

**SYRACUSE UNIVERSITY**

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**Syracuse University Bulletin**

**GRADUATE  
COURSE CATALOG**

**2013-2014**



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# Syracuse University Graduate Catalog 2013-2014

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## Welcome!

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

Those of you already familiar with SU will find here the specifics that you seek and we invite those not yet familiar with us to explore the full breadth and depth of our academic offerings. Whatever your level of familiarity, we're sure that as you learn more about SU, you will find abundant reflections of our institutional vision to leverage our vast intellectual resources collaboratively with public, private, and nonprofit sector partners to transform the world for the better.



Eric F. Spina

Vice Chancellor and Provost

A handwritten signature in black ink that reads "Eric F. Spina". The signature is written in a cursive style with a horizontal line underneath the name.

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

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

## About Syracuse University

Syracuse University, located in the City of Syracuse in the center of New York State, is a private coeducational university comprising 12 undergraduate and graduate schools and colleges. Founded in 1870, the University today has an enrollment of more than 13,000 undergraduates and close to 6,000 graduate and Law students representing all 50 states, more than 100 countries, and a variety of social and economic backgrounds.

A leader in quality graduate education, Syracuse combines the supportive network of a small college with the superior resources and enhanced opportunities needed for students to achieve their academic and professional goals. Students will learn from world-class faculty, assist in critical research, collaborate across disciplines, and immerse themselves in an active intellectual, cultural, and social community. As part of the University's expansive mission of Scholarship in Action, they also will have numerous opportunities to engage with the larger community, putting their learning to work on pressing local and global issues.

Syracuse University's picturesque main campus reflects its rich heritage, with an architectural mix of classic and contemporary academic buildings. The Hall of Languages and its early hillside companion, Crouse College, are listed in the National Register of Historic Places. At the heart of the campus is its sweeping "Quad"—an open expanse of lawn and walkways, and a popular gathering place for students throughout the day.

Syracuse University is chartered by the New York State Board of Regents and accredited by the Middle States Commission on Higher Education, 3624 Market Street, Philadelphia, PA 19104; 267-284-5000. Professional accreditation for each of the professional colleges and schools accords with the regulations of the appropriate professional association. For further information, contact the dean's office of each school or college.

Syracuse University is committed to compliance with Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, and all other applicable laws prohibiting disability discrimination. These statutes generally prohibit discrimination against individuals with disabilities and provide that no otherwise qualified person with a disability shall be excluded from participation in, be denied benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance. Students who may need assistance should contact the Office of Disability Services, Room 309, 804 University Avenue; 315-443-4498, 315-443-1371 (TTY), [www.disabilityservices.syr.edu](http://www.disabilityservices.syr.edu).

## Tuition And Fees

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

## Academic Calendar

The Academic Calendar for 2013-14 is available at <http://www.syr.edu/registrar/acadcalendars/acaddl2013-14.pdf>

## Admissions And Financial Aid

### Undergraduate Admission

To receive information about undergraduate admissions, please contact the Office of Admissions, 100 Crouse-Hinds Hall, 900 South Crouse Avenue, 315-443-3611, or send an e-mail to [orange@syr.edu](mailto:orange@syr.edu). Visit our web site at [admissions.syr.edu](http://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 [syr.edu/financialaid/contact\\_us](mailto:syr.edu/financialaid/contact_us). Visit our website for detailed financial aid information at [syr.edu/financialaid](http://syr.edu/financialaid).

### Graduate Admission

#### POST-SECONDARY EDUCATION REQUIREMENTS

To be considered for admission, an applicant to a graduate program at Syracuse University must provide official documentation of having completed at least a U.S. bachelor's degree, or if an international student, the equivalent of U.S. bachelor's degree from another country. Some programs require a master's degree (often a minimum of three years of study beyond the bachelor's degree is required for students pursuing a doctoral degree). International applicants must have graduated from colleges or universities that are recognized by the national educational authorities of their home countries.

An official transcript 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. Unsealed documents which may have been in the hands of students are not considered official.

Contact the Registrar's Office of each higher educational institution that you attended and have one copy of your transcript(s) sent to Syracuse University.

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

- Transcript(s) from all prior institutions indicating that a degree(s) has been awarded.

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

- A diploma, certificate, or certificate of graduation bearing the appropriate signatures and seal of the institution that specifies your degree(s) and date(s) of degree awarded
- A transcript (mark sheet, statement of marks, grade report) that contains all courses taken and grades for each course completed as related to each degree awarded

## 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 postsecondary 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). Each academic unit establishes acceptable scores and may also require other demonstrations of English language competence. Details are available from academic units directly.

An international applicant, if admitted, will need Syracuse University to issue a visa eligibility document to obtain a student visa. You must show evidence of having secured sufficient funding for at least the first year of graduate study. 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.

### Nonimmigrant Alien Students

Syracuse University is authorized under federal law to enroll nonimmigrant alien students.

### Graduate Financial Assistance

Through its own and outside programs, Syracuse University provides financial assistance to many graduate students. Awards offered by the University, include Syracuse University Graduate Fellowships, Ronald E. McNair Postbaccalaureate Graduate Fellowships, Syracuse University Graduate African American Fellowships, Syracuse University Graduate Scholarships, and Graduate Assistantships (teaching, research, and administrative).

Graduate students are encouraged to seek support for their studies from sources outside of the University as well. External graduate awards include such programs as Fulbright Scholarships, National Science Foundation, Ford Foundation, and Jacob Javits Fellowships.

Reference guides listing external award opportunities may be found in most major public libraries and academic libraries. Guides such as the Annual Register of Grant Support, Peterson's Grants for Graduate Study, The Grants Register, the Directory of Financial Aid for Women, and the Directory of Financial Aids for Minorities are particularly useful.

More information about merit-based financial aid can be obtained by contacting academic departments. The vast majority of funding for graduate study at Syracuse University is determined at the departmental level.

See Funding Options in the Graduate School website for additional information and deadlines.

## Hours Of Operation

### Academic Buildings

#### Academic Semester

Monday – Thursday:	7:30 a.m. – 10:00 p.m.
Friday:	7:30 a.m. – 5:00 p.m.
Weekends:	determined at the building occupant's discretion, except for the weekend community building, which is open 7:30 a.m. – 10:00 p.m.

#### Summer (includes Maymester and Summer Sessions)

Monday – Thursday:	7:30 a.m. – 10:00 p.m.
Friday:	7:30 a.m. – 5:30 p.m.
Weekends:	determined at the building occupant's discretion, except for the weekend community building, which is open 7:30 a.m. – 10:00 p.m.

#### Opening weekends

Saturday-Sunday:	7:30 a.m. – 5:00 p.m. in both fall and spring (when spring opening falls on Martin Luther King Day weekend, Monday hours may be set at the building occupant's discretion).
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During extended breaks when classes are not in session but the University is open, academic buildings are unlocked during regular University business hours (8:30 a.m. – 5:00 p.m. during the academic year, 8:00 — 4:30 in summer), at a minimum. On non-business days during those periods or during a semester, the building occupant(s) may set hours at their discretion.

Bird Library – click “hours” on the library’s website: <http://library.syr.edu/> (extended hours adapted to semester schedule)

Graduate, Law, and other professional schools expand schedules during certain periods. Information on specific academic programs and activities can be verified by calling 315-443-1870.

## University Facilities

Syracuse University students learn, study, and play among the 300 buildings on 900 acres that make up the campus. The University’s 142-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 University’s Main Campus contains 170 buildings that are used for academics, University-operated housing, food services, and other auxiliary operations. South Campus includes the Manley Athletic Complex, Hookway playing fields, Goldstein Student Center, student housing, athletic facilities, and administrative and research facilities.

SU’s 12 graduate and undergraduate colleges have their own distinct spaces on campus:

- The humanities programs of the College of Arts and Sciences is concentrated in the Hall of Languages, Huntington Beard Crouse Hall, and the Tolley Humanities Building. Facilities for instruction and research in the sciences are located in the Life Sciences Facility, Physics Building, Heroy Geology Laboratory, Carnegie Library, Center for Science and Technology, and on South Campus at 621 Skytop Road.
  - The Maxwell School of Citizenship and Public Affairs is housed in Maxwell Hall and Eggers Hall.
  - The College of Visual and Performing Arts comprises the School of Art and Design, Department of Drama, Setnor School of Music, Department of Transmedia, and Department of Communication and Rhetorical Studies. The School of Art and Design is located in Crouse College, the Comstock Art Facility, Smith Hall, The Warehouse in downtown Syracuse, and the Dorothea Ilgen Shaffer Art Building. 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. The University Art Collection is housed adjacent to the Joe and Emily Lowe Art Gallery in Sims Hall.
  - The School of Architecture is located in Slocum Hall on campus and in The Warehouse in downtown Syracuse.
  - The L.C. Smith 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 the Institute for Sensory Research located on South Campus.
  - The College of Law is located in E.I. White Hall, Grant Hall, Barclay Law Library, and McNaughton Hall.
  - The College of Human Ecology includes the Department of Public Health, Food Studies and Nutrition housed in Lyman Hall and 426 Ostrom Avenue; the Department of Child and Family Studies is located at 426 Ostrom Avenue; the Department of Marriage and Family Therapy is located in off-campus facilities in Downtown Syracuse; the Department of Sport Management, located at Drumlins Country Club; and the School of Social Work, located in Sims Hall. Administrative offices for Student Services are in Sims Hall, and the Dean’s Office is located at 119 Euclid Avenue.
  - 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 a three-building complex along University Place, including the most recently constructed building, Newhouse 3.
  - The School of Information Studies is located in Hinds Hall.
  - The School of Education is housed primarily in Huntington Hall, with additional program and administrative offices in the Hoople Building and the Henry Center.
  - University College is located at 700 University Avenue, between Marshall and Adams streets.
- Overseas, SU Abroad houses programs in Florence and London, along with other sites. Nationally, SU maintains a presence in New York City at the Joseph I. Lubin House, in Washington, D.C., at the Paul Greenberg House, and in California at the SU in LA offices. A variety of programs and events draw alumni, students, and friends to the centers.

### Student Life Facilities

Students have a variety of housing options on Main Campus and South Campus. They can live in single rooms, double rooms, and suites in residence halls and apartments. Students can grab a meal or a snack at any of the five dining centers or several snack bars around campus.

The Schine Student Center is the hub of activity on Main Campus, housing a food court, auditorium, gallery, lounges, meeting rooms, game room, and

student organization offices. The Schine also houses the main campus bookstore, which also has several on campus branches. The Carrier Dome is home to sporting events, Commencement, and musical and cultural events. An international student center, LGBT resource center, counseling center, off-campus and commuter office, the Women's Building, Watson Theater, Robert B. Menschel Media Center, and several other facilities accommodate student services and extracurricular programs.

Recreation facilities abound throughout campus. Archbold Gymnasium, Flanagan Gymnasium, the Women's Building, Ernie Davis Hall, and Marshall Square Mall contain fitness centers, swimming pools, gymnasiums, exercise rooms, dance studios, and courts for racquet sports. Manley Field House also is available for indoor recreation and student activities. Outdoor tennis courts and playing fields are located on both Main and South campuses. The Goldstein Student Center on South Campus serves Skytop and Slocum Heights students. The Tennity Ice Pavillion offers skating rinks for recreational and intramural skating sports. Hendricks Chapel, on Main Campus, sits majestically on the Quad as the focus of programs of the dean of the chapel. The St. Thomas More Chapel serves Roman Catholic students, and the Winnick Hillel Center for Jewish Life serves Jewish students.

#### Auxiliary Operations

Auxiliary service facilities include University Health Services and the Goldstein Alumni and Faculty Center. University administrative functions are conducted in Crouse Hinds Hall, the Women's Building, Steele Hall, the Schine Student Center, and at 111 Waverly Avenue on Main Campus and in the Skytop Administrative Services Building and 621 Skytop Road on South Campus.

Academic Computing Services and facilities for administrative data processing are located in the new Green Data Center and Machinery Hall, with administrative offices located in the Center for Science and Technology.

The State University College of Environmental Science and Forestry (ESF) is situated on its own campus, adjacent to Main Campus.

## Library

On the web at [library.syr.edu](http://library.syr.edu), the Syracuse University Library supports teaching, learning, and research at the university by providing a wide array of on-site and online resources and associated research support services. Library hours are extensive, with 24-hour access in Bird Library from Sunday through Friday during the academic year. Libraries are equipped with wireless access, laptops for loan, and provide a variety of study spaces, including group and individual study rooms, technology equipped study rooms, and a silent reading room. Librarians and library staff provide both in-person and web-based services via chat, email, and other venues.

The SU Libraries include:

- Bird Library, which is home to the Learning Commons, Pages (café), library administrative offices, and the Special Collections Research Center; houses Humanities and Social Sciences materials
- The Carnegie Library on the Quad; houses Science and Technology and Mathematics materials
- The Geology Library, adjacent to the Geology department in Heroy,
- The Architecture Reading Room, located in Slocum Hall, and;
- The Belfer Audio Archive, which houses historic sound recording collections and equipment.

Other separately administered campus libraries include the Martin Luther King, Jr. Memorial Library (African-American Studies Department), the H. Douglas Barclay Law Library (College of Law), and Moon Library (SUNY College of Environmental Science and Forestry). All library collections are represented in the Library's online catalog on the web.

The library's diverse collections in all university academic disciplines include more than 3.1 million printed volumes, over 39,000 online and print journals, as well as extensive collections of maps, images, sound and video recordings, music scores, microforms, rare books and manuscripts. An interlibrary loan service delivers needed materials not owned by SU Library. Library workstations, including Macs and PCs, are equipped with standard campus software applications; also available are specialized software for multimedia production and adaptive technologies for disabled users. Web resources are accessible to SU-affiliated users from any location, including residence halls, off-campus apartments, and international centers.

## Information Technology And Services

Center for Science and Technology, 315-443-2677

<http://ITS.syr.edu>

[help@syr.edu](mailto:help@syr.edu)

Information Technology and 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 and 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](mailto:help@syr.edu).
- Online support information is available at <http://answers.syr.edu>.

## Health Services

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

- Office visits
- Allergy injections
- 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 and protected by the Health Insurance Portability and Accountability Act. Protected health information can ONLY be released with written consent of the patient.

### Ambulance

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

### Health Insurance

The University strongly recommends that students carry health insurance to cover expenses not covered by the Health Fee and medical expenses incurred outside of Health Services such as specialized care, emergency room care, and hospitalization. Students should always carry their health insurance information with them. For students who do not have a health insurance plan or are not adequately covered, the University offers a student health insurance plan designed specifically for university students. For more information, call 315-443-2668.

### 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 Form and Proof of Immunity/Meningitis Response Form must be sent or faxed (315-443-9010) to Health Services prior to a student's arrival on campus. If these documents are not received prior to arrival, students will risk strict administrative consequences, including the inability to register for classes.

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

Additional information is available at [health.syr.edu](http://health.syr.edu)

## Career Services

Suite 235, Schine Student Center  
(315) 443-3616  
[careerservices.syr.edu](http://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 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 the internship/job search process. They can also help students build application documents such as resumes and cover letters, and strengthen interview skills. One special service provided by the office is the registration of internships for academic credit (discussed in more detail in Elective Internships).

Alumni Networking. 'CuseConnect 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. Each summer, SU Success In The City networking events allow students to meet with mentors and other established SU alumni in several geographic locations across the country, including New York City, Boston, Los Angeles, Washington D.C., and Chicago.

Employer Connections. Each semester, Career Services hosts large-scale career fairs to connect students with employers in their desired industries. Typically, more than 100 employers attend these fairs, seeking to hire for internship and full-time positions. Additionally, Career Services manages OrangeLink, a searchable database which stores all of the internship and job postings submitted to SU from employers. OrangeLink, accessible to all SU students and alumni, is a particularly effective way to identify and apply for relevant positions.

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

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

## Syracuse University Internship Opportunities

Elective Internships at Syracuse University

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.

Supervisors in the host organization guide and monitor the intern's work at the internship site. If the internship is taken for academic credit, then at the end of the internship the supervisor evaluates each intern's work. This becomes part of the faculty member's final evaluation of student achievement.

Every academic credit internship is guided by a faculty sponsor, a faculty member who has expertise relevant to the internship. The sponsor helps the student set goals for the internship and decides on the method of evaluating the experience. Interns may be required to keep journals, complete portfolios, or work on projects and papers. The faculty sponsor also awards the grade for the internship.

### INTERNSHIP OPPORTUNITIES

Students can find pre-existing internships in many fields. In addition students can often develop their own internships, each of which must be approved by their faculty sponsor and academic program. Internships may be taken during the fall or spring semester, over winter break or during summer sessions, either in the Syracuse area or in their home towns or elsewhere in the United States or abroad.

### ACADEMIC CREDIT

Once accepted for an internship, students must complete a learning proposal that describes the goals and activities planned for the internship and an online supplemental information (and waiver) form.

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. All internship hours worked under the oversight of the faculty sponsor are considered part of the internship. Students may register for anywhere from 1 to 6 credits, depending on the advice of their faculty advisors and the specific requirements of the department and school or college in which they are enrolled.

Work schedules are arranged by the interns and their site supervisors. The total number of credits awarded depends upon the nature of the tasks and responsibilities involved as well as the number of hours worked and in summer, the student's financial resources.

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

New York State Center for Advanced Technology (CASE Center) is funded by the New York State Foundation for Science, Technology and Innovation to support innovative, interdisciplinary research in complex information intensive systems. The mission of CASE is to catalyze growth in the high-technology economy of New York State by fusing technical competency with industry-specific knowledge to advance applications of predictive analysis, monitoring and/or control of complex behavioral, information and communication systems. CASE's current key technical focus areas range from social behavior to financial transactions, including data fusion, data mining, control design, systems modeling, systems security and assurance, bioinformatics, intelligent computing, sensor network/management. These focus areas expand as CASE engages new faculty and industry partners. In addition, CASE provides project management for university-industry collaboration in research and development; brings together interdisciplinary teams from industry and academia for brainstorming and networking to foster and spawn innovation; identifies funding opportunities and assists university-industry teams in developing and delivering successful proposals and projects.

CASE serves as an access point for the private sector to engage the University, supporting co-op and internship programs for students as well as research and development projects. Through CASE, graduate students with a variety of backgrounds can work with the country's most advanced information research and technology. In addition to close collaborations with faculty scientists and engineers, CASE offers students opportunities to 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 chance to participate first-hand in the launch of 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

Ben Ware, Dean  
Gabrielle Chapman, Associate Dean  
207 Bowne Hall, 315-443-2543  
[gradsch.syr.edu](mailto:gradsch.syr.edu)  
[grad@syr.edu](mailto:grad@syr.edu)

Graduate study and research have been recognized as a critical piece of Syracuse University's mission since its inception in 1870. Today, every school and college at Syracuse offers graduate study, and the University awards approximately 1,700 master's degrees and certificates of advanced study and 150 doctoral degrees annually. A complete listing of graduate degree programs can be found in the Academic Offerings Tab section in this catalog.

Individual graduate programs are administered by departments or interdisciplinary committees and are subject to approval by the appropriate schools and colleges and by the University Senate. These policies and standards are administered by the Graduate School. All postbaccalaureate degrees are awarded through the Graduate School, with the exception of the J.D. degree, which is awarded through the College of Law.

Graduate students will learn from a full-time faculty of more than 800 scholars, many of them internationally or nationally recognized in their field, and will assist faculty both in the classroom and with important research initiatives.

All Syracuse University graduate degree programs, with the exception of law, are organized under the auspices of the Graduate School. Applications for admission are submitted to the Graduate School, which also confers degrees upon graduation. The graduate degree programs themselves, however, are offered by faculty of the University's 12 academic schools and colleges. This unique organizational structure fosters intellectual collaboration and exploration across the disciplines while at the same time recognizing the highly specialized nature of graduate-level academic work.

Requests for information about graduate programs should be directed to the specific academic units offering those programs. Questions about University-wide policies should be directed to the Graduate School.

## Syracuse University Graduation Rate

In compliance with the federal Student-Right-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 2006, 81.7 percent had earned their bachelor's degrees as of August 2012. 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

African-American Studies	1
Architecture	1
Art & Music Histories	4
School of Management	12
Ed-Instructional Technology	1
Cultural Foundations Ed Curric	2

Exercise Science	1
Mech and Aerospace Engineering	1
BMC Engineering	1
Public Communications	32
Counseling & Human Services	2
CVPA-Drama	5
Public Communciations - SULA	6
Information Studies-Dean	35
Public Admin & International Affairs	1
School of Design	2
University College-Fin Stdt Sp	2
University College-SCP Gen Ad	3

TA'S BY SCHOOL, DEPARTMENT, OR DIVISION

A & S - Curriculum/Instruction	3
A & S - Women's Studies	3
A & S - Writing Program	21
African-American Studies	11
Anthropology	13
Architecture	29
BMC Engineering	10
Biology	31
Campbell Institute	1
FALK-Child and Family Studies	7
FALK-BMW Nursery Lab School	3
FALK-Public Health	4
FALK-Nutrition Science & Dietics	11
FALK-Sport Management	4
Case Center	1
CVPA-Foundation	8
CVPA-School Of Music	11
Chemistry	51
Civil & Environmental Engineering	11
Communication/Rhetorical Study	12
Counseling & Human Services	7
Cultural Foundations Ed Curric	6
Department of Art at Comart	12
Department of Art at Shaffer	6
Earth Sciences	13
Economics	27
Ed-Intructional Technology	4
Ed-Teach & Ldrship Sci Teach	3
Ed-Teach & Ldrship Music	2
Ed-Teaching And Leadership	19
Education - Dean's Office	1
Elec Eng & Computer Science	40

English	47
Exercise Science	8
AASC	1
Geography	14
Higher Education	1
History	21
Information Studies-Dean	7
Languages, Lit & Linguistics	28
Mathematics	34
Maxwell Dean's Office	6
Mech and Aerospace Engineering	20
Philosophy	23
Physics	23
Political Science	30
Psychology	25
Public Admin & International Affairs	1
Public Communications	2
Reading & Language Arts	6
Religion	17
CVPA-Art Education	1
School of Design	1
School of Management	25
Science Teaching	2
Social Science	3
Sociology	15
CVPA-School of Music	20
Communication Sciences & Disorders	5
UC Summer Programs Faculty	3
University College-SCP Gen Ad	65
Transmedia Studies	16

## Syracuse University Roster

### University Officers

Each officer's year of appointment to the University staff is given in parenthesis.

Nancy Cantor, B.A., Ph.D. (2004)

Chancellor and President

Eric F. Spina, B.A., M.A., Ph.D. (1988)

Vice Chancellor and Provost

Thomas J. Walsh, B.A., M.F.A. (1984)

Executive Vice President for Advancement and External Affairs

Elizabeth Breul O'Rourke, B.A., M.P.A. (1983)

Vice President, Board of Trustees

Rebecca Reed Kantrowitz, B.A., M.S. (2002)

Interim Senior Vice President and Dean of Student Affairs

Louis G. Marcoccia, B.A., M.S., C.P.A., Ed.D. (1975)

Executive Vice President and Chief Financial Officer

#### Academic Officers

Andria Costello Staniec, B.S., M.S., Ph.D. (1999)

Associate Provost for Academic Programs

Donald Saleh, B.S., M.S. (2001)

Vice President for Enrollment Management

K. Matthew Danes, B.S., M.S., J.D., Ph.D. (2008)

Interim Dean of the Libraries and University Librarian

Gina Lee-Glauser, B.S., M.S., Ph.D. (2001)

Vice President for Research

#### Schools and Colleges

School of Architecture

Michael A. Speaks, Dean

College of Arts & Sciences

George Langford, Dean

School of Education

Douglas Biklen, Dean

L.C. Smith College of Engineering & Computer Science

Laura Steinberg, Dean

David B. Falk College of Sport and Human Dynamics

Diane Lyden Murphy, Dean

School of Information Studies

Liz Liddy, Dean

College of Law

Hannah Arterian, Dean

Martin J. Whitman School of Management

Kenneth Kavajecz, Dean

Maxwell School of Citizenship and Public Affairs

James B. Steinberg, Dean

S.I. Newhouse School of Public Communications

Lorraine Branham, Dean

College of Visual and Performing Arts

Ann Clarke, Dean

University College

Bethaida Gonzalez, Dean

#### Student Privacy Rights (FERPA)

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

Syracuse University fully complies with the federal Family Educational Rights and Privacy Act and its implementing regulations, each as amended (collectively, "FERPA"), and with guidelines recommended by the American Association of Collegiate Registrars and Admissions Officers. FERPA gives

students certain rights with respect to their education records. These rights include:

I. The right to inspect and review the student's education records.

Students should submit to the University Registrar (106 Steele Hall, Syracuse University, Syracuse, NY 13244-1120) a written request that identifies the record(s) they wish to inspect. The University Registrar will make arrangements for access, excluding records and documents considered exceptions or to which a student has waived his or her right of access, and notify the student of the time and place where the records may be inspected. Access will be provided within a reasonable time, not to exceed 45 days after the Registrar's receipt of the student's request.

II. The right to request the amendment of the student's education records that the student believes are inaccurate or misleading, or in violation of the student's privacy rights.

Students who wish to ask the University to amend a record should obtain a Request to Amend or Remove Education Records form from the Registrar's Office and clearly identify the part of the record they want changed and specify why it is inaccurate, misleading or in violation of their rights of privacy. Note that this does not include a right to contest grades or other substantive matters accurately reflected in the records. Thus, this procedure may not be used to change a grade in a record unless the grade assigned was inaccurately recorded.

If the University decides not to amend the record as requested, the University will notify the student in writing of the decision and of the student's right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when he or she is notified of the right to a hearing. If the hearing results in a final determination not to amend the record, the student is permitted to place a statement with the record commenting on the contested information, stating his or her disagreement with the decision not to amend the record, or both.

III. The right to provide written consent before the University discloses personally identifiable information from the student's education records, except to the extent that FERPA authorizes disclosure without consent.

A student has the right to consent to the disclosure of personally identifiable information contained in his or her education records, except to the extent that FERPA authorizes disclosure without consent. Set forth below is information about some of the circumstances in which FERPA authorizes such disclosures. The University reserves the right to make disclosures of information from education records without a student's consent in these and other circumstances in which such disclosures are permitted by FERPA.

A. The University may disclose education records without a student's prior written consent to school officials with legitimate educational interests.

A school official is:

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

A school official has a "legitimate educational interest" when he, she, or it has a need to access student education records for the purpose of performing an appropriate educational, research, administrative or other function for the University.

B. The University may disclose education records without consent to officials of another university, college or school in which a student seeks or intends to enroll, or is already enrolled, for purposes of the student's enrollment or transfer.

C. The University may disclose education records without consent to parents of a dependent student as defined by the Internal Revenue Service, when proof of dependency has been provided. A "parent" is a parent, guardian, or someone acting as a parent who meets the IRS standard. (Note: Students should refer to their individual school/college policies concerning parental notification of information regarding academic misconduct and/or academic performance.)

D. The University may disclose education records without consent to appropriate parties in connection with an emergency if knowledge of the information is necessary to protect the health or safety of the student or other individuals.

IV. The right to prevent disclosure of personally identifiable information that Syracuse University has designated as "Directory Information."

Unless a student has followed the steps described below, the University may disclose "directory information" without consent in accordance with the provisions of FERPA. Directory information is defined as that information which would not generally be considered harmful or an invasion of privacy if disclosed. Syracuse University considers the following to be directory information:

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

Academic awards and honors  
Athletic participation  
Class/level\*  
Dates of attendance  
Degree(s) earned and date(s)

Full/part-time status  
Majors(s)/degree program(s)  
Photograph or other visual image  
Prior postsecondary institutions attended  
SU ID number  
SU school/college(s)\*

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

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

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

Students should carefully consider the consequences of a decision to prevent disclosure of Directory Information. Regardless of the effect upon students, the University assumes no liability as a result of honoring instructions that such information be withheld.

V. The right to file a complaint with the U.S. Department of Education concerning alleged failures by Syracuse University to comply with the requirements of FERPA.

Any student who has reason to believe that the University is not complying with FERPA should inform the University Registrar in writing. The Registrar shall promptly review all such allegations and initiate appropriate actions. In addition, students have the right to file complaints with the United States Department of Education concerning alleged failures by the University to comply with the requirements of FERPA. Complaints may be submitted in writing to:

Family Policy Compliance Office  
U.S. Department of Education  
400 Maryland Avenue, SW  
Washington DC 20202-5920  
Phone: 1-800-872-5327

For additional information about the University's FERPA policy, see <http://supolicies.syr.edu/ethics/ferpa.htm>. Questions about FERPA, students' privacy rights, and compliance procedures may be directed to the Office of the Registrar, 106 Steele Hall, Syracuse University, Syracuse, NY 13244-1120, 315 443-2422.

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Related Policy: Computer Law ( from item VII of SU Computing and Electronic Communications Policy)

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

## 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, military 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 and 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 Executive Director of Equal Opportunity, Inclusion and Resolution Services, Skytop Office Building, 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 Advisory Committee on Campus Safety will provide upon request all campus crime statistics as reported to the United States Department of Education.

USDOE website: <http://ope.ed.gov/security/>

## Academic Rules

This is the official version of the general academic rules of Syracuse University (SU) effective for the 2013-2014 academic year. The rules are presented alphabetically by topic, reflecting distinctions between undergraduate and graduate rules as appropriate. Both undergraduate and graduate students will find that their individual school/college/department has additional rules that apply. In the case of graduate students, these rules may be more restrictive than the general University rule.

### Additional Sources For Information

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

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

Also see school, college, and academic department materials and websites.

## Academic Integrity

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

### ACADEMIC INTEGRITY EXPECTATIONS

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

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

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

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

### Course Work and Research

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

### Communications

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

### Representations and Materials Misuse

1. Falsification of records, reports, or documents associated with the educational process;
2. Misrepresentation of one's own or another's identity for academic purposes;
3. Misrepresentation of material facts or circumstances in relation to examinations, papers, or other academic activities;
4. Sale of papers, essays, or research for fraudulent use;
5. Alteration or falsification of University records;

6. Unauthorized use of University academic facilities or equipment, including computer accounts and files;
7. Unauthorized recording, sale, purchase, or use of academic lectures, academic computer software, or other instructional materials;
8. Expropriation or abuse of ideas and preliminary data obtained during the process of editorial or peer review of work submitted to journals, or in proposals for funding by agency panels or by internal University committees;
9. Expropriation and/or inappropriate dissemination of personally-identifying human subject data;
10. Unauthorized removal, mutilation, or deliberate concealment of materials in University libraries, media, laboratories, or academic resource centers.

#### COURSE-SPECIFIC EXPECTATIONS

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

#### TRANSCRIPT NOTATIONS

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

### Academic Renewal

#### Undergraduate Students

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

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

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

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

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

#### School/College Rules

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

#### ACADEMIC RENEWAL AND THE TRANSCRIPT

If academic renewal is approved, your GPA will be reset to 0.00, and the GPA calculation will resume with the courses you take after readmission or admission. The courses you took before academic renewal will still appear on your transcript, but will be flagged (see “Flagging”) to remove them from all credit and grade calculations. The notation “(ar)” will reflect that flagging was done under the academic renewal policy.

Your prior coursework will be evaluated in the same manner as transfer credit. Only prior coursework with a grade of C or higher (no C-, D, or F grades) that can be applied toward your degree program will be accepted as a block of credits from your prior record. Grades in these courses will not calculate toward your GPA. If you subsequently transfer to another SU school/college, prior coursework will be re-evaluated.

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

### Academic Standing

## Minimum GPA To Continue Graduate Work

### Graduate Students

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

### Class Standing

#### Undergraduate Students

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

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

### Academic Probation

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

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

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

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

### College Probation

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

### School/College Rules

Architecture	Term GPA less than 2.0, a term of architecture courses below 2.0, more than 12 credit hours of Incomplete or NA grades, fewer than 24 credit hours completed in a 12-month period, or insufficient progress toward degree.
Arts and Sciences	Students earning less than a 2.0 semester GPA will be placed on Academic Warning for the following semester. Students who earn less than a 2.0 semester GPA a second time will be placed on Academic Probation. And if they earn less than a 2.0 semester GPA for a third time, they will be placed on Final Probation and they may possibly be suspended from college.
Education	Excessive number of Incompletes, missing grades, and/or limited progress toward degree, and/or students at or below a 2.0 cumulative GPA may be placed on a one-term trial (OTT) at any point in time. Inclusive early childhood special education and inclusive elementary special education: cumulative, content, or education course GPA of less than 2.8; content or education less than 3.0 for music education. Physical education and health and physical education: cumulative GPA below 2.8 or below 3.0 in required professional education courses. Health and exercise science: cumulative or major course GPA below 2.8. Selected studies: cumulative GPA below 2.8. Guidelines are published in the School of Education Undergraduate Handbook.
Engineering and Computer Science	Term GPA less than 2.0. Less than 2.0 in all mathematics, science, and ECS courses taken at SU. Completion of fewer than 12 credit hours in one semester or 24 credit hours within any 12-month period. Failure to maintain satisfactory progress toward degree. In addition to the above conditions, computer science students only: GPA of less than 2.667 in core courses.
Information Studies	Excessive missing grades, Incompletes, failure to make normal progress, or failure to complete prerequisites for the following semester's registration.
Management	Semester GPA less than 2.0, earning fewer than 12 credit hours in two consecutive semesters, or failure to meet adequate progress standards.

Public Communications	GPA of less than 2.0 in Public Communications courses, or excessive missing grades or Incompletes, or semester GPA below 2.0 for two consecutive semesters, or failure to make normal progress toward a degree.
Sport and Human Dynamics	Students with one or more of the following conditions will be placed on academic probation: semester and/or cumulative GPA below 2.0; excessive number of Incomplete, NA, or missing grades; lack of progress toward degree.
University College	Legal Studies and B.P.S students: Semester or cumulative GPA less than 2.0; less than 2.0 in legal studies courses; excessive number of Incompletes, NA, or missing grades.
Visual and Performing Arts	Semester GPA below 2.0 with cumulative GPA above 2.0; or excessive NAs, Incompletes, or other failure to make normal progress toward a degree.

### Probation, One-Semester Trial

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

### Ineligible To Continue

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

### Academic Suspension

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

- specifying the reason for the action
- explaining appeal procedures

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

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

### Advanced Credit Examinations

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

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

### Graduate Students

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

### Undergraduate Students

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

### Attendance In Classes

Attendance in classes is expected in all courses at SU. Class attendance requirements and policies concerning nonattendance are established by the instructor(s) of each class.

## Competency And Proficiency Examinations

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

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

## Consortium Agreements

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

If you are a matriculated SU student who wants to study abroad through a program not directly administered or sponsored by SU Abroad, contact the SU Abroad office at least three months before the start of the program to request consideration for a consortium agreement, which is required if you want to have the classes you take abroad count toward your degree program and continue to receive financial aid during your overseas program.

If approved for a consortium agreement, credit earned through such programs is generally treated as SU credit. Your school/college and/or department will determine acceptable courses and how they will be applied.

## Courses

### Course Numbering System

Remedial, developmental, and 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 at the graduate level	998
Doctoral dissertation	999

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

## Credit

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

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

### Restricted Graduate Credit

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

### Conversion To Graduate Credit

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

- you become matriculated in a graduate degree or certificate program
- your overall average in all SU graduate work is at least 2.8
- you earned a B or better in each course
- your courses are part of a degree or certificate program approved by your department

- you have completed your coursework within the time limit allowed for the degree

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

#### School/College Rules

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

### Counting Credits Towards Multiple Degrees And/Or Programs

NYSED limits the counting of credits toward multiple degrees and/or programs to protect the academic integrity of each degree and/or program. When a student is counting credits towards multiple degrees and/or programs, the following restrictions apply:

1. If you are 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, course credit may be double counted to fulfill degree requirements.
2. In no instance shall course credit be counted more than twice in satisfaction of the requirements for multiple degrees and/or programs.
3. In order to earn two or more distinct Master's degrees or a Master's and doctoral degree, you must earn a minimum of 80 percent of the combined total of SU credits normally required for each of the degrees. Two 30-credit Master's degrees will not be awarded for fewer than 51 credits, nor will three 30-credit Master's degrees be awarded for fewer than 75 credits. Credits counted toward two or more distinct Master's degrees must form an integral part of each degree. You must be admitted to the degree program in each of the awarding academic units.
4. Certificates of Advanced Study (C.A.S.) (excluding programs registered as preparing individuals for a teaching certificate, educational leadership certificate, or a professional license issued by NYSED). C.A.S. programs may be part of an existing degree program or a stand-alone program of study. In cases in which two or more C.A.S.s are to be earned by one student, the minimum number of credits earned by the student must be at least 80 percent of the combined total of SU credits required for each certificate. However, two 12-credit C.A.S.s may not be awarded for less than 21 credits. In cases where the C.A.S. curriculum is part of another degree program, and you are admitted to that other degree program, credit may be double counted for the C.A.S. and other degree, subject to the above restrictions.

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

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

### Undergraduate And Graduate Coursework

#### Undergraduate Students

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

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

No credit that is applied to the undergraduate degree may be applied also to the graduate degree, unless such double-counting falls under the explicit articulation of a combined bachelor's and master's degree program that has been approved by and registered with NYSED.

### Calculation Of Credit Hours

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

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

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

#### Undergraduate Students

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

### Flagging (Removing Courses From GPA, Credit And Degree Calculation)

When certain requirements are met, courses may be “flagged,” which excludes them from GPA and semester and cumulative credit hour totals. The flag symbol is noted on the official transcript. Flagging a course may affect financial aid eligibility e.g., flagging a course in which a passing grade was earned may alter the calculation of satisfactory progress. For additional information, see your financial aid counselor.

Once your degree has been awarded, you may not request to flag courses taken before the degree date.

### Flagging Courses That Have Been Retaken

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

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

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

- Both the original course and the retaken course remain on your transcript.
- A course is repeatable if it may be retaken and counted more than once toward fulfillment of degree requirements. You may not flag courses designated as repeatable, since course content is different each time the course is offered. Exceptions:
  - Selected Topics courses (with numbers ending in “00”) may be flagged if they have exactly the same title
  - Proposal for Independent Study courses may be flagged when the course subject, number, description, and requirements are the same
- Advanced Credit exams or courses that merely substitute for a degree requirement are not considered to be retaken courses for flagging purposes.

### Graduate Students

You may petition your academic unit and the Graduate School to flag the following:

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

### Undergraduate Students

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

TABLE A Retaken Courses And Flagging Rules

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

Management	Students may retake a course for grade improvement. Normally, students may not retake a course after completing a more advanced course in the same area. Students should check with an advisor in the Undergraduate Office before retaking a course.	The most recent grade is used to calculate the GPA, regardless of which grade is higher. Management grades can be flagged only once.
Public Communications	Public Communications courses in which a passing grade was earned may not be retaken.	A grade of F will be flagged only once for a retaken Public Communications course. If a student retakes a Public Communications course in which a passing grade was previously earned, the second grade will be flagged. (For retaken courses outside of Public Communications, the most recent grade is used to calculate the GPA regardless of which grade is higher.)
Sport and Human Dynamics	Any course with a grade of D or F may be retaken once. Departmental exceptions may be considered by advance petition.	Grades in courses can only be flagged once. The higher of the two grades is computed in the GPA.
University College, Bachelor of Professional Studies	Required LGL courses with grades of D or F must be retaken for credit. Individual LGL courses may be retaken only once.	LGL courses with a grade of D or F will be flagged only once.
Visual and Performing Arts	Any academic elective course in which a student has received a grade of D or F may be retaken. A studio course may be retaken only when a grade of F has been received.	The higher of two grades is computed in the GPA.

## Flagging Courses When Changing School/College Or Program

### Undergraduate Students

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

Arts and Sciences: Only D and F grades in non-Arts and Sciences courses that were required for the previous program may be flagged at the student's request. A, B, C, and I grades in such courses cannot be flagged.

Education and Management: If you transfer into either of these schools and elect to flag courses that do not apply toward your new program, then you must flag all courses that don't apply.

### Flagging Graduate-Level Courses Taken As An Undergraduate

If you petition to take graduate-level courses that will not apply to your undergraduate degree, you may also petition to flag those courses so that they don't count toward your undergraduate record. If the courses are subsequently accepted as restricted graduate credit toward a graduate program at SU, then they will automatically be flagged on the undergraduate transcript. In that case, credits earned in the courses will count toward the graduate degree requirements, but the grades will calculate in neither the undergraduate nor the graduate GPA.

### Flagging Courses Under Academic Renewal Policy

See "Academic Renewal"

### Transfer Credit

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

### Graduate Students

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

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

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

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

### Certificate Programs

A maximum of three credits from a combination of transfer and/or external examinations/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

Information Studies	Up to 15 credits from National Defense University may be applied to the M.S. program in information management.  Credits completed in approved programs at the Army Signal Center School may be applied to the M.S. in information management, and the M.S. in telecommunications and network management.
Management	Students may transfer a maximum of six credits of elective courses into their M.B.A. or M.S. program from another AACSB-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.
Maxwell	Up to 12 credits from Tsinghua University may be applied to the executive master of public administration.
Public Communications	A maximum of 20 percent of credits counted toward the following master’s degrees in the S.I. Newhouse School of Public Communications may be transferred: advertising; arts journalism; broadcast and digital journalism; communications management; documentary film and history; magazine, newspaper & online journalism; media management; photography; public relations; and television, radio & film.

### Undergraduate Students

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

- institutions recognized by
  - regional accrediting commissions
  - national accrediting bodies
  - professional organizations that accredit free-standing professional schools and programs within multipurpose institutions\*
  - institutions that are recognized candidates for accreditation
- recognized foreign tertiary-level institutions, chartered and authorized by their national governments, generally through the Ministry of Education
- a formal transfer articulation agreement

\* For students enrolled in an accredited program at a non-accredited institution, only courses within the discipline that is accredited will be considered for transfer credit. General education and other courses from the institution will not be considered.

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

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

If you plan to take courses at another institution that will transfer back into your SU degree, obtain your home school/college’s approval before enrolling. If you take courses at a two-year college

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

### School/College Rules

Arts and Sciences	Any transfer credit to be applied to a Syracuse University major or minor must be formally accepted via written petition by the major or minor department. Students are not given transfer credit until their cumulative average is 2.0 or higher. In addition, the following restrictions apply:  -- Basic or college algebra is not accepted.  -- Remedial or developmental coursework is not accepted.  -- Transfer credit for foreign language courses must be evaluated by the Department of Languages, Literatures, and Linguistics at Syracuse University to determine the appropriate course equivalent. [Note: Foreign language courses
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	taken at schools or programs that are not accredited will not be reviewed or approved.] -- Pass (P) or Satisfactory (S) grades are never accepted toward the fulfillment of requirements for your major/minor or the A&S Liberal Arts Core. If courses in which you earned a P or S are accepted as transfer credit, they will be awarded as elective credit only
Management	A minimum of 27 credit hours of required Management courses must be taken at SU.
Public Communications	No more than 12 hours of communications course credits earned in another college or university may be accepted toward meeting the requirements of a major program of study in the School of Public Communications.
University College	No more than 12 credit hours earned in another college or university may be accepted toward meeting the program of study requirements in the bachelor of professional studies degree. No more than nine credit hours earned in another college or university may be accepted to the LGL credit certificate program requirements. No more than three credit hours earned in another college or university may be accepted to the organizational leadership credit certificate program requirements.

#### How Transfer Credit Applies Toward Your Degree

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

#### Additional transfer credit rules

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

#### Credit For Extra-Institutional And Experiential Learning, And External Examination Programs

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

Undergraduate credit may also be awarded for some matriculation examinations and post-secondary educational experiences offered in other countries. Decisions about awarding such credit are made by the student's school/college during the admissions process.

#### Portfolio Review

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

#### Undergraduate Students

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

#### External Examinations

##### Undergraduate Students

##### College Board Advanced Placement (AP) and College Level Examination Program (CLEP)

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

requirements.

TABLE B College Board Advanced Placement Examinations

Exam Subject/Title	Minimum Score	Awardable Credit	Equivalent SU Course	Recommending School/College	Additional School/College Requirements or Qualifications
Art/2-D Design	5	3	Studio Elective	Visual and Performing Arts	Visual and Performing Arts Does not count toward Art and Design Freshman Foundation studio courses
Art/Drawing	5	3	Studio Elective	Visual and Performing Arts	Visual and Performing Arts Does not count toward Art and Design Freshman Foundation studio courses.
Art History	3	6	HOA 105,106	Arts and Sciences	
Biology	4	8	BIO 121, 123, 124	Arts and Sciences	
Chemistry	3 or 4 5	3 8	CHE 103 CHE 106/107 and CHE 116/117	Arts and Sciences	Arts and Sciences Only a score of 5 counts as a sequence in natural sciences and mathematics. Pre-medical students should consult with health professions advising before accepting AP chemistry credit.
Chinese	3 4	4 4	CHI 102 CHI 201	Arts and Sciences	Public Communications Must also place out of CHI 102 (with a score of 3) or CHI 201 (with a score of 4 or 5) on the placement exam.
Comparative Government and Politics	3	3	PSC 123	Arts and Sciences	
Computer Science A or Computer Science AB	3	3	CPS 196	Engineering and Computer Science	Engineering and Computer Science Students will receive this credit only upon approval of their department chair.
English Language and Composition	3*	6	WRT 105-205	Arts and Sciences	Education (Inclusive) will accept a score of 3 only after a grade of B+ or higher is earned in an SU writing course.
English Literature and Composition	4	6	ETS 151 (or 117 or 118 or 152 or 153) and WRT 105	Arts and Sciences	Arts and Sciences Students scoring 4 or better will receive 3 credits for ETS 151. Such students who subsequently elect to take ETS 151 may transfer the credit to one of the following: ETS 117, 118, 152, or 153. Three additional credits are awarded for WRT 105.
Environmental Science	3	3	EAR 200	Arts and Sciences	
European History	4	6	HST 111,112	Arts and Sciences	
French Language	3	4	FRE 102	Arts and Sciences	Public Communications Must also place out of FRE 102 on the placement examination.
French Literature	3 4	4 4	FRE 102 FRE 201	Arts and Sciences	Public Communications Must also place out of FRE 102 (with a score of 3) or FRE 201 (with a score of 4 or 5) on the placement examination.
German Language	3	4	GER 102	Arts and Sciences	Public Communications Must also place out of GER 102 on the placement examination.

Human Geography	4	3	GEO 105 or 171	Arts and Sciences	
Italian Language and Culture	3	4	ITA 102	Arts and Sciences	Public Communications Must also place out of ITA 102 (with score of 3).
Japanese Language and Culture	3 4	4 4	JPS 102 JPS 201	Arts and Sciences	Public Communications Must also place out of JPS 102 (with a score of 3) or JPS 201 (with a score of 4 or 5) on the placement examination.
Latin	3 4 5	4 4 7	LAT 102 LAT 201 LAT 201, 320	Arts and Sciences	Public Communications must also place out of LAT 102 on the placement examination.
Macroeconomics	4	3	ECN 102	Arts and Sciences	
Mathematics—Calculus AB	3 4	3 6 or 4	MAT 285 MAT 285 and 286 or MAT 295	Arts and Sciences	Engineering and Computer Science Four credits awarded for MAT 295 only, pending results of the math placement examination.
Mathematics—Calculus BC	4	8	MAT 295,296	Arts and Sciences	Engineering and Computer Science Up to 8 credits awarded for MAT 295 only, pending results of the math placement examination.
Mathematics—Calculus BC-AB subscore	3 4	3 6 or 4	MAT 285 MAT 285 and 286 or MAT 295	Arts and Sciences	Arts and Sciences Exemption from Quantitative Skills and substitute for MAT 285 in natural sciences and mathematics.
Mathematics Level II†	4	4	MAT 194	Arts and Sciences	
Microeconomics	4	3	ECN 101	Arts and Sciences	
Music Theory	3	6	HOM 125, MTC 126	Arts and Sciences	
Physics B	3	8	PHY 101, 102	Arts and Science	Education (Inclusive) will accept a score of 3 only after a grade of B+ or higher is earned in an SU lab/science course.
Physics C (Electricity and Magnetism)	3	4	PHY 102 or 212, 222	Arts and Sciences	
Physics C (Mechanics)	3	4	PHY 101 or 211, 221	Arts and Sciences	
Psychology	4	3	PSY 205	Arts and Sciences	
Spanish Language	3	4	SPA 102	Arts and Sciences	Public Communications Must also place out of SPA 102 on the placement examination.
Spanish Literature	3 4	4 4	SPA 102 SPA 201	Arts and Sciences	Public Communications Must also place out of SPA 102 (with a score of 3) or SPA 201 (with a score of 4 or 5) on the placement examination.
Statistics	3	3 or 4	MAT 121 or 221 or STT 101	Arts and Sciences	Management Credit accepted as MAS 261.
U.S.Government and Politics	3	3	PSC 121	Arts and Sciences	
U.S.History			HST 101, 102	Arts and Sciences	

	4	6			
World History	4	6	HST 121, 122	Arts and Sciences	

\* The minimum score will change to 4, beginning with students admitted for fall 2014.

† Exam offered in Puerto Rico only.

TABLE C CLEP Examination Credit

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

International Baccalaureate (IB) Credit for Higher Level IB examinations completed with a grade of 5 or higher will be awarded as indicated in Table D. No credit will be awarded for IB Standard Level exams or additional requirements.

TABLE D International Baccalaureate Credit

IB Higher Level Examination	Minimum Score	Syracuse University Credit
Biology	5	8 credits — BIO 121, 123, 124
Business and Management	5	6 credits lower division; free elective only
Chemistry	5	6 credits — CHE 103 and 113
Economics	5	6 credits — ECN 101 and 102
English	5	6 credits — WRT 105 and 205
Foreign Languages	5	No credit awarded. Exemption from basic and continuing skills in foreign languages according to performance on proficiency examination administered by the department.
Geography	5	6 credits — GEO 105 and 273
History	5	6 credits lower division
Mathematics	5	6 credits — Quantitative skills
Philosophy	5	6 credits — PHI 191 and 197
Physics	5	8 credits — PHY 101, 102
Psychology	5	6 credits — PSY 205 and 274

## Degree And Certificate Programs

### Degrees

The types of degrees conferred, the minimum number of credit hours required for each degree, and the list of approved programs of study can be found in the Academic Offerings section of the course catalog.

TABLE E Degree Types

Type	Requirements	Notes
Associate's	A.A.: Three-quarters of the work must be in the liberal arts and sciences.	Only available to part-time University College students. See Residency Requirement.
Bachelor's	B.A.: Three-quarters of the work must be in the liberal arts and sciences.  B.S.: One-half of the work must be in the liberal arts and sciences.  B. Arch., B.F.A., B.I.D., B. Mus.: One-quarter of the work must be in the liberal arts and sciences.	
Master's	At least one of the following: passing a comprehensive test, writing a thesis based on independent research, or completing an appropriate special project.	Master's degree programs normally require a minimum of one academic year of full-time graduate level study, or its equivalent in part-time study, with an accumulation of not less than 30 semester hours.  Courses numbered 500-599 may not make up more than one-half of the Syracuse coursework
Master of Philosophy	It may be conferred upon a student who has satisfactorily fulfilled all Ph.D. requirements but the dissertation. The following requirements apply: (1.) The student must be enrolled in the Ph.D. program; (2.) The student must have reached all but dissertation (ABD) status, in accordance with program requirements, and such designation must appear on the student's advising transcript; (3.) The student must complete a diploma request to receive an M.Phil. degree; and (4.) The M.Phil. must be registered with NYSED.	An intermediate degree between the master's and the doctor of philosophy, awarded by the Graduate School upon the recommendation of the academic unit. Note that not all departments have registered this degree with NY State.  Courses numbered 500-599 may not make up more than one-half of the Syracuse coursework.
Doctoral	Doctoral studies shall include the production of a substantial report on research, or the independent investigation of a topic of significance to the field of study, or the production of an appropriate creative work, or the development of advanced professional skills.	A doctoral degree represents completion of three academic years of graduate-level study or an equivalent that can be shown to accomplish the same goals.  Courses numbered 500-599 may not make up more than one-third of the Syracuse coursework for a doctoral program.
	The programs consist of coursework, examinations, and an independent study project.	The degree of computer engineer is offered for qualified students seeking advanced technical

Computer Engineer	The minimum program consists of 60 credits of work beyond the bachelor's degree, of which 6-18 credits are independent study. Each student will be examined in three topics in computer engineering.	education beyond the M.S. degree. The program is designed to provide mastery of a field of knowledge and familiarity with related fields, as well as to develop a capacity for independent study.
Electrical Engineer	The program consists of coursework, examinations, and an independent study project. The minimum program consists of 60 credits of work beyond the bachelor's degree, of which 6-18 credits are independent study. Each student will be examined in four topics: engineering mathematics and three fields of electrical engineering.	The degree of electrical engineer is offered for qualified students seeking advanced technical education beyond the M.S. degree. The program is designed to provide mastery of a field of knowledge and familiarity with related fields, as well as to develop a capacity for independent study. Candidates, with the approval of the faculty, may work toward the Ph.D. after completing the electrical engineering degree.

## Graduate Degree And Certificate Programs

### Graduate Degree Programs

#### Master's Degrees

##### Program of Study

A matriculated student who is studying for the master's degree must satisfactorily complete a program of study of not less than 30 credits that is approved by the academic unit and filed with the Graduate Degree Certification Office.

##### Time to Degree

You must meet all requirements for the master's degree within seven years from the time you register for the first course to be used in your master's degree program. If you do not meet this requirement, you may petition your school/college for reinstatement of credits that were completed outside the seven-year timeframe.

##### Comprehensive Examinations

Your school/college will determine the nature of any comprehensive examination or examinations that apply toward your master's degree. Such exams may or may not be directly related to the content of particular courses you have taken.

##### Oral Examination

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

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

#### Doctoral Degrees

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

##### Program of Study

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

##### Qualifying Examinations

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

##### Advancement to Candidacy/Time to degree

You will be admitted to candidacy when you have completed all requirements for the degree except for the dissertation and the final oral exam. The maximum time allowed to reach candidacy status is seven years from the term you matriculated into the doctoral program. Your academic unit must notify the Graduate Degree Certification Office when you have reached this status before the end of the term in which the status is effective. The maximum time

for completion of a doctoral degree is five years from the end of the semester in which you are admitted to candidacy.

#### Dissertation advisor

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

#### Oral Examination

The oral examination committee:

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

The committee chair:

- should have an affinity for the field in which the dissertation was written;
- represents the Dean of the Graduate School;
- typically will be an SU tenured or tenure-track faculty member from outside the department or program in which the dissertation was written; and
- alternatively, may be either a faculty emeritus or College of Law faculty member.

Your dissertation advisor will be a committee member. Other committee members should be tenured or tenure-track SU faculty members. One external member can be included, based on subject-matter expertise; however, this committee member can't be a personal acquaintance. You must petition to include more than one external committee member.

The oral examination:

Prior to the exam, the Graduate Degree Certification Office must verify that you've been admitted to candidacy, and that all supporting documentation has been filed. Your dissertation advisor and academic unit will determine the scheduling of the exam with the approval of the Graduate Degree Certification Office. Each school/college is free to conduct oral exams in the manner considered to be most effective.

The chair of the oral examination committee has several responsibilities:

- Represent the Dean of the Graduate School.
- Preside over the exam and ensure that academic unit and Graduate School policies and regulations are followed.
- Advise the committee as to general exam and questioning procedures.
- Participate in the questioning of the candidate.
- Vote on the outcome, and secure the committee's vote.
- Submit a written report to the Dean of the Graduate School that includes:
  - 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

You are entitled to an explanation from the committee concerning the outcome of the defense.

#### Graduate Certificate Programs

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

Eligibility requirement To be awarded a C.A.S., a student must be matriculated in the certificate program for at least one semester. Matriculation may not be backdated.

## Undergraduate Degree And Certificate Programs

### Undergraduate Degree Programs

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

TABLE F Undergraduate Degree Programs

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

			Completion of a second major within Engineering and Computer Science requires completion of all requirements for each major in addition to the requirements of the dual school/college.
Combined Undergraduate Degree Program			
A combined degree program consists of two degree programs with distinct degree titles that recognize competencies in two essentially different areas pursued simultaneously in the same school/college or two different schools/colleges.	<p>Concurrent admission to a second undergraduate degree program is constrained by NYSED's restrictions regarding second undergraduate degrees and review by the University registrar.</p> <p>Students must meet admissions requirements of both degree programs.</p> <p>For programs involving two schools/colleges, students must fulfill degree requirements in both schools/colleges.</p> <p>Students in combined programs must complete 25 percent additional work beyond the normal requirements for one of the degrees (this may be either the degree with the higher or lower credit-hour requirements, based on the school's/college's determination), e.g., 30 more credit hours for a 120-credit hour degree.</p> <p>The additional credits must be SU credit as defined under the Residency Requirement. Transfer and other credit may be accepted only if the second degree requires more than 25 percent additional credits, and such credit is applied in excess of the 25 percent additional credits.</p>	<p>Two degrees and two diplomas are conferred. The combined programs may be two undergraduate degree programs or an undergraduate and a graduate degree program. See Table H for a list of combined undergraduate-graduate degree programs.</p> <p>Students pursuing a B.A. degree will not be admitted to a second B.A. degree program in the same school/college. Approval for admission to a second B.S. degree program requires a significant difference in overall degree requirements between the two programs.</p> <p>The awarding of the second degree may be either concurrent with, or subsequent to, the awarding of the first.</p>	<p>Programs available as a single degree with dual majors (see Table G) are not available as combined degree programs.</p> <p>There is one formally established undergraduate combined program:</p> <p>Arts and Sciences and Engineering and Computer Science B.A. (or B.S., by petition) in Arts and Sciences and B.S. in Engineering and Computer Science.</p> <p>Students who wish to pursue other combinations of undergraduate degree programs must obtain the prior written permission of both deans.</p>

TABLE G Single Degree Programs with Dual Majors

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

\* Students pursuing a B.S. degree in Arts and Sciences must petition the department offering the major to be formally accepted as candidates.

### Second Undergraduate Degrees

If you previously earned a bachelor's degree at SU or another institution, you may or may not be admissible to a second undergraduate degree program, depending on the disciplinary and professional "proximity" of the completed and proposed programs. NYSED has ruled that "the conferral of two bachelor's or associate degrees should be reserved as a means of recognizing that a candidate has competencies in two essentially different areas: when a

second degree, as opposed to one degree with a double major, is academically justifiable and when the second degree requires one-fourth additional work (i.e., 30 credit hours for a 120-credit hour degree).”

The University registrar, in consultation with the associate provost for academic programs and appropriate academic advisors, will decide whether admission to a second undergraduate degree program is in accord with NYSED’s criteria. If you earned a B.A. degree you will not be admitted to a second B.A. degree program that falls within the same SU school/college (or comparable school/college, if the first degree was earned elsewhere), due to the significant overlap of degree requirements. Approval for admission to a second B.S. degree program requires a significant difference in overall degree requirements between the two degree programs. Students who meet these criteria must also meet all admissions requirements of the program to which they apply. Students whose first degree was earned at Syracuse University must file an Application for Readmission, available from the admitting school/college office. Students with first degrees from other institutions follow the normal admission application procedure.

A minimum of 30 credits for a second undergraduate degree must be Syracuse University credit, as defined under the Residency Requirement. Transfer and other credit may be accepted only if the second degree requires more than 25 percent additional credits, and such credit is applied in excess of the 25 percent additional credits.

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

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

TABLE H Combined Undergraduate/Graduate Degree Programs

Requirements	Notes	School/College Information
<b>Undergraduate/Graduate Teacher Preparation Degree Programs</b>		
Students must fully meet the combined requirements for both degrees.	Undergraduate students are accepted in the combined program through a two-step process: an initial declaration, then an application prior to their first graduate semester. Graduate status is required in the 5th year of study, for the two final semesters. Both degrees are awarded concurrently.  Graduate courses taken in the first four years that count toward fulfillment of graduate requirements are removed from calculation on the undergraduate record and transferred as a block of credits to the graduate record, where the credits apply but grades do not calculate toward the GPA. However, these grades will be used in manually calculating the GPA for all graduate credits toward the Master's degree, to assure that the minimum 3.0 requirement has been met.	Arts and Sciences/Education B.A./M.S. 5-year Teacher Preparation programs
<b>Undergraduate and Other Non-Law Graduate Degree Program</b>		
Students must fully meet the requirements for both degrees.	Students are accepted for graduate study after completion of the third year of study but are not fully matriculated as graduate students until bachelor’s degree requirements have been met. The undergraduate degree is awarded before completion of the graduate degree. Graduate courses taken in the fourth year of study count toward fulfillment of both undergraduate and graduate degree requirements. The graduate courses are included in the undergraduate tuition and appear only on the undergraduate record, and grades calculate only toward the undergraduate GPA. A block of transfer credits labeled as “transferred from SU undergraduate record” appears on the graduate record, if needed, and applies credit hours toward the graduate degree.	There are two formally established combined programs: Engineering and Computer Science B.S. and M.S. in Computer Science; B.S. and M.B.A.  Students who wish to pursue other combinations of undergraduate and graduate degree programs must obtain the prior written permission of both deans.

<b>Undergraduate and Law Graduate Degree Program</b>		
Students must fully meet the requirements for both degrees.	In this program, students matriculate in the law program after completion of the third year of undergraduate study. Courses taken in the first year of law study count toward fulfillment of both undergraduate and law degree requirements. They are billed at the College of Law tuition rate and appear only on the law record, and grades calculate only toward the law GPA. A block of transfer credits labeled as “transferred from SU law record” appears on the undergraduate record and applies credit hours toward the undergraduate degree. The undergraduate degree is awarded before completion of the graduate degree.	
<b>Other Simultaneous Pursuit of Undergraduate and Graduate Degrees</b>		
	In exceptional circumstances requiring approval of the academic department and the Graduate School, undergraduate students may be formally accepted into a graduate degree program prior to completion of undergraduate degree requirements. The status of the student, i.e., whether she/he is considered an undergraduate- or graduate-level student, will be determined upon acceptance to the graduate program. For students who are considered to be undergraduates until completion of undergraduate requirements, courses which apply to the graduate degree will be flagged on the undergraduate record to remove them from calculation there and transferred as a block of credit to the graduate record. For students who are considered to be graduate students, courses taken to fulfill undergraduate degree requirements will be flagged on the graduate record to remove them from calculation there and transferred as a block of credit to the undergraduate record. In both cases, only the credit (i.e., not grades) for the flagged courses will be calculated on the record.	

### Undergraduate Certificate Programs

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

### Degree Certification

School/college officials certify to the Registrar’s Office that degree and certificate requirements have been completed. This process generally takes four to six weeks after degree requirements have been completed. Degrees are awarded for the official date following the completion of degree requirements; the degree award dates fall in May, June or July, August, and December. Only courses that are an integral part of your degree program will be credited toward graduation requirements, in compliance with NYSED requirements.

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

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

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

### Diplomas And Certificates

Diplomas are ordered after program completion has been certified by schools/colleges and posted by the Registrar’s Office. You will receive your diploma/certificate four to six weeks after the certification/posting process has been completed. SU reserves the right to withhold diplomas/certificates from students who are financially delinquent, or at the request of the Office of Judicial Affairs.

Undergraduate diplomas:

- display the degree title;

- display University honors and “Renée Crown University Honors,” when awarded;
- do not list major or minor; and
- are signed by the chancellor and the dean(s) of the student's school(s)/college(s).

Graduate diplomas:

- display the degree title;
- list major, except when already included in the degree title, e.g., Master of Social Work; and
- are signed by the chancellor, the dean of the Graduate School, 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, the dean of the Graduate School, and the dean(s) of the school(s)/college(s) that award the C.A.S.

## Grades

### Grading System

TABLE I Letter Grades

Grades	Grade Points per Credit
A	4.0
A-	3.667
B+	3.333
B	3.0
B-	2.667
C+	2.333
C	2.0
C-	1.667
D <sup>1</sup>	1.0
D- <sup>1,2</sup>	.667
F	0

<sup>1</sup>Grades of D and D- may not be assigned to graduate students.

<sup>2</sup> Available only for Law students in LAW courses.

TABLE J Grading Symbols

GRADING SYMBOLS	Meaning	Grade Points per Credit	Explanation
I	Incomplete	0	Indicates that, due to exceptional circumstances, a student has made a formal arrangement with the instructor to complete remaining work/assignments after the course ends.
AU	Audit	Not counted	Indicates that a student elected to take the course for no (zero) credit.
NA	Did not attend and did not withdraw	Not counted	Indicates that a student never attended the course, or that participation ended so early in the term that there was no basis for evaluation.
NR	Not Required	Not counted	Used for courses or components of courses that do not require a grade.
P	Pass	Not counted	Indicates satisfactory completion of a Pass/Fail-graded course or one for which a student elected

			the Pass/Fail option.
RM	Remedial	Not counted	Used for college-level remedial and developmental courses.
V	Variable length course— grade not yet due	Not counted	Used for courses that do not follow the normal semester timeline. V indicates that normal progress is being made at the end-of-semester point.
WD	Withdrew	Not counted	Indicates that a student withdrew from the course, after the academic drop deadline.

## Grades And Grading Symbols - Additional Information

### Letter Grades

#### Undergraduate Students

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

#### I (Incomplete)

You may request an Incomplete if you have exceptional circumstances that prevent you from fulfilling all course requirements on time. You will need your instructor's approval, and will need to have completed enough course content to have a grade assigned based on your work to date. An Incomplete is not available if you have not completed enough work on which to base a grade. Check with the appropriate instructor about deferred exams and any other requirements. If you take a leave of absence or are withdrawn from the University, you can't receive Incompletes for courses in which you were registered.

Complete a "Request for Incomplete Grade" form, which is an agreement between you and your instructor that specifies the reasons, conditions, and time limit for removing the Incomplete from your record. An Incomplete will calculate as an F in your GPA. As a function of the agreement, your instructor will calculate a grade for you based on work completed to date, counting unsubmitted work as zero. This is the grade you will receive if a "Removal of Incomplete Grade" form is not submitted to the Registrar's Office by the appropriate deadline.

#### AU (Audit)

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

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

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

#### P/F (Pass/Fail)

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

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

#### Undergraduate Students

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

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

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

## School/College Rules

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

**RM (Remedial)**

RM courses count toward credit hours carried in a particular semester, but not toward credit hours earned for the degree.

**WD (Withdraw)**

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

**Reporting Grades/Grading Symbols**

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

**Missing Grades**

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

**Changing Grades**

An instructor may elect to submit a grade change after the grade has already been reported. Grade changes must be reported to the department chair, the dean of the student's home school/college, and the Registrar's Office. Any or all of those offices may require an explanation of the change, and may require that additional information or forms be provided. All changes involving grading symbols must adhere to University policies and procedures. The Registrar's Office has final authority to approve changes that involve grading symbols.

Grades may also be changed in the following circumstances:

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

**Removal Of Incomplete**

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

- complete the outstanding work specified on the Request for Incomplete Grade form by the agreed-upon date; or

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

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

### Incompletes and Graduation

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

After your degree has been certified, a grade may replace an Incomplete only when your home school/college determines that you completed all coursework before the degree award date, with only the evaluation and grade submission occurring after that date.

### Grade Appeals

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

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

\* For further guidance, consult the bylaws of the individual school or college.

\*\* These procedures do not apply for students in the College of Law.

### Grade Point Average

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

### Graduation

Undergraduate students must earn a minimum cumulative GPA of 2.0 in order to be awarded an SU degree. 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.

### Honors

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

## Dean's List

Undergraduate Students

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

School/College	Requirement
Architecture	Minimum GPA of 3.5 for 12-14 letter-graded credit hours taken on campus or a minimum GPA of 3.2 for 15 or more letter-graded credit hours taken on campus.
Arts and Sciences, Education, Engineering and Computer Science, Information Studies, Management, Sport and Human Dynamics, and Visual and Performing Arts	Minimum GPA of 3.4 and a minimum of 12 credit hours of letter grades with no missing or Incomplete grades.
Public Communications	Minimum GPA of 3.5 and a minimum of 12 credit hours of letter grades with no missing or Incomplete grades.
University College	UC students are eligible for the dean's list at the end of each semester (excluding summer) if they earn a 3.4 GPA in the last 12 credit hours taken and have been enrolled in consecutive semesters.

## University Scholars

The Senate Committee on Academic Affairs selects eight to 12 seniors each year as University Scholars.

## Renee Crown University Honors Program

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

## University Honors

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

### GPA Requirement

Cum laude	3.2 for Architecture
	3.4 for all other schools/colleges
Magna cum laude	3.5 for Architecture
	3.6 for all other schools/colleges
Summa cum laude	3.8

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

### School/College Rules

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

## Departmental Distinction

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

## Internal Transfer

Graduate Students

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

# Intra-University Transfer

## Undergraduate Students

Students transferring to other schools/colleges within the University (intra-University transfer) must meet the admission requirements of the new school/college that were in effect at the time of matriculation into the University. Submit internal transfer requests well before the start of the next semester to allow adequate review/processing time. Check with the appropriate school/college undergraduate office, as intra-University transfer deadline dates vary. Until your IUT is approved, you may not be able to register for courses in the new program. See TABLE K for school/college-specific information.

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

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

**TABLE K Intra-University Transfer Standards**

New School/College	Conditions
Architecture	3.0 GPA. Applicants are expected to complete one of MAT 221, MAT 285, MAT 295 or PHY 101. No midyear transfers. Interview and portfolio review required. Application deadline: Friday preceding spring break.
Arts and Sciences	The College will review applications for intra-University transfer on a continuing basis throughout the academic year. Students interested in transferring into the College must attend an informational session in order to obtain the application materials. These meetings are held throughout the semester. The application deadline for acceptance for the fall semester is July 15 and Dec. 15 for the spring semester. Applicants who are making satisfactory progress and have a cumulative grade point average of 3.0 or above will be admitted to the College. Students with a current cumulative GPA below 3.0 should submit a letter with the application, explaining the reason(s) for prior academic problems, why they believe they will be academically successful in the College, and what major they are interested in pursuing. Students who will have junior standing when entering the College must include a plan of study form signed by their intended major department. Incomplete applications will not be considered. The associate dean of advising and support will review applications. Students will be notified by email prior to the start of the semester.
Education	Minimum cumulative GPA of 2.8 for inclusive and special education, inclusive early childhood special education, health and exercise science, selected studies in education, physical education, and health and physical education; 2.8 for secondary education (English, Mathematics, sciences, and social studies); 2.8 for art education; and 3.0 for music education. Students who meet department criteria will be admitted on a space-available basis. An interview with the assistant director of academic advising may be required, and all applications are held until the end of the semester.
Engineering and Computer Science	3.0 GPA. Applicants are required to complete at least one of MAT 295, 296, or 397 (with a grade of B or better) and science (by completing at least one set of PHY 211/221 or CHE 106/107 with a grade of B or better). Students who wish to major in computer science must also complete CIS 252 with a grade of at least a B.
Information Studies	Cumulative GPA of 3.2. Students must earn at least 15 credits in courses graded A-F at Syracuse before transferring. Transfers will normally take place at the beginning of the sophomore year. (Depending upon available spaces, students with GPAs below 3.2 may be considered after completion of IST 195 and IST 233 with grades of B or higher. However, there may be times when GPA requirements will be higher than 3.2 due to space considerations.) They must also meet other criteria as determined by the faculty of the School.
Management	Applicants must earn a 3.3 cumulative GPA and 24 credits at SU, including two of the following: ECN 203, MAT 183, MAT 221, MAT 284 (or equivalent substitutes). Additional applicants may be considered as spaces become available, beginning with the highest GPA. Students should visit the Whitman Undergraduate Office (Room 215) for additional information and advising.
Public Communication	Applicants must complete a minimum of 30 graded (not P/F) credits at SU before they are eligible for internal transfer. Admission is based upon a student's cumulative Syracuse GPA. Applicants who meet the minimum credit qualifications are rank-ordered by GPA and admitted in that order, highest to lowest, until all seats are filled. The cumulative GPA includes all courses taken at SU. The GPA required for admission varies each semester, depending upon the number of spaces available and the number and strength of the applicants. Because Newhouse majors require a minimum of four semesters to complete, juniors and seniors are ineligible to transfer. (A junior is defined as a student who has earned 54 credits.) Application deadlines are Dec. 15 for spring admission and May 1 for fall admission.
Sport and Human Dynamics	GPA variable, depending on major. Departments may have additional criteria. Applicants are required to discuss tentative transfer plans with the academic chair or director of the proposed program of study. Students who meet department criteria will be admitted on a space-available basis. Transfer requests may be held until the end of the semester.
University College	GPA variable, depending on major. Probation students accepted pending the approval and recommendation of the student's school/college.
Visual and Performing Arts	3.0 cumulative GPA required for all programs. Additional requirements: Portfolio for art and design/transmedia; audition for drama and music; essay for Bandier program; interview with department chair for communication and rhetorical studies. Application deadlines for CRS are Oct. 15 for spring admission and Mar. 1 for fall admission. Admission for all programs on a space available basis.

## Leave Of Absence, Withdrawal And Readmission

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

### Leave Of Absence

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

#### Medical Leaves of Absence

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

#### Military Leaves of Absence

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

### Withdrawal

SU will officially withdraw students who are suspended for academic or disciplinary reasons; the suspending school/college or the Division of Student Affairs will initiate the withdrawal. A student who chooses to leave the University rather than participate in the judicial or academic integrity review process will be classified as having been withdrawn for disciplinary reasons. The University may also withdraw students for medical reasons or for academic integrity violations. Officially withdrawn students lose matriculation status; however, matriculation may be reinstated if all requirements for readmission are met (see "Readmission/Termination of Leave of Absence").

**Enforced Medical Withdrawal** An enforced medical withdrawal may be imposed in response to behavior that has its basis in a psychological or other medical condition including, but not limited to, situations in which a student fails to attend and participate actively in an appropriate assessment, educational program, or other intervention; and situations in which student behavior poses a significant health or safety risk to the student or others. The senior vice president and dean of student affairs, or one or more of her/his designees will make the determination that an enforced medical withdrawal should occur, consistent with the process enumerated in the University Judicial System Handbook.

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

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

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

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

**TABLE L Academic And Financial Effects Of Dropping Or Withdrawing From A Course, Leaves Of Absence, And Withdrawal From The University**

Action	Date	Effect on Transcript	Effect on Financial Aid	Effect on Tuition and Fees
Drop a course, take a leave of absence, or be withdrawn from the University	On or before the financial drop deadline (in fall and spring, three weeks from the first day of classes)	Course(s) dropped	For leaves and withdrawals, all financial aid is canceled.	All charges, except the nonrefundable portion, will be refunded. <sup>1</sup>
Drop a course, take a leave of absence, or be withdrawn from the University	After the financial drop deadline and on or before the academic drop deadline <sup>3</sup>	Course(s) dropped <sup>2</sup>	For leaves and withdrawals, see footnote. <sup>1</sup> No adjustments are made for individual dropped courses.	For individual dropped courses, all charges remain. For leaves and withdrawals, see footnote. <sup>1</sup>

Withdraw from a course, take a leave of absence, or be withdrawn from the University	After the academic drop deadline and on or before the course withdrawal deadline	Course(s) remain(s) on transcript with withdrawal (WD) grading symbol <sup>2</sup>	For leaves and withdrawals, see footnote. <sup>1</sup> No adjustments are made for individual dropped courses.	For individual courses, all charges remain. For leaves and withdrawals from the University, see footnote. <sup>1</sup>
Take a leave of absence or be withdrawn from the University	After the course withdrawal deadline	All courses graded "F" <sup>2</sup>	For leaves and withdrawals, see footnote. <sup>1</sup> No adjustments are made for individual dropped courses.	See footnote. <sup>1</sup>

<sup>1</sup> Federal regulations governing refunds and adjustments to federal financial aid, and adjustments to institutional scholarships and grants require careful review. Please see the current Tuition, Fees & Related Policies for details.

<sup>2</sup> Courses completed before the effective date of the leave of absence or withdrawal may be graded.

<sup>3</sup> University College students should consult the Part-Time Studies Course Schedule for interim dates and deadlines.

## Readmission

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

- Your school/college and program must have available space to accommodate your inclusion.
- You may need to satisfy new requirements in your academic program or even change your major, depending upon curricular changes that may have occurred during your absence. Your school/college and/or department will determine the available options.
- You must meet all outstanding SU financial obligations.
- If your leave/withdrawal was conditional, you must resolve the appropriate issues and obtain readmission approval from the academic unit or office that authorized or required your leave/withdrawal.

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

After you're readmitted, you may register for the upcoming semester during the regular registration period, during the schedule adjustment period prior to the start of the semester, or on the registration day for new students at the beginning of the new semester.

### Undergraduate Students

If you are applying for readmission following an academic withdrawal:

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

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

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

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

## Majors

### Undergraduate Students

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

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

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

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

TABLE M Double Majors (In Single Degree Programs)

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

## Minors

### Undergraduate Students

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

### School/College Rules

School/college	Rules
Arts and Sciences	At least 15 of the credit hours for a minor must be SU letter-graded coursework. A maximum of six credits of coursework at the 300 level or above may overlap among all majors and minors. For each major or minor program, all but six credits of upper-division coursework counted toward requirements must be exclusive to that program.
Education	Minors must be declared by the end of the junior year or 6th semester of study.
Management	Normally, at least 15 of the credit hours for a minor must be SU letter-graded coursework. Exceptions are granted by petition only.

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

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

## Registration

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

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

The same rule also applies to internships taken for credit, independent study, experience credit, etc.: You must register during the semester or summer session in which work begins. Retroactive registration is not permitted for such work done without faculty oversight.

Before you register, you will need to clear all holds. If outstanding bills are not paid by Aug. 1 for fall semester, and by Dec. 15 for spring semester, your early registration for the next semester may be canceled and you will be unable to re-register until the semester begins. Your current semester's registration may be canceled if you have not met the University's immunization requirements.

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

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

### Maximum Course Load (Fall And Spring)

#### Graduate Students

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

#### Undergraduate Students

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

### Summer Registration

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

### Maximum Course Load (Summer)

#### Graduate Students

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

#### Undergraduate Students

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

### Graduate Students Taking 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 with a notation to indicate the course is

undergraduate-level and, unless flagged to remove it from calculation, the course counts toward overall credit and GPA calculations on the transcript. However, an undergraduate-level course does not fulfill graduate degree requirements.

## Undergraduates Taking Graduate-Level Courses

Registration for a graduate-level course is subject to a variety of restrictions, depending upon how the course is intended to apply toward your undergraduate or graduate degree requirements. Taking a graduate course as restricted graduate credit, with the intention of later applying it toward a graduate degree or certificate program, requires prior approval.

A graduate course taken by an undergraduate appears on the undergraduate section of the transcript with a notation to indicate the course is graduate level, and the course counts toward overall undergraduate credit and GPA calculations. However, a graduate-level course neither fulfills undergraduate degree requirements (unless it has specifically been approved for that purpose, either as part of the degree program's requirements or by petition prior to registration), nor does it count toward calculations for certification, e.g., for University honors.

## Changes To Registration

You may make changes to your registration after the semester begins, adding, dropping, or withdrawing from classes in accordance with published deadlines. Courses with nontraditional start and/or end dates have different deadlines than full-semester courses. While the student normally initiates registration and subsequent changes, the student's school(s)/college(s) of enrollment may also initiate such actions. Instructors also have the option to administratively drop students who do not attend the first week of classes (up to and including the add deadline). The administrative drop option for instructors is not available in Maymester.

The Health Center or the Bursar's Office may cancel your registration. No other University persons or units may make substantive changes to an undergraduate student's schedule of classes without first securing the formal permission of your home school/college.

## Religious Observances, Policy On

SU recognizes the diverse faith traditions represented among its campus community and supports the rights of faculty, staff, and students to observe according to these traditions. Students are asked to consider that it is more difficult to arrange appropriate accommodations in some kinds of courses, e.g., those that have certain kinds of laboratories or a significant experiential learning component, so students should consider their need for accommodation for religious observances as they plan their schedule each semester. Students should recall that not every course is offered every academic year and that the catalog indicates how frequently each course is offered.

Faculty are asked to make appropriate accommodation for students' observance needs by providing an opportunity to make up any examination, study, or work requirement that is missed because of an absence due to a religious observance, provided the instructor has been notified no later than the end of the second week of classes. No fees will be charged to the student for the costs incurred by the University for such make-up work. If a faculty member is unwilling or unable to make an appropriate accommodation, the student should consult his or her academic dean.

## Research Involving Human Or Animal Subjects

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

## Residency Requirement

All students must complete a minimum number of credit hours at SU in courses offered through duly registered graduate programs order to be granted a Syracuse University degree. Advanced Credit (AC) exams may not be applied toward the residency requirement.

### Graduate Students

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

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

### Undergraduate Students

You must take at least 30 credit hours of coursework at SU to qualify for the degree; in most cases more than 30 credits will be required in order to fulfill degree requirements. Work necessary to complete a major must be completed at SU unless a waiver is granted by the appropriate major department.

SU courses taken while a student is matriculated at SUNY ESF do count toward the residency requirement. ESF courses taken while a student is matriculated either at SUNY ESF or at SU do not count toward the SU residency requirement.

University College Candidates for associate's degrees, bachelor of liberal studies degrees, or bachelor of professional studies degrees must complete a minimum of 30 credit hours of SU coursework while enrolled as part-time students at University College. Credits earned at SU while enrolled as a full-time student do not count toward this requirement.

## Retaking Courses

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

- Language courses A course cannot be retaken once you have successfully completed a higher level course in the same language.
- Mathematics courses A course cannot be retaken once you have completed a higher level course in the same mathematics curriculum sequence with a grade of C or better.

Table A describes other rules for undergraduates who want to retake courses. Also see “Flagging Courses That Have Been Retaken.” Note that retaken courses may not count toward eligibility and satisfactory progress requirements for certain types of financial aid awards.

### Graduate Students

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

## Student Academic Work

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

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

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

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

## Student Status

### Enrolled Students

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

### Matriculated Students

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

### Non-Matriculated Students

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

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

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

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

### Full-Time And Part-Time Status

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

### Graduate Students

#### Full-time

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

- 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

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.

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

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

#### Undergraduate Students

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

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

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

Undergraduates enrolled for fewer than 12 credit hours are considered to be part time.

Exception: Engineering and Computer Science Students registered in the Cooperative Education program for zero hours in semesters when they are on work assignments are considered to be full time.

The number of credit hours carried by a part-time student may affect eligibility for University housing and financial aid. For purposes of financial aid, students registered for 9-11 credit hours are considered three-quarter time; students registered for 6-8 credit hours are considered half-time students; students registered for 0-5 credit hours are considered less than half time.

## Transcript

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

Transcripts of courses taken and degrees received at SU are maintained by the Registrar's Office in accordance with the policies of the American Association of Collegiate Registrars and Admissions Officers. Official transcripts show the entire record of all coursework, both undergraduate and graduate, matriculated and non-matriculated. Undergraduate and graduate transcript records print separately, but are issued and sent together for students with more than one SU academic career. Coursework is displayed chronologically within each career record, with one GPA calculation for the career. However, within that distinction the transcript is not degree-specific: i.e., it does not designate courses that apply to multiple specific degree programs at the same level. Such information may only be obtained from the student's school/college for undergraduate degrees; the academic department for graduate programs; or the College of Law for law degrees.

All courses taken at SU Abroad centers are listed on students' transcripts. Credit hours and grades are computed in the GPA in the same manner as any other Syracuse University courses. Courses taken through SU Abroad at foreign institutions may be listed on students' transcripts with credit hours and grades computed in the GPA in the same manner as any other Syracuse University course, or as transfer credit, as determined by SU departmental review.

SU does not maintain a transcript record of SU courses taken by SUNY ESF students. For ESF students, ESF is the college of record. ESF courses taken by matriculated SU students appear on the SU transcript and calculate in the same way as SU courses, except for graduate students admitted to concurrent master's degree programs.

Transcripts may be obtained from the Registrar's Office. The student's signature must appear on all transcript requests. Students making a request in person must present appropriate identification. SU reserves the right to withhold copies of transcripts of students who have unfulfilled financial obligations to the University or by request of the Office of Judicial Affairs.

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

## Academic Offerings

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OFFERING	MINIMUM CREDITS REQUIRED	HEGIS
Accounting		0502

M.S.	30	
Addiction Studies		2201
C.A.S.	18	
Advertising		0604
M.A.	36	
Aerospace Engineering/Business Administration (Combined U/G)		0902,0506
BS/MBA	150	
African American Studies (Tch Prep)/Social Studies Ed: Prep 7-12 (5 Yr) (Combined U/G)		2211,2201
BA/MS	150	
Anthropology		2202
M.A.	30	
Ph.D.	72	
Anthropology (Tch Prep)/Social Studies Ed: Prep 7-12 (5 Yr) (Combined U/G)		2202,2201
BA/MS	150	
Applied Statistics		1702
M.S.	33	
Architecture - M.Arch I		0202
M.Arch.	110	
Architecture - M.Arch. II		0202
M.Arch.	30	
Art Education: Preparation		0831
M.S.	42	
Art Education: Professional Certification		0831
M.S.	30	
Art History		1001
M.A.	30	
Art Photography		1011
M.F.A.	60	
Art Video		1010
M.F.A.	60	
Arts Journalism		0602
M.A.	36	
Arts Leadership Administration		1099
C.A.S.	15	
M.A.	39	
Audio Arts		0599
M.A.	36	
Audiology		1220
Au.D.	92	
AuD/PhD	110	
Ph.D.	82	
Bioengineering		0905
M.S.	30	
Ph.D.	42	
Bioengineering/Business Administration (Combined U/G)		0905,0506

BS/MBA	150	
Biology		0401
M.S.	30	
Ph.D.	48	
Biology (Tchr Prep)/Science Ed (Biology): Prep 7-12 (5 Yr) (Combined U/G)		0401
BA/MS	150	
Biomedical Forensic Sciences		1999
M.S.	34	
Broadcast and Digital Journalism		0603
M.S.	40	
Business Administration		0506
M.B.A.	54	
Ph.D.	72	
Ceramics		1009
M.F.A.	60	
Chemical Engineering		0906
M.S.	30	
Ph.D.	42	
Chemical Engineering/Business Administration (Combined U/G)		0906,0506
BS/MBA	150	
Chemistry		1905
M.S.	30	
Ph.D.	48	
Chemistry (Tchr Prep)/Science Ed (Chem): Prep 7-12 (5 Yr) (Combined U/G)		1905,1905
BA/MS	150	
Child & Family Health in the Global Community		1214
M.S.	36	
Child and Family Studies		1305
M.A.	30	
M.S.	30	
Ph.D.	72	
Civil Engineering		0908
M.S.	30	
Ph.D.	48	
Civil Engineering/Business Administration (Combined U/G)		0908,0506
BS/MBA	150	
Civil Society Organizations		2102
C.A.S.	15	
Clinical Mental Health Counseling		2104
M.S.	60	
Clinical Psychology		2003
Ph.D.	90	
College Science Teaching		4999
Ph.D.	90	
Communication and Rhetorical Studies		1506

M.A.	33	
M.S.	33	
Communications Management		0599
M.S.	36	
Composition and Cultural Rhetoric		1599
Ph.D.	75	
Computational Linguistics		0799.00
M.S.	36	
Computer and Information Sci. & Engineering		0799
Ph.D.	52	
Computer Art		1009
M.F.A.	60	
Computer Engineering		0999
C.E.	60	
M.S.	30	
Computer Engineering/Business Administration (Combined U/G)		0999,0506
BS/MBA	150	
Computer Science		0701
M.S.	30	
Computer Science/Business Administration (Combined U/G)		0701,0506
BS/MBA	150	
Computer Science/Computer Science (Combined U/G)		0701,0701
BS/MS	150	
Conducting		1004
M.Mus.	35	
Conflict Resolution		2199
C.A.S.	12	
Counseling and Counselor Education		0806
Ph.D.	90	
Creative Writing		1507
M.F.A.	48	
Cultural Foundations of Education		0821
C.A.S.	60	
M.S.	30	
Ph.D.	90	
Cultural Heritage Preservation		1099
C.A.S.	15	
Cybersecurity		0701
C.A.S.	12	
Data Science		0799
C.A.S.	15	
Digital Libraries		1499
C.A.S.	18	
Disabilities Studies		2199
C.A.S.	15	

Documentary Film and History		0605
M.A.	39	
Drama		1007
M.A.	30	
M.F.A.	30	
Early Childhood Special Education		0808
M.S.	36	
Earth Sciences		1917
M.A.	30	
M.S.	30	
Ph.D.	72	
Earth Sciences (Tchr Prep)/Science Ed (Earth Sci): Prep 7-12 (5 Yr) (Combined U/G)		1917,1917
BA/MS	150	
Econometrics		0503
C.A.S.	15	
Economics		2204
M.A.	30	
Ph.D.	72	
Economics (Tchr Prep)/Social Studies Ed: Prep 7-12 (5 Yr) (Combined U/G)		2204,2201
BA/MS	150	
Economics/IR Joint Master's		2204,2210
M.A., M.A.	58	
Educational Leadership		0827
C.A.S.	60	
Ed.D.	90	
M.S.	30	
Educational Technology		0899
C.A.S.	15	
E-Government Management and Leadership		0599
C.A.S.	12	
Electrical & Computer Engineering		0999
Ph.D.	52	
Electrical Engineering		0909
E.E.	60	
M.S.	30	
Electrical Engineering/Business Administration (Combined U/G)		0909,0506
BS/MBA	150	
Engineering Management		0913
M.S.	36	
English		1501
M.A.	30	
Ph.D.	72	
English and Textual Studies (Tch Prep)/English Ed:Prep 7-12 (5 Yr) (Combined U/G)		1502,1501
BA/MS	150	
English Education: Preparation 7-12		1501.01

M.S.	40	
Entrepreneurship & Emerging Enterprises		0509
M.S.	30	
Environmental Engineering		0922
M.S.	30	
Environmental Engineering Science		0922
M.S.	30	
Environmental Engineering/Business Administration (Combined U/G)		0922,0506
BS/MBA	150	
European Union & Contemporary Europe		0310
C.A.S.	12	
Executive Master in International Relations		2210
M.A.	30	
Executive Master of Public Administration		2102
M.P.A.	30	
Exercise Science		1299.30
M.S.	36	
Experimental Psychology		2002
Ph.D.	90	
Film		1010
M.F.A.	60	
Finance		0504
M.S.	30	
Forensic Science		1999
M.S.	34	
French and Francophone Studies		1102
M.A.	30	
Geography		2206
M.A.	30	
Ph.D.	72	
Geography (Tch Prep)/Social Studies Ed: Prep 7-12 (5 Yr) (Combined U/G)		2206,2206
BA/MS	150	
Global Enterprise Technology		0799
C.A.S.	15	
Global Health		1214
C.A.S.	19	
Health Services Management and Policy		1202
C.A.S.	12	
Higher/Postsecondary Education		0805
M.S.	36	
Ph.D.	90	
History		2205
M.A.	30	
Ph.D.	72	

BA/MS	150	
Illustration		1009
M.F.A.	60	
Inclusive Special Educ: 1-6 Preparation		0808
M.S.	32	
Inclusive Special Educ. Severe/Multiple Disabilities		0808
M.S.	31	
Inclusive Special Education 7-12 Generalist		0808.00
M.S.	31	
Independent Study MBA (iMBA)		0506
M.B.A.	54	
Information Innovation		0799
C.A.S.	15	
Information Management		0702
D.P.S.	51	
M.S.	30	
Information Science and Technology		0702
Ph.D.	78	
Information Security Management		0799
C.A.S.	15	
Information Systems and Telecommunications Management		0799
C.A.S.	15	
Information, Technology, and Policy, and Mgt.		0799
C.A.S.	12	
Instructional Design Foundations		0899
C.A.S.	12	
Instructional Design, Development, and Evaluation (IDD&E)		0899
C.A.S.	60	
M.S.	30	
Ph.D.	90	
Instructional Technology		0899
M.S.	37	
International Relations		2210
M.A.	40	
International Relations (Tch Prep-5 yr.)/Social Studies Ed: Prep 7-12 (5yr.) (Combined U/G)		2210,2201
BA/MS	150	
International Relations/Public Administration Joint Program		2210,2102
M.A.	58	
M.P.A.	58	
Jewelry and Metalsmithing		1009
M.F.A.	60	
Language Teaching: TESOL/TLOTE		1508
C.A.S.	12	

Latin American/Caribbean Studies		0308
C.A.S.	12	
Latino-Latin American Studies (Tch Prep)/Social Studies Ed: Prep 7-12 (5 Yr) (Combined U/G)		0308,2201
BA/MS	150	
Law		1401
J.D.	87	
Law LLM		1401
LLM	24	
Law/Advertising		1401, 0604
J.D./M.A.		
Law/Arts Journalism		1401, 0602
J.D./M.A.		
Law/Computer Science		1401,0701
J.D./M.S.		
Law/Cultural Foundations of Education		1401,0821
J.D./M.S.		
Law/Documentary Film & History		1401, 0605
J.D./M.A.		
Law/Forensic Science		1401,1999.20
J.D./M.A.		
Law/History		1401, 2205
J.D./M.A.		
Law/International Relations		1401, 2201
J.D./M.A.		
Law/Library Science		1401,1601
J.D./M.S.		
Law/Magazine, Newspaper, & Online Journalism		1401, 0602
J.D./M.A.		
Law/Management		1401,0599
J.D./M.B.A.		
Law/Media Management		1401, 0605
J.D./M.S.		
Law/Media Studies		1401, 0605
J.D./M.A.		
Law/Philosophy		1401, 1509
J.D./Ph.D.		
Law/Photography		1401, 1011
J.D./M.S.		
Law/Political Science		1401, 2207
J.D./M.A.		
J.D./Ph.D.		
Law/Public Administration		1401, 2101
J.D./M.P.A.		
Law/Public Relations		1401, 0604
J.D./M.S.		

Law/Social Work (Licensed Clinical) LCSW/JD		1401, 2104.10
Law/Social Work (Licensed Master) LMSW/JD		1401,2104.10
Law/Television, Radio, & Film J.D./M.A.		1401, 0603
Leadership in International and Non-Governmental Organizations C.A.S.	12	2102
Library and Information Science M.S.	42	1601
Library and Information Science: School Media M.S.	37	0899.01
Linguistic Studies M.A.	30	1505
Literacy Education M.S.	36	0830
Literacy Education Birth - Grade 6 M.S.	36	0803
Literacy Education Grades 5-12 M.S.	36	0830
Magazine, Newspaper, and Online Journalism M.A.	36	0602
Marriage and Family Therapy M.A. Ph.D.	60 90	1305
Mass Communications Ph.D.	90	0605
Mathematics M.S. Ph.D.	30 90	1701
Mathematics (Tch Prep)/Mathematics Ed: Prep 7-12 (5 Yr) (Combined U/G) BA/MS	150	1701,1701
Mathematics Education Ph.D.	90	0833
Mathematics Education Preparation 7-12 M.S.	43	1701.01
Mechanical and Aerospace Engineering M.S. Ph.D.	30 48	0910
Mechanical Engineering/Business Administration (Combined U/G) BS/MBA	150	0910,0506
Media Studies M.A.	36	0605
Medicolegal Death Investigation		1999

C.A.S.	12	
Microwave Engineering		0909
C.A.S.	18	
Middle Eastern Affairs		0309
C.A.S.	12	
Museum Studies		1099
M.A.	33	
Music Composition		1004.10
M.Mus.	35	
Music Education Professional Certification		0832
M.Mus.	33	
M.S.	33	
Music Education: Preparation		0832
M.S.	47	
New Media Management		0605
M.S.	36	
Nutrition Science		1306
M.A.	36	
M.S.	30	
Ph.D.	78	
Organ		1004
M.Mus.	32	
Painting		1002
M.F.A.	60	
Pan African Studies		0305
M.A.	30	
Percussion		1004
M.Mus.	35	
Philosophy		1509
M.A.	30	
Ph.D.	63	
Photography		1011
M.S.	30	
Physics		1902
M.S.	30	
Ph.D.	48	
Physics (Tchr Prep)/Science Ed (Physics): Prep 7-12 (5 Yr) (Combined U/G)		1902
BA/MS	150	
Piano		1004
M.Mus.	36	
Policy Studies (Tch Prep)/Social Studies Ed: Prep 7-12 (5 Yr) (Combined U/G)		2102,2201
BA/MS	150	
Political Science		2207
M.A.	30	
Ph.D.	72	

Political Science (Tch Prep)/Social Studies Ed: Prep 7-12 (5 Yr) (Combined U/G)		2207,2201
BA/MS	150	
Post-Conflict Reconstruction		2299
C.A.S.	12	
Printmaking		1009
M.F.A.	60	
Professional Accounting (distance)		0502
M.S.	30	
Professional Practice in Educational Technology		0899
C.A.S.	24	
Public Administration		2102
C.A.S.	12	
M.P.A.	40	
Ph.D.	81	
Public Diplomacy - Dual Degree Int'l Rel., Public Rel.		2210, 0604
M.A., M.S.	58	
Public Health		1214
C.A.S.	15	
Public Infrastructure Management and Leadership		2102
C.A.S.	15	
Public Management and Policy		2101
C.A.S.	12	
Public Relations		0604
M.S.	36	
Religion		1510
M.A.	30	
Ph.D.	78	
School Counseling		0826.01
M.S.	48	
School Counseling-P/P		0826.01
C.A.S.	60	
School District Business Leader (Professional Certification)		0827
C.A.S.	60	
School Library Media		0899.01
C.A.S.	21	
School Psychology		0826.02
Ph.D.	90	
Science Education		0834
C.A.S.	60	
Ph.D.	90	
Science/Biology Education Preparation 7-12		0401.01
M.S.	40	
Science/Chemistry Education Preparation 7-12		1905.01

M.S.	40	
Science/Earth Sciences Education Preparation 7-12		1917
M.S.	40	
Science/Physics Education Preparation 7-12		1902
M.S.	40	
Sculpture		1002
M.F.A.	60	
Security Studies		2102
C.A.S.	12	
Social Psychology		2005
Ph.D.	90	
Social Science		2201
Ph.D.	72	
Social Science (distance)		2201
M.S.	30	
Social Studies Education: Preparation 7-12		2201.01
M.S.	40	
Social Work		2104
M.S.W.	60	
Social Work Advanced Standing Program		2104
M.S.W.	36	
Social Work and Marriage and Family Therapy Dual Degree		1305,2104
M.A., M.S.W.	96	
Sociology		2208
Ph.D.	72	
Sociology (Tch Prep)/Social Studies Ed: Prep 7-12 (5 Yr) (Combined U/G)		2208,2201
BA/MS	150	
South Asia Studies		0303
C.A.S.	12	
Spanish Language Literature and Culture		1105
M.A.	33	
Special Education		0808
Ph.D.	90	
Speech Language Pathology		1220, 0815
M.S.	42	
Ph.D.	83	
Sport Venue & Event Management		0599
M.S.	36	
Strings		1004
M.Mus.	36	
Structural Biology, Biochemistry, and Biophysics		0415
Ph.D.	42	
Student Affairs Counseling		0826
M.S.	48	

Supply Chain Management		0506
M.S.	30	
Sustainable Enterprise		0420
C.A.S.	15	
Systems Assurance		0799
C.A.S.	21	
Teaching and Curriculum		0829
M.S.	30	
Ph.D.	90	
Teaching English Language Learners (TELL)		1508
M.S.	30	
Telecommunications and Network Management		0799
M.S.	36	
Television-Radio-Film		0603
M.A.	36	
Voice		1004
M.Mus.	36	
Wind Instruments		1004
M.Mus.	35	
Women's and Gender Studies		4902
C.A.S.	12	
Women's and Gender Studies (Tch Prep)/Social Studies Ed: Prep 7-12 (5 Yr) (Combined U/G)		4903,2201
BA/MS	150	

## Other Programs

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### English Language Institute

Geraldine de Berly, Director  
700 University Avenue, 315-443-2390  
FAX: 315-443-1530  
elimail@uc.syr.edu  
<http://eli.syr.edu/>

The English Language Institute (ELI) offers English language instruction to international students and visiting professionals. It is administered through University College and offers instruction, from beginner to advanced levels.

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

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

Completion of the Level 4 (high intermediate) course will waive the University TOEFL requirement for undergraduates.

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

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### iLEARN

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

The Center for Innovative Learning (iLEARN) of the College of Arts and Sciences supports a variety of innovative educational programs and undergraduate research activities in the College and its departments. It also serves as a clearinghouse for information about undergraduate research and other innovative learning opportunities, as well as a source of encouragement and support for their further development.

The center helps students complement traditional classroom and laboratory work with enhanced out-of-classroom learning experiences. These experiences represent active learning at its best, tapping students' creativity, curiosity, and drive. These kinds of opportunities also enable students to apply their knowledge and skill to independent research and other scholarly projects that address real world problems, and give them the kinds of experiences helpful in making career choices.

Exemplary programs:

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

Funding opportunities:

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

Courses/Credits:

Each credit-earning program listed under iLEARN has its own courses or credit-bearing numbers available for use by eligible students.

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### Mary Ann Shaw Center For Public & Community Services

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 co-curricular service opportunities at nonprofit and/or public organizations. Every college within the University offers community based service learning/research opportunities for students.

#### The Program

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

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

The SHAW CENTER works with students, faculty, teaching assistants, academic administrators, and community site partners and supervisors to assist in successfully implementing community based learning opportunities. The SHAW CENTER provides information about placement options; orientation to the community; assistance when there are questions; transportation (on a 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.

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## Renee Crown University Honors Program

Professor Stephen Kuusisto, Director  
306 Bowne Hall, 315-443-2759

The Renée Crown University Honors Program is a selective, demanding, and rewarding program for outstanding students who seek intense intellectual challenge and are prepared to invest the extra effort it takes to meet that challenge. It is marked by four distinguishing characteristics:

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

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

#### DEPTH

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

#### BREADTH (the following three requirements):

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

#### B. Disciplinary Diversity

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

C. Interdisciplinary Work (one of the following three options):

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

COMMAND OF LANGUAGE (the following four requirements):

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

GLOBAL AWARENESS (two of the following ten options; at least one must be non-Eurocentric in its focus):

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

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

CIVIC ENGAGEMENT:

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

COLLABORATIVE CAPACITY (one of three options):

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

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

All courses taken to fulfill the above requirements must be completed with a grade of B or better. Honors students must complete the program with a grade point average at least at the cum laude level in their home schools or colleges (for School of Architecture students, 3.2; for 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/current-students/courses-seminars/>.

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## 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 first 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, 315-443-1752; or Air Force ROTC, 315-443-2461; or visit us .

Air Force Reserve Officer Training Corps  
Lt. Col. Jonathan Landis  
Professor of Aerospace Studies  
303 Archbold, 315-443-2461

The goal of the Air Force Reserve Officer Training Corps is to commission second lieutenants in the U.S. Air Force. Students completing the Air Force ROTC training program will serve as Air Force officers on active duty for a minimum of four years after graduation. These students will have learned to exercise leadership, think critically and creatively, and communicate effectively. All cadets are required to complete the Air Force ROTC course sequence. The ROTC academic courses are cross-listed with other University departments and colleges, allowing academic credit toward degree requirements.

Students in the Air Force ROTC program enroll in an aerospace studies (ASC) course each semester. ASC 205/PAF 275 and ASC 206/PAF 276 are taken during the first year and ASC/HST 295 and ASC/HST 296 are taken during the sophomore year. These courses comprise the general military course and meet one hour a week.

During the junior year, students enroll in ASC 305/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 Kubala  
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 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-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 (first-year and sophomore students) receive instruction in physical conditioning, first aid, effective writing, and human behavior. The basic course does not obligate students to any military service and only requires two to three hours a week.

After successful completion of basic-course requirements, students can enroll in advanced ROTC, which requires five to eight hours a week.

In the junior year cadets prepare for advanced camp, which takes place at an active duty Army base, during the summer between the junior and senior year.

Students study military leadership and management, map reading, advanced physical conditioning, military ethics, professionalism, and law. These courses, if cross-listed with other academic courses, may be taken for academic credit.

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

#### Aerospace Studies Courses

##### GENERAL MILITARY

ASC 101,102/201,202

ASC 205/PAF 275

ASC 206/PAF 276

ASC/HST 295

ASC/HST 296

##### PROFESSIONAL OFFICER

ASC 301,302/401,402

ASC 305/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

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## 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, University-wide study clinics, 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@svr.edu](mailto:ssui@svr.edu), or visit the [web site](#).

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## SU Abroad

### Syracuse University Abroad

106 Walnut Place

Margaret Himley, Associate provost for international education and engagement

1-800-235-3472, [suabroad@svr.edu](mailto:suabroad@svr.edu), <http://suabroad.svr.edu>

Did you know that nearly 40 percent of Syracuse University students study in another country with SU Abroad? Consistently ranked as one of the nation's highest quality programs, SU Abroad offers a variety of options and signature features:

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

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

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

## Undergraduate Research

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

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

### FACULTY PARTICIPATION

The program offers Arts and Sciences faculty members a chance to extend and expand the character of their teaching in the undergraduate context, to work closely with self-selecting, highly motivated students, to attract excellent students to continued study in their particular field of study, and to open both internal and external funding possibilities by way of undergraduate involvement in their work. Faculty projects open to this involvement are invited and listed on a semester-by-semester basis, although individual projects may extend beyond a semester in length or be repeated or relisted as appropriate. The character and requirements of these projects, as well as the number of credits involved, vary greatly, since they come from across the disciplines of the College of Arts and Sciences. The common criterion for all, however, is appropriateness to an educational credit-bearing experience for qualified undergraduate students.

For more information about the Undergraduate Research Program please visit our website

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## Defense Comptrollership Program

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

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

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

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

### First Quarter--Summer (12 credits)

MBC 601 -- Economic Foundation of Business (1½)  
MBC 602 -- Economics of International Business (1½)  
MBC 603 -- Creating Customer Value (1½)  
MBC 604 -- Managing the Marketing Mix (1½)  
MBC 638 -- Data Analysis (3)  
PPA730 -- Dispute Resolution for Public Managers (3)

### Second Quarter--Fall (15 credits)

PAI 897 -- Policy Analysis (3)  
MBC 606 -- IT for Decision Making (1½)  
MBC 607 -- Understanding Financial Statements (1½)  
MBC 608 -- Creating Financial Statements (1½)  
MBC 610 -- Ideation (1½)  
SMC 656 -- Project Management (3)  
PAI 895 -- Mid-Career Seminar: Managerial Leadership or PAI Elective Choice (3)

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

PAI 742 -- Public Administration and Law or PAI Elective Choice (3) (Winter)  
FIN600 -- Bank Management (1½)

MBC 609 -- Accounting for Managerial Decisions (1½)  
MBC 616 -- Operations Management (1½)  
MBC 617 -- Supply Chain Management (1½)  
MBC 618 -- Competitive Strategy (1½)  
MBC 619 -- Corporate Strategy (1½)  
MBC 627 -- Financial Markets and Institutions (1½)  
MBC 628 -- Fundamentals of Financial Management (1½)  
PAI 895 -- Mid-Career Seminar: Managerial Leadership or PAI Elective Choice (3)

Fourth Quarter--Summer (15 credits)  
One week visit to Washington, DC  
ACC 760 -- Fraud Examination (3)  
BUA 600 -- Seminar in Resource Management (3)  
BUA 786 -- Seminar in Comptrollership and CDFM (3)  
MBC 647 -- Consulting Project (3)  
PAI 996 -- Master's Project (3)

\* 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.

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## Master Of Public Health (CNYMPH) Program Overview

Contact: Thomas H. Dennison, Ph.D., Associate Director

426 Eggers Hall; 315-443-9060; thdennis@maxwell.syr.edu

[www.upstate.edu/cnymph](http://www.upstate.edu/cnymph)

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, L.C. Smith 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.

A certificate of Advanced Study in Public Health (CASPH) a 5 course (15-credit hour) program of study, is also offered. 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.

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](http://www.upstate.edu/cnymph/academic/mph_degree/how_to_apply.php)

# 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 above link.

## Guide To Reading Descriptions

### EXAMPLE 1

CHE 477 Preparation and Analysis of Proteins and Nucleic Acids College of Arts & Sciences

Crosslisted with: BCM 477

Double Numbered with: CHE 677

3 Credits - Offered at least 1 time, fall or spring

Experimental methods for biologically synthesizing and chemically purifying macromolecules in order to analyze their structure and function, including: polymerase chain reaction; site-directed mutagenesis; Protein expression and purification; nucleic acid and protein electrophoresis. Additional work required of graduate students. PREREQ: CHE 474 or BIO 326 or BIO 575

CHE 477 — course subject = CHE (Chemistry) (see “Glossary of Course Subjects) and catalog number = 477.

Preparation and Analysis of Proteins and Nucleic Acids — course title.

College of Arts and Sciences — the school, college, or academic unit offering the course.

Crosslisted\* with: BCM 477— course is crosslisted with a course in Biochemistry, BCM 477.

\*Crosslist: Two or more different subjects, same or different course numbers, but with the same title and catalog description, e.g., CHE/BCM 477.

Crosslisting may occur within a school or college, or between schools/colleges.

Double Numbered\*\* with: CHE 677 — Course is also offered as CHE 677.

\*\*Double Number: Same subject, two different course numbers at the same or different levels, usually undergraduate and graduate, e.g., CHE 477/677.

3 Credits — number of academic credits the course carries. Variable credit courses show a range of credits, e.g. 1-3 credits.

Offered at least 1x fall or spring — Indicates frequency of offering. Courses may be offered every semester, at least once a year, only in academic years ending in an odd year (2012-2013) or in an even year (2013-2014); during a summer session, irregularly, or based on sufficient student interest.

Experimental methods for biologically synthesizing and chemically purifying macromolecules in order to analyze their structure and function, including: polymerase chain reaction; site-directed mutagenesis; Protein expression and purification; nucleic acid and protein electrophoresis. Additional work required of graduate students. — Course description

PREREQ: CHE 474 or BIO 326 or BIO 575 — A prerequisite (PREREQ) is a course or condition that must be successfully completed or met before enrollment is possible in the course described. A course may also have a corequisite (COREQ), which requires concurrent enrollment.

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

SED 340 Participation in the Professional Development School 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 three 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 1-3 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. Student registers for the course at the foreign institution and is graded according to that institution's practice. SU Abroad works with SU's academic department to assign the appropriate course level, title, and grade for the student's transcript.
- **INDEPENDENT STUDY**  
(Subject) (Catalog Number) Independent Study 1-6 credits  
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department. May be repeated for credit.
- **HONORS THESIS**  
(Subject) 499 Honors Thesis 3-6 credits  
The "499" number is used as needed by all departments in the University. Students sign up for Honors Thesis the same way they do for the other

all-University courses - by filling out a form at registration each time they register for the course.

Course Numbering for All-University Courses

	Lower-division	Upper-division	1 <sup>st</sup> year graduate	Advanced graduate
Selected topics	100, 200	300, 400, 500	600	900
Experience credit	170, 270	370, 470, 570	670	970
International	180, 280	380, 480, 580	680	980
Independent study	190, 290	390, 490, 590	690	990
Honors thesis		499		

## Course Subjects

AAA Asian/Asian American Studies (The College of Arts and Sciences)  
AAS African American Studies (The College of Arts and Sciences)  
ACC Accounting (The Martin J. Whitman School of Management)  
ACT Applied Computer Technologies (University College)  
ADD Advertising Design (School of Art and Design)  
ADF Art & Drama of Film (Drama)  
ADV Advertising (S.I. Newhouse School of Public Communications)  
AED Art Education (School of Education)  
AEE Aerospace Engineering (L.C. Smith College of Engineering and Computer Science)  
AJP Arts Journalism (S.I. Newhouse School of Public Communications)  
ALP Arts Leadership Administration (The College of Arts and Sciences)  
AMC Applied Music (Setnor School of Music)  
AMH Amharic (The College of Arts and Sciences)  
AMP Art Media Program (School of Art and Design)  
AMS American Studies (The College of Arts and Sciences)  
ANT Anthropology (The College of Arts and Sciences)  
APH Art Photography (School of Art and Design)  
ARA Arabic (The College of Arts and Sciences)  
ARB Arabic (The College of Arts and Sciences)  
ARC Architecture (School of Architecture)  
ARD Urban Design (School of Architecture)  
ART Art (School of Art and Design)  
ASL American Sign Language (School of Education)  
AST Astronomy (The College of Arts and Sciences)  
ATE Adult Education (School of Education)  
BCM Biochemistry (The College of Arts and Sciences)  
BDJ Broadcast and Digital Journalism (S.I. Newhouse School of Public Communications)  
BED Business Education (The Martin J. Whitman School of Management)  
BEN Bioengineering (L.C. Smith College of Engineering and Computer Science)  
BFA Basic Art (Freshmen) (School of Art and Design)  
BGR Bulgarian (The College of Arts and Sciences)  
BIB Bible Studies (The College of Arts and Sciences)  
BIO Biology (The College of Arts and Sciences)  
BNG Bengali (The College of Arts and Sciences)  
BPS Bachelor of Professional Studies (University College)  
BRI Brass Instruments (Setnor School of Music)  
BRY Biochemistry (The College of Arts and Sciences)  
BSN Bassoon (Setnor School of Music)  
BTB Tuba (Setnor School of Music)  
BUA Business Administration (The Martin J. Whitman School of Management)  
BUE Business Economics (The Martin J. Whitman School of Management)  
CAR Computer Art (School of Art and Design)  
CAS College of Arts and Sciences (The College of Arts and Sciences)  
CCR Composition and Cultural Rhetoric (The College of Arts and Sciences)  
CEN Chemical Engineering (L.C. Smith College of Engineering and Computer Science)  
CER Ceramics (School of Art and Design)  
CFE Cultural Foundations of Education (School of Education)  
CFS Child and Family Studies (Child and Family Studies)  
CGR Computer Graphics (School of Art and Design)

CGS Cognitive Science (The College of Arts and Sciences)

CHE Chemistry (The College of Arts and Sciences)

CHI Chinese (The College of Arts and Sciences)

CHN World Language Prog: Chinese (The College of Arts and Sciences)

CHP College Honors Program (The College of Arts and Sciences)

CIE Civil Engineering (L.C. Smith College of Engineering and Computer Science)

CIS Computer and Information Science (L.C. Smith College of Engineering and Computer Science)

CLA Classics (The College of Arts and Sciences)

CLB Collaborative Laboratory (College of Visual and Performing Arts)

CLR Clarinet (Setnor School of Music)

CLS College Learning Strategies (School of Education)

CLT Comparative Literature (The College of Arts and Sciences)

CMD Communication Design (School of Art and Design)

COG Cognitive Science (The College of Arts and Sciences)

COM Communications (S.I. Newhouse School of Public Communications)

CON Consumer Studies (College of Visual and Performing Arts)

COU Counseling (School of Education)

CPS Computational Science (L.C. Smith College of Engineering and Computer Science)

CRS Communication and Rhetorical Studies (Communication and Rhetorical Studies)

CSD Communication Sciences and Disorders (The College of Arts and Sciences)

CSE Computer Engineering (L.C. Smith College of Engineering and Computer Science)

CTG Conducting (Setnor School of Music)

CZE Czechoslovakian (The College of Arts and Sciences)

DAN World Language Program: Danish (The College of Arts and Sciences)

DBS Double Bass (Setnor School of Music)

DES Design (School of Art and Design)

DFH Documentary Film and History (S.I. Newhouse School of Public Communications)

DRA Drama (Drama)

DRD Design/Technical Theater (Drama)

DRM Drama Management (Drama)

DRS Drumset (Setnor School of Music)

DRW Drawing (School of Art and Design)

DSP Disability Studies (School of Education)

DTC World Language Program: Dutch (The College of Arts and Sciences)

DTS Dance Technique Studies (School of Education)

DUT Dutch (The College of Arts and Sciences)

EAR Earth Sciences (The College of Arts and Sciences)

ECE Electrl & Computer Engr (L.C. Smith College of Engineering and Computer Science)

ECN Economics (The College of Arts and Sciences)

ECO Economics (The College of Arts and Sciences)

ECS Engineering and Computer Science (L.C. Smith College of Engineering and Computer Science)

EDA Education Leadership (School of Education)

EDI Environmental Design (School of Art and Design)

EDP Counselor Education (School of Education)

EDU Education (General) (School of Education)

EED Elementary Education (School of Education)

EEE Entrepreneurship and Emerging Enterprises (The Martin J. Whitman School of Management)

EGR Engineering (L.C. Smith College of Engineering and Computer Science)

ELE Electrical Engineering (L.C. Smith College of Engineering and Computer Science)

ELL English Language Learners (School of Education)

EMB Executive Organization and Management M.B.A. Program (University College)  
 ENA Environmental Arts (College of Visual and Performing Arts)  
 ENC Ensemble (Chamber Music) (Setnor School of Music)  
 ENG English (The College of Arts and Sciences)  
 ENI Ensemble (Instrumental) (Setnor School of Music)  
 ENL English as a Second Language (The College of Arts and Sciences)  
 ENM Engineering Management (L.C. Smith College of Engineering and Computer Science)  
 ENO Freshmen Orientation (The College of Arts and Sciences)  
 ENP Engineering Physics (L.C. Smith College of Engineering and Computer Science)  
 ENV Ensemble (Vocal) (Setnor School of Music)  
 ESP Environmental/Science Policy (The College of Arts and Sciences)  
 ETS English and Textual Studies (The College of Arts and Sciences)  
 EUP Euphonium (Setnor School of Music)  
 EXS Experimental Studios (School of Art and Design)  
 FAS Fashion Design (School of Art and Design)  
 FCS Family and Community Services (Child and Family Studies)  
 FEC Family Economics (David B. Falk College of Sport and Human Dynamics)  
 FEM Family Equipment & Management (David B. Falk College of Sport and Human Dynamics)  
 FHN French Horn (Setnor School of Music)  
 FIA Fine Arts (The College of Arts and Sciences)  
 FIB Fiber Arts (School of Art and Design)  
 FIL Film (School of Art and Design)  
 FIN Finance (The Martin J. Whitman School of Management)  
 FLL Foreign Languages and Literatures (The College of Arts and Sciences)  
 FLM Film (S.I. Newhouse School of Public Communications)  
 FLT Flute (Setnor School of Music)  
 FND Foundation (School of Art and Design)  
 FRC FRC (David B. Falk College of Sport and Human Dynamics)  
 FRE French and Francophone Studies (The College of Arts and Sciences)  
 FSC Forensic Science (The College of Arts and Sciences)  
 FSH Fashion Illustration (School of Art and Design)  
 FSM Food Service Management (David B. Falk College of Sport and Human Dynamics)  
 FST Food Studies (David B. Falk College of Sport and Human Dynamics)  
 GED General Education (The College of Arts and Sciences)  
 GEO Geography (The College of Arts and Sciences)  
 GER German (The College of Arts and Sciences)  
 GET Global Enterprise Technology (School of Information Studies)  
 GFO General Forestry (University College)  
 GOL Earth Science (The College of Arts and Sciences)  
 GRA Graphic Design (S.I. Newhouse School of Public Communications)  
 GRE Greek (The College of Arts and Sciences)  
 GRK World Language Program: Greek (The College of Arts and Sciences)  
 GTR Guitar (Setnor School of Music)  
 HAU World Language Program: Hausa (The College of Arts and Sciences)  
 HBR World Language Program: Hebrew (The College of Arts and Sciences)  
 HEA Health and Physical Education (School of Education)  
 HEB Hebrew (The College of Arts and Sciences)  
 HED Higher Education (School of Education)  
 HEE Home Economics Education (David B. Falk College of Sport and Human Dynamics)  
 HEM Housing Equip & Mgmt (David B. Falk College of Sport and Human Dynamics)

HGP Humanities Doctoral Program (The College of Arts and Sciences)

HIN Hindi (The College of Arts and Sciences)

HIP Housing & Interior Planning (David B. Falk College of Sport and Human Dynamics)

HIS History (The College of Arts and Sciences)

HNG World Language Prog: Hungarian (The College of Arts and Sciences)

HNR Honors Program (The College of Arts and Sciences)

HOA History of Art (The College of Arts and Sciences)

HOM History of Music (The College of Arts and Sciences)

HPD Harpsichord (Setnor School of Music)

HPM Hospitality Management (David B. Falk College of Sport and Human Dynamics)

HRM Human Resource Management (The Martin J. Whitman School of Management)

HRP Harp (Setnor School of Music)

HSH Human Services and Health Professions (David B. Falk College of Sport and Human Dynamics)

HST History (The College of Arts and Sciences)

HTW Health and Wellness (Public Health, Food Studies and Nutrition )

HUD Human Development (David B. Falk College of Sport and Human Dynamics)

HUM Humanities (The College of Arts and Sciences)

HUN Human Nutrition (David B. Falk College of Sport and Human Dynamics)

ICC Interactive Communications Core (S.I. Newhouse School of Public Communications)

IDE Instructional Design, Development, and Evaluation (School of Education)

IDN World Lang Prog: Indonesian (The College of Arts and Sciences)

IDP Interdisciplinary Programs (The College of Arts and Sciences)

IDS Information Technology, Design and Startup (School of Information Studies)

ILL Illustration (School of Art and Design)

INB International Business (The Martin J. Whitman School of Management)

IND Industrial Design (School of Art and Design)

INE Industrial Engineering (L.C. Smith College of Engineering and Computer Science)

INS Insurance (The Martin J. Whitman School of Management)

INT Intermedia (S.I. Newhouse School of Public Communications)

IOR Industrial Engineering and Operations Research (L.C. Smith College of Engineering and Computer Science)

IPD Home Furnishings (David B. Falk College of Sport and Human Dynamics)

IRG World Lang Prog: Irish-Gaelic (The College of Arts and Sciences)

IRP International Relations (The College of Arts and Sciences)

ISA Independent Study Degree Program (The College of Arts and Sciences)

ISD Interior Design (School of Art and Design)

ISE Industrial Systems Engineering (L.C. Smith College of Engineering and Computer Science)

ISH Independent Study Degree Program (David B. Falk College of Sport and Human Dynamics)

ISM Independent Study Degree Program (The Martin J. Whitman School of Management)

ISP Independent Study Degree Program (University College)

IST Information Studies (School of Information Studies)

ISX Independent Study Degree Program (Maxwell School of Citizenship and Public Affairs)

ITA Italian (The College of Arts and Sciences)

ITE Instructional Technology (School of Education)

JAM Jewelry and Metalsmithing (School of Art and Design)

JAP Japanese (The College of Arts and Sciences)

JNL Journalism (S.I. Newhouse School of Public Communications)

JPN World Language Prog: Japanese (The College of Arts and Sciences)

JPS Japanese (The College of Arts and Sciences)

JSP Judaic Studies Program (The College of Arts and Sciences)

KBI Keyboard Instruments (Setnor School of Music)

KOR World Language Prog: Korean (The College of Arts and Sciences)

LAN Self-Instructional Language (The College of Arts and Sciences)  
 LAS Latino-Latin American Studies (The College of Arts and Sciences)  
 LAT Latin (The College of Arts and Sciences)  
 LAW Law (College of Law)  
 LGL Legal Studies (University College)  
 LIN Linguistics (The College of Arts and Sciences)  
 LIT Literature in English Translation (The College of Arts and Sciences)  
 LLM Master of Laws (College of Law)  
 LPP Law and Public Policy (The Martin J. Whitman School of Management)  
 MAE Mechanical and Aerospace Engineering (L.C. Smith College of Engineering and Computer Science)  
 MAG Magazine (S.I. Newhouse School of Public Communications)  
 MAR Marketing Management (The Martin J. Whitman School of Management)  
 MAS Managerial Statistics (The Martin J. Whitman School of Management)  
 MAT Mathematics (The College of Arts and Sciences)  
 MAX Maxwell (The College of Arts and Sciences)  
 MBC Master of Business Core (The Martin J. Whitman School of Management)  
 MDE Mathematics Education (School of Education)  
 MDS Management Data Systems (The Martin J. Whitman School of Management)  
 MEE Mechanical Engineering (L.C. Smith College of Engineering and Computer Science)  
 MES Middle Eastern Studies (The College of Arts and Sciences)  
 MET Metalsmithing (School of Art and Design)  
 MFE Manufacturing Engineering (L.C. Smith College of Engineering and Computer Science)  
 MFT Marriage and Family Therapy (Marriage and Family Therapy)  
 MGT School of Management (The Martin J. Whitman School of Management)  
 MHL Music History and Literature (Setnor School of Music)  
 MIC Microbiology (The College of Arts and Sciences)  
 MIS Management Information Systems (The Martin J. Whitman School of Management)  
 MNO Magazine, Newspaper, and Online Journalism (S.I. Newhouse School of Public Communications)  
 MOT Management of Technology (The Martin J. Whitman School of Management)  
 MPD Multimedia Photography and Design (S.I. Newhouse School of Public Communications)  
 MPH Master of Public Health (Maxwell School of Citizenship and Public Affairs)  
 MPS Metropolitan Studies (The College of Arts and Sciences)  
 MSL Military Science (The Martin J. Whitman School of Management)  
 MTA Music Theory Analysis (Setnor School of Music)  
 MTC Music Theory (Setnor School of Music)  
 MTD Mathematics Education (School of Education)  
 MTE Metallurgy (L.C. Smith College of Engineering and Computer Science)  
 MTP Music Theory Performance (Setnor School of Music)  
 MTS Materials Science (L.C. Smith College of Engineering and Computer Science)  
 MTW Music Theory Writing (Setnor School of Music)  
 MUE Music Education (Setnor School of Music)  
 MUH Music History (Setnor School of Music)  
 MUI Music Industry (Setnor School of Music)  
 MUL Music Literature (Setnor School of Music)  
 MUS Museum Studies (School of Art and Design)  
 NAS Nondepartmental Arts and Sciences (The College of Arts and Sciences)  
 NAT Native American Studies (The College of Arts and Sciences)  
 NEU Neuroscience (The College of Arts and Sciences)  
 NEW Newspaper and Online Journalism (S.I. Newhouse School of Public Communications)  
 NOR World Language Prog: Norwegian (The College of Arts and Sciences)  
 NPR NPR (S.I. Newhouse School of Public Communications)

NSD Nutrition Science and Dietetics (David B. Falk College of Sport and Human Dynamics)

NUC Nuclear Energy Track (L.C. Smith College of Engineering and Computer Science)

O&M Organization and Management (The Martin J. Whitman School of Management)

OBO Oboe (Setnor School of Music)

OCD Organizational Change and Development (The Martin J. Whitman School of Management)

OGL Organizational Leadership (University College)

OPM Operations Management (The Martin J. Whitman School of Management)

ORG Organ (Setnor School of Music)

PAF Public Affairs and Citizenship (The College of Arts and Sciences)

PAI Public Admin & Internatl Affrs (Maxwell School of Citizenship and Public Affairs)

PDG Pedagogy of Theory (Setnor School of Music)

PED Physical Education (School of Education)

PER Performance Recital (Setnor School of Music)

PHI Philosophy (The College of Arts and Sciences)

PHO Photography (S.I. Newhouse School of Public Communications)

PHY Physics (The College of Arts and Sciences)

PIR Personnel Relations (The Martin J. Whitman School of Management)

PLA Planning Prgm(Grad) (The College of Arts and Sciences)

PNO Piano (Setnor School of Music)

POL Polish (The College of Arts and Sciences)

POR Portuguese (The College of Arts and Sciences)

PPA Public Administration (The College of Arts and Sciences)

PPE Professional Physical Education (School of Education)

PRC Percussion (Setnor School of Music)

PRL Public Relations (S.I. Newhouse School of Public Communications)

PRS Persian (The College of Arts and Sciences)

PRT Printmaking (School of Art and Design)

PSC Political Science (The College of Arts and Sciences)

PSY Psychology (The College of Arts and Sciences)

PTG Painting (School of Art and Design)

PTS Technology and Society (L.C. Smith College of Engineering and Computer Science)

QSX Queer Sexuality (The College of Arts and Sciences)

QUM Quantitative Methods (The Martin J. Whitman School of Management)

RAE Recording and Allied Entertainment (Setnor School of Music)

RCE Rehabilitation Counselor Education (School of Education)

RCS Retailing and Consumer Studies (College of Visual and Performing Arts)

RDR Recorder (Setnor School of Music)

REC Recreation (School of Education)

RED Reading and Language Arts (School of Education)

REL Religion (The College of Arts and Sciences)

RES Real Estate (The Martin J. Whitman School of Management)

RET Retailing (College of Visual and Performing Arts)

RMT Retail Management (The Martin J. Whitman School of Management)

ROL Romance Languages and Literatures (The College of Arts and Sciences)

RTN Radio/Television News (S.I. Newhouse School of Public Communications)

RUS Russian (The College of Arts and Sciences)

SAN Sanskrit (The College of Arts and Sciences)

SAS South Asian Studies (The College of Arts and Sciences)

SCE Science Education (School of Education)

SCI Science Teaching (The College of Arts and Sciences)

SCM Supply Chain Management (The Martin J. Whitman School of Management)

SCU Sculpture (School of Art and Design)  
 SED Secondary Education (School of Education)  
 SES Sensory Research (L.C. Smith College of Engineering and Computer Science)  
 SHE Speech Education (College of Visual and Performing Arts)  
 SHR Strategy and human Resources (The Martin J. Whitman School of Management)  
 SIS Systems & Information Science (School of Information Studies)  
 SLA Slavic (The College of Arts and Sciences)  
 SNH World Language Prog: Sinhalese (The College of Arts and Sciences)  
 SOC Sociology (The College of Arts and Sciences)  
 SOL Soling Program (The College of Arts and Sciences)  
 SOM School of Management (The Martin J. Whitman School of Management)  
 SOS Social Science (The College of Arts and Sciences)  
 SPA Spanish (The College of Arts and Sciences)  
 SPC Speech Communication (Communication and Rhetorical Studies)  
 SPD Surface Pattern Design (School of Art and Design)  
 SPE Special Education (School of Education)  
 SPM Sport Management (Sport Management)  
 SPP Audio & Speech Path (School of Education)  
 SRC Serbo-Croatian (The College of Arts and Sciences)  
 SST Solid-State Science and Technology (L.C. Smith College of Engineering and Computer Science)  
 STA Studio Arts (School of Art and Design)  
 STI String Instruments (Setnor School of Music)  
 STR Studio Research (School of Art and Design)  
 STS Science, Technology, and Society (The College of Arts and Sciences)  
 STT Applied Statistics (The College of Arts and Sciences)  
 SWA Kiswahili (The College of Arts and Sciences)  
 SWE World Language Prog: Swedish (The College of Arts and Sciences)  
 SWK Social Work (School of Social Work)  
 SXP Saxophone (Setnor School of Music)  
 SYE Synaesthetic Education (School of Education)  
 TCM Telecommunications (S.I. Newhouse School of Public Communications)  
 TDM Transportation and Distribution (The Martin J. Whitman School of Management)  
 TEA Textile Arts (School of Art and Design)  
 TEL Telecommunications (L.C. Smith College of Engineering and Computer Science)  
 TGL World Language Prog: Tagalog (The College of Arts and Sciences)  
 TML Tamil (The College of Arts and Sciences)  
 TRB Trombone (Setnor School of Music)  
 TRF Television, Radio, and Film (S.I. Newhouse School of Public Communications)  
 TRK Turkish (The College of Arts and Sciences)  
 TRM Transmedia (School of Art and Design)  
 TRP Trumpet (Setnor School of Music)  
 TUR World Language Prog: Turkish (The College of Arts and Sciences)  
 TVR TV/Radio (S.I. Newhouse School of Public Communications)  
 TXT Textiles (College of Visual and Performing Arts)  
 UCS University Coll Ceramics (School of Art and Design)  
 UFA University Coll Fiber Art (School of Art and Design)  
 UFD University Coll Foundation (School of Art and Design)  
 UKR Ukrainian (The College of Arts and Sciences)  
 UPG University Coll Painting (School of Art and Design)  
 UPT Univ Coll Printmaking (School of Art and Design)

URD World Language Program: Urdu (The College of Arts and Sciences)  
URP Undergraduate Research Program (The College of Arts and Sciences)  
VCO Violoncello (Setnor School of Music)  
  
VIC Visual Communications (School of Art and Design)  
VID Art Video (School of Art and Design)  
VIE World Lang Prog: Vietnamese (The College of Arts and Sciences)  
VLA Viola (Setnor School of Music)  
VLN Violin (Setnor School of Music)  
VOC Voice (Setnor School of Music)  
VPA VPA (College of Visual and Performing Arts)  
WGS Women's and Gender Studies (The College of Arts and Sciences)  
WLP World Language Program (The College of Arts and Sciences)  
WRT Writing Program (The College of Arts and Sciences)  
WSP Women's and Gender Studies Program (The College of Arts and Sciences)  
WWI Woodwind Instruments (Setnor School of Music)

# School Of Architecture

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Michael Speaks, Dean  
201 Slocum Hall  
soa.syr.edu



## About The College

### Dean's Message

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

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

The School of Architecture is equally committed to local and regional engagement projects, and over the last several years we have worked in conjunction with the University and the city of Syracuse to develop numerous projects in the city and in the region. Many of these projects have been organized by Upstate, an interdisciplinary design, research and real estate program located in downtown Syracuse, started and run by the Syracuse University School of Architecture.

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 Policy

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

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

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

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

- The School encourages students and faculty alike to embrace the design studio and the classroom as places of intellectual and

creative exploration and collaboration. The frequently open-ended pursuit of knowledge through design and other forms of learning requires generosity of spirit on all parts, including the recognition that faculty members bring a high level of expertise to their teaching and that students bring a diversity of valuable prior knowledge to their learning. It also requires clear communication, rigorous testing of ideas, and a commitment to excellence on the part of all participants.

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

## Accreditation

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

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

Master's degree programs may consist of a pre-professional undergraduate degree and a professional graduate degree, which, when earned sequentially, comprise an accredited professional education. However, the pre-professional degree is not, by itself, recognized as an accredited degree.

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

## Graduate Education

Chair     Jean-François Bédard, 225 Slocum Hall

Contact   Speranza Migliore, 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. I is a fully accredited professional degree open to students with non-architecture as well as architecture backgrounds. The Syracuse Architecture M.Arch. II 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.

## Global Campus Programs

### The Programs

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

### Florence

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

### London

The London program is based at the Syracuse University London Center in central London, near Covent Garden and the British Museum. As in Florence, 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 including Cambridge, Oxford, Bath, and Edinburgh. Students may also select from the wide range of non-professional 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 New York City program at 171 Madison Avenue offers opportunity to study in one of the most architecturally rich and culturally vibrant cities in the world. The NYC space will expand in Spring 2014 and relocate to 136 Madison Avenue. The curriculum focuses on the city's history, urban morphology, planning, real estate development, as well as urban theory. The program draws on Syracuse Architecture faculty and NYC-based critics, combined with guest lecturers, collateral programming, and extensive field studies in and around the city.

## Short-term/summer global programs

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

## Questions

For further information about our global 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 recently underwent a dramatic redesign to enhance and restore original qualities while updating it technologically, functionally, and aesthetically. Slocum Hall now includes a vast open central atrium space, a new auditorium and gallery, as well as expanded studio, research, and office space.

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

### Computing and Fabrication

The School of Architecture has two CAD 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; image generation; video production; and mapping. An output room provides an assortment of plotters, printers, and scanners. Digital fabrication equipment includes two 3D printers, a 3D Systems Invision SR 3-D Printer and a Zcorp 350, three Universal laser cutters, a Roland CNC mill and a Formech 450 vacuum former. Required and elective courses range from introduction to the 3D computing environment to digital animation and digital production.

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

### Reading Room and Library

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

### The Warehouse

The School maintains a downtown Syracuse presence at The Warehouse in Armory Square, located in one of the most vital, pedestrian-oriented parts of the city. The Warehouse serves as headquarters for UPSTATE: A Center for Design, Research, and Real Estate as well as selected visiting critic studios. It is the perfect setting for students to understand the intricate relationship among architecture, design, and the public realm.

## Academic Offerings

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# Master Of Architecture First-Professional

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## PROGRAM DESCRIPTION

The Syracuse Architecture M. Arch. I 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.

Because the architect's role in society is complex and changing, students approach the study of architecture as a transdisciplinary enterprise. The program places equal importance on the acquisition of professional skills, knowledge, and expertise, as on the necessity for versatility and innovation in the application of design.

Toward that end, the graduate program has developed the "discursive studio." Each of the first four semesters of design is team-taught by faculty members with differing expertise and approaches, who conduct the studio as a site of debate, exchange, and possibility. Students actively contribute to the conversations and criticism through their design work. This work is informed by seminars, collaborations, and technical and speculative exercises. Studio work is also coordinated with other core courses in theory, history, representation, and technology so that design is pursued as inseparable from other aspects of the discipline as well as the complexities of the broader culture.

Completion of the degree requires seven semesters, each of which includes a 6-credit design studio. The fifth semester offers students the option of studying off campus in one of our studio-based Architecture programs in Florence, London or NYC. The focus of the sixth semester in Syracuse is the visiting critic studio. The program culminates in a thesis project defined and developed by the student working with a faculty advisor.

## DEGREE AWARDED

This is a 110 credit program leading to a Masters of Architecture I (M. Arch. I) degree.

## PREREQUISITES FOR ADMISSION INTO THE M. ARCH. I 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 of study 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

Course Number	Course Name	Credits
ARC 604, 605	Architectural Design I/II	6 each
ARC 606, 607	Architectural Design III/IV	6 each
ARC 608, 609	Architectural Design V/VI	6 each
ARC 998	Design VII – Thesis	6

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

Course Number	Course Name	Credits
ARC 505	Thesis Preparation	3
ARC 585	Professional Practice	3
ARC 611, 612	Structures I/II	4 each
ARC 623	Advanced Building Systems	4
ARC 639	Architectural History Principles	3 each
ARC 641	Introduction to Architectural Discourse	3
ARC 642	Architectural Theory & Design Research	3
ARC 681, 682	Media I/II	3 each

History Electives

Nine credits of History Electives are required for graduation.

Course Number	Course Name	Credits
ARC 500	Selected Topics in Architecture (if taught by a Historian)	1-3
ARC 632	Sixteenth Century Italian Architecture	3
ARC 634	The Architecture of Revolutions	3
ARC 635	Early Renaissance Architecture in Italy 1400-1529	3
ARC 636	Italian Seventeenth Century Architecture	3
ARC 637	American Architecture, Settlement to 1860	3
ARC 638	American Architecture, 1860-World War I	3
ARC 731	Early Modern Architecture	3
ARC 732	The City in Architectural History	3
ARC 735	Islamic Architecture	3
ARC 736	Modern Architecture: The International Style to Present	3

ARC 737	French Architecture, Sixteenth and Seventeenth Centuries	3
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Professional Electives

Twelve credits of professional electives are required for graduation.

Course Number	Course Name	Credits
ARC 500	Selected Topics in Architecture	1-3
ARC 535	Organicism in Modern Architecture	3
ARC 536	Italian Urbanism: 100 Cities	3
ARC 537	Italian Medieval Architecture and Urbanism	3
ARC 538	Artistic Patronage of the Medici	3
ARC 539	Italian Architecture, 1909-1959	3
ARC 551	Le Corbusier 1887-1965	3
ARC 553	Collage: Making Exploring Imagining Space	3
ARC 556	Rem Koolhaas: Architect, Historian, Provocateur, Document Maker	3
ARC 557	Utopia: Design and Cultural Imagination	3
ARC 563	Introduction to Computer Applications in Architecture	3
ARC 564	Drawing	3
ARC 565	Visual Design	3
ARC 566	Introduction to Preservation	3
ARC 571	Survey of Italian Architecture	3
ARC 572	Advanced Computer Applications to Architecture	3
ARC 573	American Town Planning	3
ARC 574	Reading the Landscape	3
ARC 575	Urban Housing: Building, Block, Street	3
ARC 576	Theories and Analysis of Exurbia	3

ARC 577	Visual Studies	3
ARC 578	Façade as Idea	3
ARC 579	Community Design Workshop	3

#### Other Electives

Open to all students in good academic standing.

Course Number	Course Name	Credits
ARC 690	Independent Study	1-6 each

An additional 6 open elective credits are required.

#### STUDY ABROAD

Students enrolled in the M. Arch. I 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. I 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 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. I 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 at another graduate school or 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.

## Master Of Architecture Post-Professional

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Chair Francisco Sanin, 225 Slocum

Faculty Bruce Abbey, Sarosh Anklesaria, Jean-François Bédard, Larry Bowne, Lori Brown, Theodore Brown, Bruce Coleman, Julia Czerniak, Lawrence Davis, Alexandra French, Terrance Goode, Martin Hättasch, Susan Henderson, Elizabeth Kamell, Randall Korman, Mark Linder, Brian Lonsway, Ryan Ludwig, Sinéad Mac Namara, Jonathan Massey, Arthur McDonald, Anne Munly, Michael Pelken, Richard Rosa, Francisco Sanin, Yutaka Sho, Edward Sichta, Timothy Stenson, Robert Svez

#### PROGRAM DESCRIPTION

The Syracuse Architecture M. Arch. II 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 Masters of Architecture II (M. Arch. II) degree.

#### PREQUISITES FOR ADMISSION INTO THE M. ARCH. II 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. I, M. Arch. I, 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

M. Arch. II 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 M. Arch. II students must present a final project to their committee members representing a culmination of what they have learned in their research.

#### STUDY ABROAD

M. Arch. II 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.

# Courses

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## Architecture

### ARC 500 Selected Topics 1-3 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. R

### ARC 505 Thesis Preparation 3 S

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

### ARC 508 Architectural Design IX-Thesis 6 S

Undergraduate thesis. Semester-long, advanced, student-originated project based on a program and research produced by the student and approved by the faculty.

PREREQ: ARC 505 WITH MINIMUM GRADE OF C AND ARC 423.

### ARC 532 Ornament and its Discontent 3 IR

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 3 IR

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 3 S

Crosslisted with: HOA 520  
A survey of Italian urban history: design of cities, local rituals, politics, and patronage in ancient Rome, medieval Venice, Renaissance Florence, Baroque Turin, and modern Milan. Site visits in Florence and surrounding towns. Offered only in Florence.

PREREQ: HOA 105 OR ARC 134 OR CAS 134.

### ARC 537 Italian Medieval Architecture and Urbanism 3 S

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 3 S

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 3 S

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 3 IR

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

### ARC 552 Politics of Public Space 3 IR

Issues surrounding public space, politics, and power relations as they impact our public realms, through investigations of critical and political theorists, geographers, architects and artists.

PREREQ: ARC 208.

### ARC 553 Collage: Making Exploring Imagining Space 3 IR

Overlapping concepts of space between architecture and art. How space is created and understood through the method of collage. Examining, analyzing, and making two- and three-dimensional collages.

### ARC 554 Material Manifestations 3 IR

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 556 Rem Koolhaas: Architect, Historian, Provocateur, Document Maker 3 IR

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 557 Utopia: Design and Cultural Imagination 3 IR

Interdisciplinary seminar investigating the discourse, forms, and evolution of utopian experiments from pre-modern to post-modern America in four themes: wilderness, pastoralism, metropolis, and spectacle.

PREREQ: HOA 106 OR ARC 208.

### ARC 561 Survey of British Architecture 3 S

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 608 OR 609.

ARC 563 Introduction to Computer Applications in Architecture 2-3 Y  
Overview of the computer and its applications to architecture. Direct involvement with the computer to resolve problems in structures, design, environmental systems, specifications, cost estimation, etc. Additional work required of graduate students.

### ARC 564 Drawing 3 Y

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 3 IR

Elements and principles of visual organization, perception, and communication through various two- and three-dimensional exercises.

PREREQ: ARC 208.

ARC 566 Introduction to Preservation 3 Y  
Crosslisted with: HOA 577

Problems and methods in implementing continued use for quality segments of the humanly built environment.

PREREQ: ARC 134 OR CAS 134.

ARC 568 Real Estate Design and Development 3 Y

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 3 S

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 408 OR 608 OR 609.

ARC 572 Advanced Computer Applications to Architecture 2-3 Y

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 3 IR

Comparative urban analysis considering reciprocal influences of historical antecedent and utopian visions of the city in helping determine early American town and building form. Concentration on urban and architectural development of Boston, Charleston, Savannah.

PREREQ: ARC 134 OR CAS 134.

ARC 574 Reading the Landscape 3 IR

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 3 IR

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 3 IR

Course studies history, evolution, and contemporary condition of exurban built environment in America.

PREREQ: ARC 208.

ARC 577 Visual Studies 3 IR

Conceptual development and visual representation of the thesis idea.

PREREQ: ARC 505.

ARC 578 Facade as Idea 3 IR

Seminar in contemporary and historical examples of the phenomenon of the building facade as a primary instrument by which architecture communicates. Fourth year undergraduate or third year graduate standing.

PREREQ: ARC 307 OR 607.

ARC 579 Community Design Workshop 3 IR

An interdisciplinary, applied learning workshop that engages architectural and urban design initiatives involving community groups, nonprofit organizations, and government agencies in collaborative design processes.

ARC 585 Professional Practice 3 S

Legal and administrative aspects of architectural practice. The architect's role in society.

PREREQ: ARC 322.

ARC 604 Architectural Design I 6 Y

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 6 Y

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 6 Y

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 3-6 Y

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 6 Y

Continuation of ARC 607. Project development. Choice of studio by permission.

PREREQ: ARC 607.

ARC 609 Architectural Design VI 6 Y

Advanced studio. Choice of upper-level studio.

PREREQ: ARC 608 WITH MINIMUM GRADE OF C.

ARC 611 Structures I 4 Y

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.

PREREQ: ARC 641.

ARC 612 Structural Systems Design II 4 Y

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.

PREREQ: ARC 611 AND 641.

ARC 621 Building Systems Design I 4 Y

Introduces materials and methods of building construction, basic building assemblies, and their elements. Energy conservation and conformance to regulatory codes also addressed.

PREREQ: ARC 641.

ARC 622 Building Systems Design II 4 Y

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 4 S

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 622.

ARC 632 Sixteenth Century Italian Architecture 3 S

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 3 Y  
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.

ARC 635 Early Renaissance Architecture in Italy 1400-1529 3 S  
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 3 IR  
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.  
PREREQ: ARC 639.

ARC 637 American Architecture, Settlement to 1860 3 IR  
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 3 IR  
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 3 Y  
Examination of the principles of architectural history through study of selected buildings and movements.

ARC 641 Introduction to Architecture 3 Y  
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 3 Y  
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 681 Media I 3 Y  
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 682 Media II 3 Y  
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 1-6 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. R

ARC 700 Selected Topics 1-3 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. R

ARC 707 Architectural Design 9 IR  
M.Arch. II graduate design studio dealing with urban architectural problems. Conducted primarily by adjunct faculty.

ARC 708 Architectural Design 9 IR  
M.Arch. II graduate design studio dealing with urban architectural problems. Conducted primarily by adjunct faculty.  
PREREQ: ARC 707.

ARC 731 Early Modern Architecture 3 IR  
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 3 IR  
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 735 Islamic Architecture 3 IR  
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 3 IR  
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 3 IR  
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 3-8 IR  
Individual or group research into particular aspects or problems in architecture, under supervision of the faculty. R

ARC 998 Design VII-Thesis 1-9 S  
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. R1, 9 credits maximum

# Faculty

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- Bruce Abbey, Professor  
B.Arch., Cornell University, 1966; M.Arch., Princeton University, 1971  
Architectural design, architectural theory
- Sarosh Anklesaria, Assistant Professor  
M.Arch., Cornell University, 2011  
Architectural design
- Amber Bartosh, Assistant Professor  
M.Arch II, Southern California Institute of Architecture, 2010; B.A., Rice University, 2000  
Architectural Design and Technology
- Jean-François Bédard, Associate Professor;  
Chair, Graduate Program  
Ph.D., Columbia University, 2003  
Architectural history
- Larry Bowne, Associate Professor  
M.Arch., Harvard University, 1992  
Architectural Design
- Lori Brown, Associate Professor  
M.Arch., Princeton University, 1994  
Architectural design, politics of spacial production, intersections between art and architectural practices
- Theodore Brown, Professor  
M.Arch., Princeton University, 1981  
Architectural design, architectural theory
- Angie Co , Assistant Professor  
M.Arch, Columbia University, 2005; B.Arch, University of Pennsylvania, 2001  
Architectural Design
- Bruce Coleman, Professor  
B.Arch., Cornell University, 1967  
Architectural design, architectural technology
- Julia Czerniak, Professor  
M. Arch., Princeton University, 1992  
Architectural design, landscape architecture
- Lawrence Davis, Associate Professor  
M. Arch., Columbia University, 1988  
Architectural design, Registered Architect in NY State, NCARB
- Alexandra French, Assistant Professor  
M.Arch., Princeton University, 2006  
Architectural design
- 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  
Architectural design
- Martin Hättasch, Assistant Professor  
M.Arch. II, Princeton University, 2007  
Architectural design
- Susan Henderson, Professor; Honors Faculty  
Ph.D., Columbia University, 1989  
History of architecture
- Roger Hubeli, Assistant Professor  
Dipl. Arch. ETH Zurich Switzerland; CEPT School of Architecture, Ahmedabad India (Exchange Program)  
Architectural Design and Technology
- Lydia Kallipoliti, Assistant Professor  
MA, Princeton University, 2007; SMArchS, Massachusetts Institute of Technology, 2004  
Architectural Design and Theory
- Elizabeth Kamell, Associate Professor  
S.M. Arch. S., Massachusetts Institute of Technology, 1996  
Architectural design
- Randall Korman, Professor  
M.Arch., Harvard University, 1977  
Architectural design
- Bess Krietemeyer, Assistant Professor  
MS, Rensselaer Polytechnic Institute, 2009; B.Arch, Rensselaer Polytechnic Institute, 2005  
Architectural Design and Technology
- Julie Larsen, Assistant Professor
- Mark Linder, Associate Professor  
Ph.D., Princeton University, 1998  
Architectural design, architectural theory
- Brian Lonsway, Associate Professor  
M.Arch., Columbia University, 1995  
Architectural design, cultural theory, computation
- Jonathan Louie, Assistant Professor  
M.Arch II, University of California, 2012; B.Arch, Syracuse University, 2007  
Architectural Design
- Ryan Ludwig, Assistant Professor  
M.Arch. II, Harvard University, 2009  
Architectural design
- Sinéad Mac Namara, Assistant Professor  
Ph.D., Princeton University, 2006  
Civil and environmental engineering
- Jonathan Massey, Associate Professor  
Ph.D., Princeton University, 2001  
History and theory of architecture
- Arthur McDonald, Professor  
B.Arch., Pratt Institute, 1963; M.Arch., Cornell University, 1972  
Architectural and urban theory and design, urban housing, comprehensive design/technology studio
- Kyle Miller , Assistant Professor  
M.Arch, University of California, 2008; B.Arch, University of Michigan, 2004  
Architectural Design
- Anne Munly, Professor  
M.Arch., Princeton University, 1980  
Architectural design
- Michael Pelken, Associate Professor;  
Coordinator, London Program  
Dipl.-Ing. (FH) Architektur, University of Applied Sciences, Dusseldorf (Germany), 2001  
Architectural design and technology
- Robert Petrie, Assistant Professor  
M.Arch, Cornell University, 2004; B.Arch, Virginia Polytechnic Institute, 1996  
Architectural Design
- Richard Rosa, Associate Professor;  
Coordinator, Florence Program  
M.Arch., Harvard University, 1993  
Architectural design
- Francisco Sanin, Professor  
Diploma, Universidad Pontificia Bolivariana (Colombia), 1979  
Architectural design, urban design
- Yutaka Sho, Assistant Professor  
M.Arch., Harvard University, 2005  
Architectural design
- Edward Sichta, Associate Professor  
M.F.A., Syracuse University, 1969  
Drawing and visual design
- Jonathan Solomon, Associate Professor;  
Associate Dean  
B.A. Urban Studies Columbia University, M.Arch Princeton University  
Architectural Design
- Michael Speaks , Professor, Dean  
B.A. University of Mississippi, Ph.D. Duke University

Timothy Stenson, Associate Professor;  
Chair, Undergraduate Program  
M.Arch., University of Virginia, 1988  
Architectural design, technology, low-energy  
building research

Robert Svez, Assistant Professor  
M.Arch. II, Yale University, 2002  
Architectural design, technology

# The College Of Arts And Sciences

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George M. Langford, Dean  
300 Hall of Languages  
thecollege.syr.edu/



## About The College

The College of Arts and Sciences at Syracuse University prepares students for the global workplace and for study in post-graduate and professional programs by providing a contemporary liberal arts curriculum emphasizing interdisciplinary learning, research, service, and enterprise.

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 that help them 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, 40 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 SU'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](mailto:casdean@syr.edu)

## Academic Departments

The College of Arts and Sciences is a place of discovery, creativity, and imagination that forms the core of a liberal arts education at Syracuse University. Through its three academic divisions--the Sciences and Mathematics, the Humanities, and the Social Sciences (offered in collaboration with the Maxwell School of Citizenship and Public Affairs)--The College offers an eclectic array of traditional degree options as well as a number of interdisciplinary, dual, and combined-degree programs.

African American Studies

Anthropology

Art and Music Histories

Biology

Chemistry

Communication Sciences and Disorders

Earth Sciences

Economics

English

Geography

History

International Relations

Languages, Literatures, and Linguistics

Mathematics

Philosophy

Physics

Political Science

Psychology

Religion

Science Teaching

Sociology

Women's and Gender Studies

The Writing Program

## Undergraduate Studies

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

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

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

## Special Degree Offerings

For additional information on the following options, contact: Advising and Academic Support

Office:  
323 Hall of Languages  
Call: 315-443-3150  
E-mail: [casadvising@syr.edu](mailto:casadvising@syr.edu)

Options for Study in the College of Arts and Sciences.

There are two general options for study leading to the B.A. or B.S. degree for undergraduates in the College of Arts and Sciences: the Standard Program and the Selected Studies Program.

The Standard Program involves the Liberal Arts Core, a major, electives and, perhaps, a minor or an additional major. The first two years are devoted largely to work that satisfies requirements of the Liberal Arts Core. The major is chosen by the end of the second year.

The selected studies program offers the student an opportunity to develop a highly individualized curricular plan. This program, which can lead to the B.A. or the B.S. degree, is intended to meet individual needs. It provides considerable freedom in curricular planning, but also requires greatly increased responsibility on the part of the student. Each student in the selected studies program develops a four-year program of study based on academic goals. He or she is assisted by a faculty advisor who helps to formulate an academically sound curriculum. For additional information please see Selected Studies under Undergraduate Program Offerings.

### Combined Programs

The College of Arts and Sciences offers combined programs of study with certain professional schools and colleges within the University. These programs lead to two degrees and require at least 30 credits beyond the minimal requirement for one degree and a total of at least 150 credits. This means that it generally takes five years (10 semesters) to complete a combined program. Specific requirements vary from program to program and are described under individual program headings. Students pursuing a combined program in the College of Arts and Sciences must complete all college requirements relevant to the chosen program of study. A minimum of 96 credits in the College of Arts and Sciences is required. For a general definition and requirements of a combined program and comparison with other kinds of programs, refer to the appropriate chart in the “Academic Rules and Regulations” section of this catalog.

A combined program in the College of Arts and Sciences is offered with the L.C. Smith College of Engineering and Computer Science and results in the B.A. or B.S. in Arts and Sciences and the B.S. in Engineering.

### Dual Enrollments

The College of Arts and Sciences offers dual enrollments in cooperation with certain professional schools and colleges within the University. These lead to a single degree jointly authorized and certified by the cooperating schools. The standards and procedures for admission vary and are described under individual headings. With careful course selection and planning, students are able to finish within four years (eight semesters) and within the 120-126 credits required for a degree. (For a general definition and requirements of a dual program and comparison with other kinds of programs, refer to the appropriate chart in the “Academic Rules and Regulations” section of this catalog.)

Dual enrollments in Arts and Sciences are offered only with the School of Education and the S.I. Newhouse School of Public Communications.

For the Dual program offered with S.I. Newhouse School of Public Communications:

Contact Rosanna Grassi, Associate Dean, S.I. Newhouse School of Public Communications, 315 Newhouse 3, 315-443-1908 or

For the College of Arts and Sciences, contact Advising and Academic Support, 323 Hall of Languages, 315-443-3150, [casadvising@syr.edu](mailto:casadvising@syr.edu)

Students in the College of Arts and Sciences who are dually enrolled in the S.I. Newhouse School of Public Communications receive the bachelor’s degree jointly awarded by both colleges.

Students complete the requirements for the B.A. degree or the B.S. degree from the College of Arts and Sciences, including at least 90 credits in Arts and Sciences coursework and an Arts and Sciences major, or a selected studies program approved by the dean of the College of Arts and Sciences. Students also satisfy requirements for a major in the S. I. Newhouse School of Public Communications, chosen from the professional fields of advertising; broadcast and digital journalism; graphic design; magazine; newspaper and online journalism; photography; public relations; or television, radio, and film. At least 122 credits, including electives, are required to graduate.

Students who wish to enroll in this program should request dual enrollment at the time of admission to the University, or they may consult the School of Public Communications about an intra-University transfer to the dual program during the first or sophomore year.

#### First-year students entering the dual program

Students entering the Arts and Sciences/Public Communications Dual Degree in their first year will be required to satisfy the core requirements for the dual degree by completing the requirements of the College of Arts and Sciences Liberal Arts Core.

Students entering the dual program after the first year and who are either singly enrolled in the College of Arts and Sciences or the S.I. Newhouse School of Public Communications

satisfy the core requirements for the dual degree by completing the requirements of the school or college in which they were originally singly enrolled. In either case, the College of Arts and Sciences is the home college.

#### Other Special Options

##### Arts and Sciences/Art

The special options degree program in arts and sciences/art is designed for students who wish to include studio arts in conjunction with studies in humanities and/or sciences. The option permits any major in the College of Arts and Sciences to be joined with studio arts work. The degree awarded at the completion of undergraduate study is a B.A. in the arts and sciences major with the supplementary designation “and art.” The degree is singly awarded by the College of Arts and Sciences.

##### Arts and Sciences/Music

This special options degree program provides the opportunity to combine any degree in the College of Arts and Sciences with advanced studies in music performance or music composition—studies that will be taken primarily in the Setnor School of Music. To be admitted to the special options degree program, students in the College of Arts and Sciences apply through the Department of Art and Music Histories before the beginning of the sophomore year. Prospective students for the music performance and music composition degree options must meet admissions requirements administered by the Setnor School of Music.

The degree awarded after completing undergraduate studies is a B.A. in the arts and sciences major with the supplementary designation, “with advanced studies in music performance/composition” (depending on the particular degree option). The degree is singly awarded by the College of Arts and Sciences. Completion of the major does not result in any professional or artistic certification by the Setnor School of Music or the College of Visual and Performing Arts.

#### Combined Bachelor’s/Master’s Degrees - Secondary Teacher Preparation Programs

School of Education contact: Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall. [mrsarno@syr.edu](mailto:mrsarno@syr.edu)

This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for a New York Teaching certification for grades 7-12 in English, mathematics, a science area, or social studies. It is an alternative to the existing undergraduate Arts and Sciences/Education dual programs in these areas, and an option that often takes less time and fewer credits than earning the entire master’s degree in education after completion of a general Arts and Sciences degree.

The combined bachelor’s/master’s teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree allows.

Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master’s degree are conferred at the same time, after all requirements are met – typically at the end of 5 years. Students begin taking education courses as undergraduates, including some in the fourth year that are taken for graduate credit, and apply to become graduate students for their last two semesters. Some summer study (not necessarily at SU) may be required.

The combined program has a two-stage admission process. The first stage involves meeting with the School of Education contact as early as possible to develop a plan, and, if a decision to pursue the program is made, completing a form signed by Education and a new declaration of program of study form in Arts and Science to declare the Arts and Sciences program with “Teacher Preparation/5 year” appended to the title (e.g., “History(TchrPrep/5yr)” instead of “History”). The second admission stage involves an application to graduate school. Each admission stage requires a 3.0 cumulative GPA and a 3.0 GPA in the courses from the subject to be taught. The second stage also requires successful performance in the undergraduate education courses.

The choices of Arts and Sciences majors, and the course requirements for the Arts and Sciences major, the Liberal Arts Core, and other requirements related to the major are the same for these combined programs as those for students completing the dual enrollment undergraduate Arts and Sciences/Education program. These details about specific adjustments necessary to the Liberal Arts Core and to Arts and Sciences major may be found in the section describing Dual Arts and Sciences/ Education Programs.

Because of the specific course requirements and sequencing of courses, it is important that students interested in one of these programs meet with the Education contact as soon as possible to develop a plan. EDU 204, the first education course, must be taken no later than spring of the junior year.

## 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.

## Academic Offerings

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### African American Studies Secondary Teacher Preparation Program

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](mailto: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 Social Studies (7-12). It is an alternative to the existing undergraduate Arts and Sciences/Education dual program in these areas, and an option that often takes less time and fewer credits than earning the entire master's degree in education after completion of a general Arts and Sciences degree.

The combined bachelor's/master's teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree allows.

Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met – typically at the end of 5 years. Students begin taking education courses as undergraduates, including some in the fourth year that are taken for graduate credit, and apply to become graduate students for their last two semesters. Some summer study (not necessarily at SU) may be required.

The combined program has a two-stage admission process. The first stage involves meeting with the School of Education contact as early as possible to develop a plan, and, if a decision to pursue the program is made, completing a form signed by Education and a new declaration of program of study form in Arts and Science to declare the Arts and Sciences program with “Teacher Preparation/5 year” appended to the title (e.g., “History (TchrPrep/5yr)” instead of “History”). The second admission stage involves an application to the Graduate School. Each admission stage requires a minimum 3.0 cumulative GPA and a minimum 3.0 GPA in the courses from the subject to be taught. The second stage also requires successful performance in the undergraduate education courses.

The choices of Arts and Sciences majors, and the course requirements for the Arts and Sciences major, the Liberal Arts Core, and other requirements related to the major are the same for these combined programs as those for students completing the dual enrollment undergraduate Arts and Sciences/Education program. These details about specific adjustments necessary to the Liberal Arts Core and to Arts and Sciences major may be found in the section describing Dual Arts and Sciences/ Education Programs.

Because of the specific course requirements and sequencing of courses, it is important that students interested in one of these programs meet with the School of Education contact as soon as possible to develop a plan. EDU 204, the first education course, must be taken no later than spring of the junior year.

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### Anthropology Secondary Teacher Preparation Program

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](mailto: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 Social Studies (7-12). It is an alternative to the existing undergraduate Arts and Sciences/Education dual program in these areas, and an option that often takes less time and fewer credits than earning the entire master's degree in education after completion of a general Arts and Sciences degree.

The combined bachelor's/master's teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree allows.

Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met – typically at the end of 5 years. Students begin taking education courses as undergraduates, including some in the fourth year that are taken for graduate credit, and apply to become graduate students for their last two semesters. Some summer study (not

necessarily at SU) may be required.

The combined program has a two-stage admission process. The first stage involves meeting with the School of Education contact as early as possible to develop a plan, and, if a decision to pursue the program is made, completing a form signed by Education and a new declaration of program of study form in Arts and Science to declare the Arts and Sciences program with “Teacher Preparation/5 year” appended to the title (e.g., “History (TchrPrep/5yr)” instead of “History”). The second admission stage involves an application to the Graduate School. Each admission stage requires a minimum 3.0 cumulative GPA and a minimum 3.0 GPA in the courses from the subject to be taught. The second stage also requires successful performance in the undergraduate education courses.

The choices of Arts and Sciences majors, and the course requirements for the Arts and Sciences major, the Liberal Arts Core, and other requirements related to the major are the same for these combined programs as those for students completing the dual enrollment undergraduate Arts and Sciences/Education program. These details about specific adjustments necessary to the Liberal Arts Core and to Arts and Sciences major may be found in the section describing Dual Arts and Sciences/ Education Programs.

Because of the specific course requirements and sequencing of courses, it is important that students interested in one of these programs meet with the School of Education contact as soon as possible to develop a plan. EDU 204, the first education course, must be taken no later than spring of the junior year.

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## Applied Statistics Graduate Program

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

Faculty Pinyuen Chen, Peng Gao, Susan H. Gensemer, Vernon L. Greene, Christine L. Himes, Chihwa (Duke) Kao, Hyune-Ju Kim, Yingyi Ma, Jan Ivar Ondrich, Jeffrey M. Stonecash, Raja Velu, Janet Wilmoth, Douglas A. Wolf, Yildiray Yildirim

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](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.

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

- MAT 521: Introduction to probability and statistics (students with a strong mathematics background are to take MAT 651).
- MAT 525: Mathematical statistics (students with a strong mathematics background are to take MAT 652).
- Any one of the following courses in regression Analysis: MAT 654, PSY 757, MAS 766, APM 630, SOC 714, ECN 621, PPA 810.
- STT 750/ MAT 750: Statistical Consulting. 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.

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

Design of Experiments [PSY 756, PSY 853, MAS 767, APM 620] Sampling Theory [MAS 765, APM 625]

Multivariate Methods [PSY 857, APM 635, SOC 813, PAI 721, PAI 722, PAI 730, PSC 794, MAT 755] Nonparametric Methods [MAS 723]

Time Series Modeling and Analysis [MAS 777]

Stochastic Processes/Markov Processes [MAT 526, ECE 756] Statistical Simulation and Nonstandard Data Analysis [MAT 653] Topics in Statistics [MAT 850]

Advanced Probability I and II [MAT 721, MAT 722]

Statistical Ranking, Selection, and Multiple Comparisons [MAT 752] Spatial Statistics [GEO 686]

Econometrics [ECN 620, ECN 622, ECN 720]

Statistical Consulting [STT 750, MAT 750]

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

1. emphasize statistical applications, or
2. involve consulting or advisement about statistical applications.

Degree: Master of Science in Applied Statistics

Total Credits: 33

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## M.A. In Art History

Theodore Philip Cateforis, Chair  
308 Bowne Hall  
315-443-4835

Director of Graduate Studies: Laurinda Dixon  
308 Bowne Hall  
315-443-5031

Director of Graduate Studies Florence, Gary Radke  
308 Bowne Hall  
315-443-9198

Faculty Luis Castañeda, Laurinda Dixon, Wayne Franits, Jeehee Hong, Matilde M. Mateo, Jonathan Nelson, Gary M. Radke, Romita Ray, Sascha Scott

### M.A. IN ART HISTORY

The M.A. in art history requires thirty graduate credits, taken over a period of two years time, 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 –ancient/medieval, Renaissance, Baroque/18th century, modern/American, and non-Western—are required. Also required are HOA 655 Graduate Research and Writing and HOA 656: The Literature of Art Criticism.

Colloquia and special lectures augment formal courses. With permission, a limited number of credits may be taken outside the department, such as studies in 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 a language exam, which assesses reading knowledge of Italian, French, or German. Students also 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. The language exam must be passed by the beginning of their second year. In their last semester, students participate in a pro-seminar, 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 Collection 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 55 credits, which must include the requirements for the M.A. in museum studies (33 credits) and the M.A. in art history (22 credits). While students may work on the two degrees simultaneously, the art history degree is not awarded until the museum studies requirements have been completed.

For information on the M.A. in museum studies, contact Edward Aiken, Director of the Museum Studies Program, The Warehouse 1st floor, [eaiken@syr.edu](mailto:eaiken@syr.edu).

#### M.A. IN ART HISTORY IN FLORENCE, ITALY

Thirty graduate credits are required for the specialized M.A. degree program in the study of Italian Renaissance art.

##### Florence Fellowship Program

Four graduate fellowships are awarded annually. Applicants for this program must have a strong working knowledge of the Italian language and must meet entrance qualifications for graduate study in the Department of Art and Music Histories. Students begin their coursework in the fall semester at the University's main campus in Syracuse, where they complete three graduate seminars. Students are also required to audit a formal Italian language class. Upon successful completion of the fall semester, students register for two semesters of advanced coursework at Syracuse University's Villa Gigliucci in Florence. Four seminars are offered during the spring semester, and in the following fall semester students enroll in a seminar on art conservation and the advanced research seminar culminating in a public colloquium devoted to aspects of Renaissance art history.

The deadline for application to these programs is January 1.

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## Arts Leadership Administration

### Contact:

Mark Nerenhausen, Professor of Practice and Founding Director  
[manerenh@syr.edu](mailto:manerenh@syr.edu)  
308 Bowne Hall  
443-1796

### Master of Arts in Arts Leadership Administration

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 non-profit 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 immersion course to NYC or other major US destination and immersion course to London, 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

### Certificate of Advanced Study in Arts Leadership Administration

### Faculty:

Stephen Masiclat, Associate Professor

John Petosa, Professor of Practice  
Johann Comprix, Assistant Professor  
Ernest Lathrop, Assistant 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

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## Audiology Graduate Program

### Audiology

Chair Linda Milosky  
621 Skytop Road, Suite 1200  
315-443-9637

Faculty Karen Doherty, Linda Milosky, Joseph Pellegrino, Beth Prieve, Kathy R. Vander Werff, plus adjunct faculty for certain specializations.

Clinical Staff: T. Kordas, K. Kennedy

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.

### Doctor of Audiology (Au.D.)

The department offers a clinical doctorate program in audiology culminating in the Doctor of Audiology (AuD) 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 AuD 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

Students will have a wide variety of clinical experiences. They will begin work in the Gebbie Speech-Language-Hearing Clinics, 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 Au.D. students' 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.

#### 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. In addition to Audiology coursework for the Ph.D. degree, coursework is selected from a number of areas related to communication disorders, such as psychology, engineering, computer science, statistics, sensory processes, neuroscience and gerontology.

Students begin their research experiences early in their programs and are mentored in faculty laboratories. The Ph.D. degree requires a minimum of 83 credits beyond the bachelor's degree. Students 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. The academic and research experiences lead to the dissertation, which is typically begun in the third year. The program may be completed in four years of full-time study.

#### AuD/PhD Dual Degree

The Department of Communication Sciences and Disorders offers an AuD/PhD degree for those students interested in receiving both a professional doctoral degree (AuD) and a research doctoral degree (PhD). The professional doctoral program is designed to meet the current requirements for the ASHA Certificate of Clinical Competence. The research doctoral degree (PhD) is designed for students interested in a traditional PhD program that focuses on research and prepares students for careers in teaching and research. Application to the dual program (AuD/PhD) may be made after successful completion of the first year of the AuD program. Students who are interested in the AuD/PhD 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 AuD/PhD 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. Students must pass a pre-qualifying exam at the end of their first year in the AuD/PhD program and qualifying exams at the end of their coursework. The academic and research experiences lead to the dissertation, which typically is begun in the fourth year of study. It is anticipated that a student can complete the dual degree program in 6 years of full-time study.

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## Biology Graduate Program

Graduate Program Directors:

Steve Dorus, 315-443-7091  
sdorus@syr.edu  
248 Life Sciences Complex

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

Contact Evelyn Lott, Graduate Secretary  
114 Life Sciences Complex  
315-443-9154  
biology@syr.edu.

Faculty David M. Althoff, John M. Belote, Heather Coleman, Steve Dorus, Scott E. Erdman, Douglas A. Frank, Jason D. Fridley, Jannice Friedman, Anthony Garza, Paul Gold, Sarah Hall, James A. Hewett, Sandra J. Hewett, Donna Korol, George M. Langford, Katharine Lewis, Eleanor Maine, Susan Parks, Melissa Pepling, Scott Pitnick, Ramesh Raina, Mark Ritchie, Kari A. Segraves, Robert Silver, Roy Welch, Jason R. Wiles

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 & 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. Primary emphasis is placed on graduate training leading to the Ph.D.

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 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 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.

#### DEGREE PROGRAMS

##### 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 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.

##### 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 given at 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 2013-2014 academic year is \$ 24,500. 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 the student free 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 an AAALAC-accredited animal facility and extensive facilities and instrumentation for carrying out most kinds of modern biological research at the molecular, cellular, organismal, and population levels. Extensive library holdings and computing facilities are readily accessible for student and faculty use. Construction of the new life sciences complex was completed in fall 2008. The 210,000-square-foot building, the University's largest, most ambitious construction project, brings the biology, chemistry, and biochemistry departments under one roof for the first time in the University's history.

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## M.S. In Biomedical Forensic Sciences

M.S. in Biomedical Forensic Sciences

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 34 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 cr.)
- FSC 631 Statistics for the Forensic Sciences (3 cr.)
- FSC 640 Forensic Biochemical Analysis (3 cr.)
- FSC 651 Forensic Pathology (3 cr.)
- FSC 653 Forensic Toxicology (3 cr.)

Elective Courses - 19 credits required

At least one \* course required

- ANT 600 Reading the Body
- ANT 633 Advanced Human Osteology
- ANT 634 Anthropology of Death
- ANT 636 Forensic Anthropology
- BIO 575 Biochemistry I
- BIO 576 Biochemistry II
- BIO 631 Population Genetics
- BIO 662 Molecular Genetics
- BIO 663 Molecular Biotechnology\*
- BIO 665 Molecular Biology Laboratory\*
- BIO 675 Biochemistry Laboratory\*
- CHE 575 Organic Spectroscopy
- CHE/BCM 677 Preparation Anal Proteins and Nucleic Acids\*
- FSC 553 Principles of Toxicology
- FSC 635 Medicolegal Death Investigation I
- FSC 636 Medicolegal Death Investigation II
- FSC 637 Medicolegal Death Investigation for Emergency Responders
- FSC 640 Selected Topics in Advanced Forensic Science
- FSC 652 Forensic Mental Health
- FSC 654 Nuclear Forensics
- FSC 661 Firearms & Impression Evidence
- FSC 662 Forensic Entomology
- FSC 663 Bloodstain Pattern Analysis
- FSC 665 Latent Prints
- FSC 668 Crime Scene Investigation
- FSC 667 Forensic Photography
- FSC 671 Firearms & Impression Evidence II
- FSC 690 Independent Study or Internship in Forensic Science
- IST 602 Digital Forensics
- LIN 671 Bilingualism
- LIN 675 Forensic Linguistics

Total: 34 credits

Degree: Master of Science

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## Chemistry Graduate Program

Chair: Karin Ruhlandt, 1-014 Center for Science and Technology, 315-443-4109, [kruhland@syr.edu](mailto:kruhland@syr.edu)

Faculty Philip N. Borer, Mark S. Braiman, Joseph Chaiken, Arindam Chakraborty, John D. Chisholm, Daniel Clark, James C. Dabrowiak, Robert P. Doyle, Jerry Goodisman, Bruce S. Hudson, Tara Kahan, James Kallmerten, Ivan V. Korendovych, Timothy M. Korter, Yan-Yeung Luk, Mathew M. Maye, Karin Ruhlandt, James T. Spencer, Michael B. Sponsler, Nancy I. Totah, 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, 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. An interdisciplinary program in structural biology, biochemistry, and biophysics is also available.

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.

## DEGREE PROGRAMS

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, including thesis 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.

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 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 examinations; and passing an oral examination based on the thesis.

## GRADUATE AWARDS

The figures associated with various appointments are based on 2012 - 2013 awards.

Syracuse University Graduate Fellowships provide stipends of \$22,460 (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 \$22,975 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 new Life Sciences Complex, located adjacent to the department of chemistry, provides new 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.

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## Chemistry Secondary Teacher Preparation Program

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](mailto: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 Chemistry (7-12). It is an alternative to the existing undergraduate Arts and Sciences/Education dual program in these areas, and an option that often takes less time and fewer credits than earning the entire master's degree in education after completion of a general Arts and Sciences degree.

The combined bachelor's/master's teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree allows.

Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met – typically at the end of 5 years. Students begin taking education courses as undergraduates, including some in the fourth year that are taken for graduate credit, and apply to become graduate students for their last two semesters. Some summer study (not necessarily at SU) may be required.

The combined program has a two-stage admission process. The first stage involves meeting with the School of Education contact as early as possible to develop a plan, and, if a decision to pursue the program is made, completing a form signed by Education and a new declaration of program of study form in Arts and Science to declare the Arts and Sciences program with “Teacher Preparation/5 year” appended to the title (e.g., “History (TchrPrep/5yr)” instead of “History”). The second admission stage involves an application to the Graduate School. Each admission stage requires a minimum 3.0 cumulative GPA and a minimum 3.0 GPA in the courses from the subject to be taught. The second stage also requires successful performance in the undergraduate education courses.

The choices of Arts and Sciences majors, and the course requirements for the Arts and Sciences major, the Liberal Arts Core, and other requirements related to the major are the same for these combined programs as those for students completing the dual enrollment undergraduate Arts and Sciences/Education program. These details about specific adjustments necessary to the Liberal Arts Core and to Arts and Sciences major may be found in the section describing Dual Arts and Sciences/ Education Programs.

Because of the specific course requirements and sequencing of courses, it is important that students interested in one of these programs meet with the School of Education contact as soon as possible to develop a plan. EDU 204, the first education course, must be taken no later than spring of the junior year.

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## Clinical Psychology

### Clinical Psychology

Contact: Kevin Antshel, Ph.D..

430 Huntington Hall

kmantshel@syr.edu

(315) 443-9450

The clinical psychology training program at Syracuse University is a doctoral program designed to train students to be responsible, innovative, and scholarly psychologists. The program embraces the scientist-practitioner model, and a strong emphasis is placed on both research and clinical training. The program is accredited by the American Psychological Association.

### ADMISSION

In making decisions about admission, the clinical faculty consider a student's grades, GRE scores, letters of recommendation, personal statement, and evidence of the hard work, interest, and motivation that is vital to success in graduate school. Experience in research is also looked on positively. Applicants should have at least 18 credits of psychology, including a laboratory course and a statistics course. Recently admitted applicants have averaged higher than 1210 on the verbal + quantitative GREs and had higher than 3.5 undergraduate GPAs. The program does not discriminate on the basis of age, sex, race, ethnic origin, religion, or physical disability. Applications are considered for the fall term only, and the deadline for receipt of the COMPLETED application is January 1. The program receives about 125 applications per year for four to six openings. There are approximately 25 students in the program.

### 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, history 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 sixth year. The internships carry stipends and may be completed at any APA-accredited agency in the United States or Canada.

### 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

Chair, TBA  
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:

1. broad training concentrated in the natural sciences or engineering;
2. a combination of breadth, specialization, and integration in the sciences or engineering;
3. supervised college teaching experience in the candidate's science specialty, either at Syracuse University or at another college in the Syracuse vicinity;
4. seminars in curriculum development and methods of teaching science in higher education; and
5. 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 18 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:

The Nature of Science in Science Education

College Science Teaching

Higher Education

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:

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

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

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## Composition And Cultural Rhetoric Graduate Program

Composition and Cultural Rhetoric  
Stephen Parks  
239 H.B. Crouse Hall  
315-443-5146

Faculty Lois Agnew, Patrick W. Berry, Collin G. Brooke, Kevin Browne, Margaret Himley, Krista Kennedy, Rebecca Moore Howard, Iswari P. Pandey, Stephen Parks, Minnie Bruce Pratt, Eileen E. Schell, Tony Scott

This program offers a doctoral degree in Composition and Cultural Rhetoric (CCR) situated in the Writing Program, a departmental unit devoted entirely to writing and rhetoric. Its nationally known undergraduate teaching program provides a laboratory for research and innovation. The independence of the CCR

program allows focused study of the pedagogy and cultural practices of written language, yet facilitates multidisciplinary study and integrations. In addition to a core faculty and closely associated faculty affiliates, faculty consultants in other disciplines facilitate and advise on students' interdisciplinary studies, a required element of the program.

The goal of the program is to prepare students for careers blending scholarship, teaching, administration, and consulting on writing and rhetoric in academic, workplace, and community settings. Intellectual themes of the program include studying composition and rhetoric emphasizing social practices of literacy, rhetoric, and writing instruction; and conceiving written language as culturally and historically specific. Students are encouraged to develop disciplinary and interdisciplinary specializations such as writing program administration; cross-cultural literacy studies; professional, technical, and electronic communication; rhetorical history; or feminist studies.

## ADMISSION

The program admits a class of four to six full-time students a year. Applicants should have satisfactorily completed a master's degree in a language-related or cognate discipline (counted as 30 credits) and demonstrated a strong commitment and talent in rhetoric and composition. In making decisions about admissions, the faculty considers an applicant's academic record, career plans and scholarly interests, GRE scores, a scholarly writing sample, and letters of recommendation. Prior teaching experience or practice in communication fields is desirable.

In addition to completing the regular application for graduate study, CCR applicants must submit an essay on their intellectual history and academic interests, as well as a statement on teaching interests and practical experience. Detailed instructions for tailoring the application to the CCR program may be obtained from the Graduate Coordinator, Writing Program, 239 H.B. Crouse Hall, Syracuse NY 13244-1160, 315-443-5146; or from the program's web site, [ccr.syr.edu](http://ccr.syr.edu).

## 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 designed to be completed in 4 years. Required credits are distributed as follows:

- 18 credits in a required core
- 18 credits (minimum) in electives, 9 of which must be taken in Composition and Cultural Rhetoric
- 3 credits in doctoral readings (in preparation for qualifying examinations)
- 6-18 credits of dissertation

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 take a required 6-course core in Composition Studies and Cultural Rhetoric, which becomes the primary area for qualifying examinations. Students must pass comprehensive written qualifying examinations, including one primary and two secondary areas. Students must complete a written dissertation that is a book-length work of scholarship and defend it *viva voce*.

## 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 \$16,022, 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, attend a weekly teaching practicum during the first year, and participate in a weekly coordinating group thereafter. 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.

For further details, contact the director or graduate coordinator, or visit the Composition and Cultural Rhetoric web site, [ccr.syr.edu](http://ccr.syr.edu).

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## M.S. Computational Linguistics

Jaklin Kornfilt  
[Kornfilt@syr.edu](mailto:Kornfilt@syr.edu)  
340 HB Crouse  
315-443-2175

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 may include up to 6 credits earned through 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, Introduction to Syntactic Analysis, LIN 651, Introduction to Morphological Analysis, and LIN 611, Introduction to Semantics, 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.

Three required courses in information studies, including two foundational courses IST 657 Information Retrieval and IST 664/CIS 668 Natural Language Processing and one internship course IST 971. The internship IST 971 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, Information Retrieval, 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 required courses in computational science CPS 681 Beginning Explorations in Computing and Programming and CPS 688 Intermediate Programming and Computing Fundamentals. 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/CSE 683 Expert Systems  
CIS 667/CSE 684 Intro/Artfcl. Intelligence  
CIS 626 Theor Found of Comp Science  
CIS 623 Structured Programming & Formal Methods  
CSD 616 Introduction to Applied Phonetics  
LIN 631 Introduction to Phonological Analysis  
LIN 612 Introduction to Pragmatics  
PHI 651 Logic and Language  
IST 631 Classification & Subject Representation  
IST 638 Indexing and Abstracting  
IST 649 Human Interaction with Computers  
IST 565 Data Mining  
IST 736 Text Mining

#### 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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## Creative Writing Graduate Program

### M.F.A. Creative Writing

Contact: Sarah Harwell, Associate Director, 420 Hall of Languages, [scharwel@syr.edu](mailto:scharwel@syr.edu), 315-443-9480

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

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](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 \$14,034 to \$14,951. 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 (WRT 670) 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 \$12,660 to \$21,170.

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.

### DEGREE PROGRAMS

#### 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 about 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.

Applicants must fill out the basic information sheet and submit a sample of poetry or fiction no later than January 1, as well as complete the regular 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 30 pages, maximum, for fiction writing) should be sent directly to the Director of Creative Writing, 401 Hall of Languages, Syracuse NY 13244-1170.

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 third-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

## Earth Sciences Graduate Program

Donald Siegel, Chair  
204 Heroy Geology Laboratory,  
315-443-2672

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

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 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.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.

#### 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.

#### 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 thesis 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 thesis 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 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 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,  $^{40}\text{Ar}/^{39}\text{Ar}$  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 plasmasspectrometer, 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.

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## Earth Science Secondary Teacher Preparation Program

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](mailto: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 Earth Science (7-12). It is an alternative to the existing undergraduate Arts and Sciences/Education dual program in these areas, and an option that often takes less time and fewer credits than earning the entire master's degree in education after completion of a general Arts and Sciences degree.

The combined bachelor's/master's teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree allows.

Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met – typically at the end of 5 years. Students begin taking education courses as undergraduates, including some in the fourth year that are taken for graduate credit, and apply to become graduate students for their last two semesters. Some summer study (not necessarily at SU) may be required.

The combined program has a two-stage admission process. The first stage involves meeting with the School of Education contact as early as possible to develop a plan, and, if a decision to pursue the program is made, completing a form signed by Education and a new declaration of program of study form in Arts and Science to declare the Arts and Sciences program with "Teacher Preparation/5 year" appended to the title (e.g., "History (TchrPrep/5yr)" instead of "History"). The second admission stage involves an application to the Graduate School. Each admission stage requires a minimum 3.0 cumulative GPA and a minimum 3.0 GPA in the courses from the subject to be taught. The second stage also requires successful performance in the undergraduate education courses.

The choices of Arts and Sciences majors, and the course requirements for the Arts and Sciences major, the Liberal Arts Core, and other requirements related to the major are the same for these combined programs as those for students completing the dual enrollment undergraduate Arts and Sciences/Education program. These details about specific adjustments necessary to the Liberal Arts Core and to Arts and Sciences major may be found in the section describing Dual Arts and Sciences/ Education Programs.

Because of the specific course requirements and sequencing of courses, it is important that students interested in one of these programs meet with the School of Education contact as soon as possible to develop a plan. EDU 204, the first education course, must be taken no later than spring of the junior year.

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## Econometrics Certificate Overview

### Econometrics

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.

To obtain the certificate a student must successfully complete ECN 621, ECN 622, ECN 720, MAT 651, and MAT 652.

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## Economics Secondary Teacher Preparation Program

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](mailto: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 Social Studies (7-12). It is an alternative to the existing undergraduate Arts and Sciences/Education dual program in these areas, and an option that often takes less time and fewer credits than earning the entire master's degree in education after completion of a general Arts and Sciences degree.

The combined bachelor's/master's teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree allows.

Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met – typically at the end of 5 years. Students begin taking education courses as undergraduates, including some in the fourth year that are taken for graduate credit, and apply to become graduate students for their last two semesters. Some summer study (not necessarily at SU) may be required.

The combined program has a two-stage admission process. The first stage involves meeting with the School of Education contact as early as possible to develop a plan, and, if a decision to pursue the program is made, completing a form signed by Education and a new declaration of program of study form in Arts and Science to declare the Arts and Sciences program with “Teacher Preparation/5 year” appended to the title (e.g., “History (TchrPrep/5yr)” instead of “History”). The second admission stage involves an application to the Graduate School. Each admission stage requires a minimum 3.0 cumulative GPA and a minimum 3.0 GPA in the courses from the subject to be taught. The second stage also requires successful performance in the undergraduate education courses.

The choices of Arts and Sciences majors, and the course requirements for the Arts and Sciences major, the Liberal Arts Core, and other requirements related to the major are the same for these combined programs as those for students completing the dual enrollment undergraduate Arts and Sciences/Education program. These details about specific adjustments necessary to the Liberal Arts Core and to Arts and Sciences major may be found in the section describing Dual Arts and Sciences/ Education Programs.

Because of the specific course requirements and sequencing of courses, it is important that students interested in one of these programs meet with the School of Education contact as soon as possible to develop a plan. EDU 204, the first education course, must be taken no later than spring of the junior year.

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## English Graduate Program

Contact: Mike Goode, Director of Graduate Studies, 401 Hall of Languages, 315-443-6133; or Christopher Kennedy, Director of Creative Writing, 401 Hall of Languages, 315-443-3755.

Faculty Crystal Bartolovich, Michael Burkard, Dympna Callaghan, Steven Cohan, 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 Shirilan, Bruce Smith, Dana Spiotta, Harvey Teres, Greg Thomas, Silvio Torres-Saillant, David Yaffe

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, visit our department web site at [english.syr.edu](http://english.syr.edu).

## DEGREE PROGRAMS

### 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 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 fill out the basic information sheet and submit a sample of poetry or fiction no later than January 1, as well as complete the regular 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 30 pages, maximum, for fiction writing) should be sent directly to the Director of Creative Writing, 401 Hall of Languages, Syracuse NY 13244-1170.

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 third-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).

### 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 630/730) 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.

### 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 Introduction to Critical Theory is a required part of students' coursework credit. Other courses are chosen from proseminars (630) and seminars (730). Occasionally, electives at the 800 level are offered. 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, 500 level courses in English 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: [english.syr.edu](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 \$14,034 to \$14,951. 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 (WRT 670) 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. Ph.D. students often teach in the Writing Program in their final year.

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 \$13,040 to \$21,805.

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.

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## English And Textual Studies Secondary Teacher Preparation

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](mailto: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 English Language Arts (7-12). It is an alternative to the existing undergraduate Arts and Sciences/Education dual program in these areas, and an option that often takes less time and fewer credits than earning the entire master's degree in education after completion of a general Arts and Sciences degree.

The combined bachelor's/master's teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree allows.

Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met – typically at the end of 5 years. Students begin taking education courses as undergraduates, including some in the fourth year that are taken for graduate credit, and apply to become graduate students for their last two semesters. Some summer study (not necessarily at SU) may be required.

The combined program has a two-stage admission process. The first stage involves meeting with the School of Education contact as early as possible to develop a plan, and, if a decision to pursue the program is made, completing a form signed by Education and a new declaration of program of study form in Arts and Science to declare the Arts and Sciences program with "Teacher Preparation/5 year" appended to the title (e.g., "History(TchrPrep/5yr)" instead of "History"). The second admission stage involves an application to the Graduate School. Each admission stage requires a minimum 3.0 cumulative GPA and a minimum 3.0 GPA in the courses from the subject to be taught. The second stage also requires successful performance in the undergraduate education courses.

The choices of Arts and Sciences majors, and the course requirements for the Arts and Sciences major, the Liberal Arts Core, and other requirements related to the major are the same for these combined programs as those for students completing the dual enrollment undergraduate Arts and Sciences/Education program. These details about specific adjustments necessary to the Liberal Arts Core and to Arts and Sciences major may be found in the section describing Dual Arts and Sciences/ Education Programs.

Because of the specific course requirements and sequencing of courses, it is important that students interested in one of these programs meet with the School of Education contact as soon as possible to develop a plan. EDU 204, the first education course, must be taken no later than spring of the junior year.

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## European Union & Contemporary Europe Certificate Overview

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](mailto: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/](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:

1. The choice of one of the required courses:

PSC 756 Politics of the European Union  
PSC 600 The EU and Beyond: Identity, Politics, and the New Europe\*  
ANT/HUM/SOC 670 The Culture and Politics of Reconciliation in Central Europe\*\*

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  
ANT 673/ PAI 730 Peace and Conflict in the Balkans  
ANT/PAI 701 Multilateral Peacekeeping  
FRE 600 Contemporary France in Literature & Film\*  
FRE 600 Selected Topics  
GER 600 Selected Topics  
HST 735 Readings and Research on European History  
LAW 910 English Legal System\*\*\*  
PHI 640/REL 660 Continental Philosophy of Religion  
PAI 715 Issues in Global Economic and Financial Security\*\*\*\*  
PAI 715 International Economic Negotiations\*\*\*\*  
PA 715 Statecraft and Smart Power in the Digital Era\*\*\*\*  
PAI 727 Responding to the Proliferation of Weapons of Mass Destruction  
PAI 788 Transnational Crime, Drugs & Terrorism  
PAI 716/ECN 610 Economic Dimensions of Global Power  
PSC 769 Comparative Parties and Politics  
PSC 785 Comparative Civil-Military Relations  
PSC 786 Russian and Post-Soviet Politics  
PSC 788.001 Political Leadership  
PSC / PAI 700.003 Crisis Management  
PSC 600 European National and International Conflict: What Alternatives to Violence\*  
PSC 600 European Human Rights\*  
SPA 653 Women in Spanish Literature  
SPA 658 Narrative and Film in Spain

\*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.

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).

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## Experimental Psychology

Experimental Psychology  
Contact: Amy Criss, Ph.D.  
430 Huntington Hall  
acriss@syr.edu  
(315)443-3667

The overall aim of this program is to prepare students for academic careers in research and teaching. Students gain knowledge and research skills in the broad fields of experimental psychology, cognitive psychology, and cognitive neuroscience and in selected areas of research specialization (e.g., memory, cognitive aging, social-cognitive neuroscience).

Research training occurs in one or more of the laboratories of the program faculty. Students usually gain teaching experience under faculty supervision in one or more courses (e.g., introductory psychology, cognitive psychology, research methods, statistics, psychology of adult life and aging). A distinctive feature of the training program is its emphasis on the use of state-of-the-art research methods and tools (e.g., high-density electrophysiology, eye tracking) and rigorous analytic techniques (e.g., computational modeling) as they apply to student-selected areas of interest.

### PROGRAM REQUIREMENTS

The curriculum in experimental psychology is designed to provide students with the essential coursework and laboratory experience necessary for an academic or research career in experimental psychology. Coursework is offered in three areas: (1) research methods, and statistics and design; (2) cognitive and neural bases of behavior including the study of perception, memory, and attention; cognitive neuropsychology; cognitive neurochemistry; cognitive aging; and brain-behavior relationships through the life-span; and (3) applications of research principles to selected areas (e.g., psychology of adult life and aging). The program of study for the Ph.D. in experimental psychology requires a minimum of 90 graduate credits, distributed as follows:

#### Statistics Core (9 credits)

PSY 655 Statistical Methods in Psychology II  
PSY 756 Statistical Methods in Psychology III  
PSY 853 Experimental Design and Statistical Tests

#### Department Core (9 credits)

Three courses chosen from departmental areas outside the student's major area of study.

#### Methods Core (9 credits required)

PSY 611 Proseminar: Methods and Topics in Cognitive Psychology  
PSY 612 Advanced Experimental Psychology  
PSY 854 Statistical Analysis in Research Design

#### Cognitive/Neural Bases (9 credits)

PSY 615 Behavioral Pharmacology  
PSY 622 Cognitive Psychology: Memory and Attention  
PSY 626 Cognitive Neurochemistry  
PSY 730 Seminar in Experimental Psychology  
PSY 737 Experimental Psychology: Cognition and Human Aging

#### Applications of Experimental Psychology (3 credits)

PSY 736 Psychology of Adult Life and Aging

#### Independent Research, Other Recommended Courses (27 credits)

Students are encouraged to work closely with one or more faculty members in a research program and to develop a program of research early in their training.

#### Master's thesis (6 credits)

#### Dissertation (18 or more credits)

### SATISFACTORY PROGRESS IN THE PROGRAM

Students are required to propose their master's thesis by December 15 of the second year, and to propose their doctoral dissertation by December 15 of the fourth year. Students having completed a research master's thesis elsewhere are not 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 15 of the third year. Students take a Ph.D. qualifying exam after completion of the master's thesis and prior to submitting 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 experimental psychology 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 Experimental Psychology 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. Applicants must have a minimum GPA of 3.0 and a minimum GRE of 1100 (combined verbal and quantitative scores). Financial support is available for all well-qualified graduate students by means of research assistantships, teaching assistantships, or fellowships.

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## Master Of Science In Forensic Science

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
- FSC 631 Statistics for the Forensic Sciences
- FSC 632 Research & Career Resources
- FSC 633 Quality Assurance & Ethics
- FSC 644 Forensic Chemical Analysis

#### 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.

#### BIOLOGY CONCENTRATION

- BIO 575 Biochemistry I
- BIO 576 Biochemistry II
- BIO 631 Population Genetics
- BIO 662 Molecular Genetics
- BIO 663 Molecular Biotechnology
- BIO 665 Molecular Biology Laboratory
- BIO 675 Biochemistry Laboratory
- CHE/BCM 677 Prep & Analysis of Proteins & Nucleic Acids
- FSC 640 Forensic Biochemical Analysis

#### CRIME SCENE INVESTIGATION CONCENTRATION

- FSC 637 Medicolegal Death Investigation for Emergency Responders
- FSC 662 Forensic Entomology
- FSC 663 Bloodstain Pattern Analysis
- FSC 665 Latent Prints
- FSC 667 Forensic Photography

- FSC 668 Crime Scene Investigation

FORENSIC ANTHROPOLOGY CONCENTRATION

- ANT 600 Reading the Body
- ANT 633 Advanced Human Osteology
- ANT 634 Anthropology of Death
- ANT 636 Forensic Anthropology
- FSC 662 Forensic Entomology

FORENSIC CHEMISTRY CONCENTRATION

- CHE 575 Organic Spectroscopy
- CHE/BCM 677 Prep & Analysis of Proteins & Nucleic Acids
- FSC 553 Principles of Toxicology

IMPRESSIONS EVIDENCE CONCENTRATION

- FSC 661 Firearms & Impression Evidence
- FSC 665 Latent Prints
- FSC 671 Firearms & Impression Evidence II

JURISPRUDENCE CONCENTRATION

- LAW 604 Criminal Law
- LAW 708 Constitutional Criminal Procedure- Investigation
- LAW 718 Evidence
- LAW 719 Psychology & the Law
- LAW 759 Computer Crimes
- LAW 781 Forensic Evidence

LINGUISTICS CONCENTRATION

- LIN 601 Introductory Linguistic Analysis
- LIN 631 Phonological Analysis
- LIN 671 Dimension of Bilingualism & Multiculturalism
- LIN 675 Forensic Linguistics

MEDICOLEGAL DEATH INVESTIGATION CONCENTRATION

- FSC 635 Medicolegal Death Investigation I
- FSC 636 Medicolegal Death Investigation II
- FSC 651 Forensic Pathology

NATIONAL SECURITY SCIENCE CONCENTRATION

- FSC 654 Nuclear Forensics
- FSC 640 Countering WMDs
- NUC 520 Radiochemistry, Nuclear Fuel Reprocessing and Nonproliferation

PSYCHIATRY & BEHAVIORAL SCIENCE CONCENTRATION

- FSC 652 Forensic Mental Health
- PSY 674 Advanced Social Psychology
- SWK/WGS 626 Persons in Social Context
- SWK 724 Psychopathology

REGULATORY SCIENCE CONCENTRATION

- FSC 656 Regulation and Compliance
- FSC 657 Drug Development, Testing, and Approval
- FSC 653 Forensic Toxicology

TOXICOLOGY CONCENTRATION

- FSC 553 Principles of Toxicology
- FSC 651 Forensic Pathology
- FSC 653 Forensic Toxicology

FULL ELECTIVES LIST

- ANT 600 Reading the Body
- ANT 633 Advanced Human Osteology
- ANT 634 Anthropology of Death
- ANT 636 Forensic Anthropology
- BIO 575 Biochemistry I
- BIO 576 Biochemistry II
- BIO 631 Population Genetics
- BIO 662 Molecular Genetics
- BIO 663 Molecular Biotechnology
- BIO 665 Molecular Biology Laboratory
- BIO 675 Biochemistry Laboratory
- CHE 575 Organic Spectroscopy
- CHE/BCM 677 Prep & Analysis of Proteins & Nucleic Acids
- FSC 553 Principles of Toxicology
- FSC 635 Medicolegal Death Investigation I
- FSC 636 Medicolegal Death Investigation II
- FSC 637 Medicolegal Death Investigation for Emergency Responders
- FSC 640 Selected Topics in Advanced Forensic Science
- FSC 651 Forensic Pathology
- FSC 652 Forensic Mental Health
- FSC 653 Forensic Toxicology
- FSC 654 Nuclear Forensics
- FSC 661 Firearms & Impression Evidence
- FSC 662 Forensic Entomology
- FSC 663 Bloodstain Pattern Analysis
- FSC 664 Forensic Biochemical Analysis
- FSC 665 Latent Prints
- FSC 667 Forensic Photography
- FSC 668 Crime Scene Investigation
- FSC 671 Firearms & Impression Evidence II
- FSC 690 Independent Study or Internship in Forensic Science
- IST 602 Digital Forensics
- LAW 604 Criminal Law
- LAW 708 Constitutional Criminal Procedure- Investigation
- LAW 718 Evidence
- LAW 719 Psychology & the Law
- LAW 759 Computer Crimes
- LAW 781 Forensic Evidence
- LIN 601 Introductory Linguistic Analysis
- LIN 631 Phonological Analysis
- LIN 671 Dimension of Bilingualism and Multiculturalism
- LIN 675 Forensic Linguistics
- NUC 520 Radiochemistry, Nuclear Fuel Reprocessing and Nonproliferation
- PSY 674 Advanced Social Psychology
- SWK 724 Psychopathology
- SWK/WGS 626 Persons in Social Context

### III. RESEARCH - 3 credits 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 should be conducted as part of an on- or off-campus research project, internship, or independent study. Additional credits of independent study or internship may be used to satisfy elective credit or concentration credit by petition.

- FSC 690 Independent Study in Forensic Science

## General Track

### I. GATEWAY COURSES - 12 Credits Required

- FSC 606 Advanced Forensic Science
- FSC 631 Statistics for the Forensic Sciences
- FSC 632 Research & Career Resources
- FSC 633 Quality Assurance & Ethics

### 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.

#### BIOLOGY CONCENTRATION

- BIO 575 Biochemistry I
- BIO 576 Biochemistry II
- BIO 631 Population Genetics
- BIO 662 Molecular Genetics
- BIO 663 Molecular Biotechnology
- BIO 665 Molecular Biology Laboratory
- BIO 675 Biochemistry Laboratory
- CHE/BCM 677 Prep & Analysis of Proteins & Nucleic Acids
- FSC 640 Forensic Biochemical Analysis

#### CRIME SCENE INVESTIGATION CONCENTRATION

- FSC 637 Medicolegal Death Investigation for Emergency Responders
- FSC 662 Forensic Entomology
- FSC 663 Bloodstain Pattern Analysis
- FSC 665 Latent Prints
- FSC 667 Forensic Photography
- FSC 668 Crime Scene Investigation

#### FORENSIC ANTHROPOLOGY CONCENTRATION

- ANT 600 Reading the Body
- ANT 633 Advanced Human Osteology
- ANT 634 Anthropology of Death
- ANT 636 Forensic Anthropology
- FSC 662 Forensic Entomology

#### FORENSIC CHEMISTRY CONCENTRATION

- CHE 575 Organic Spectroscopy
- CHE/BCM 677 Prep & Analysis of Proteins & Nucleic Acids
- FSC 553 Principles of Toxicology

#### IMPRESSIONS EVIDENCE CONCENTRATION

- FSC 661 Firearms & Impression Evidence
- FSC 665 Latent Prints
- FSC 671 Firearms & Impression Evidence II

#### JURISPRUDENCE CONCENTRATION

- LAW 604 Criminal Law
- LAW 708 Constitutional Criminal Procedure- Investigation
- LAW 718 Evidence
- LAW 719 Psychology & the Law
- LAW 759 Computer Crimes
- LAW 781 Forensic Evidence

#### LINGUISTICS CONCENTRATION

- LIN 601 Introductory Linguistic Analysis
- LIN 631 Phonological Analysis
- LIN 671 Dimension of Bilingualism & Multiculturalism
- LIN 675 Forensic Linguistics

#### MEDICOLEGAL DEATH INVESTIGATION CONCENTRATION

- FSC 635 Medicolegal Death Investigation I
- FSC 636 Medicolegal Death Investigation II
- FSC 651 Forensic Pathology

#### NATIONAL SECURITY SCIENCE CONCENTRATION

- FSC 654 Nuclear Forensics
- FSC 640 Countering WMDs

- NUC 520 Radiochemistry, Nuclear Fuel Reprocessing and Nonproliferation

#### PSYCHIATRY & BEHAVIORAL SCIENCE CONCENTRATION

- FSC 652 Forensic Mental Health
- PSY 674 Advanced Social Psychology
- SWK/WGS 626 Persons in Social Context
- SWK 724 Psychopathology

#### REGULATORY SCIENCE CONCENTRATION

- FSC 656 Regulation and Compliance
- FSC 657 Drug Development, Testing, and Approval
- FSC 653 Forensic Toxicology

#### TOXICOLOGY CONCENTRATION

- FSC 553 Principles of Toxicology
- FSC 651 Forensic Pathology
- FSC 653 Forensic Toxicology

#### FULL ELECTIVES LIST

- ANT 600 Reading the Body
- ANT 633 Advanced Human Osteology
- ANT 634 Anthropology of Death
- ANT 636 Forensic Anthropology
- BIO 575 Biochemistry I
- BIO 576 Biochemistry II
- BIO 631 Population Genetics
- BIO 662 Molecular Genetics
- BIO 663 Molecular Biotechnology
- BIO 665 Molecular Biology Laboratory
- BIO 675 Biochemistry Laboratory
- CHE 575 Organic Spectroscopy
- CHE/BCM 677 Prep & Analysis of Proteins & Nucleic Acids
- FSC 553 Principles of Toxicology
- FSC 635 Medicolegal Death Investigation I
- FSC 636 Medicolegal Death Investigation II
- FSC 637 Medicolegal Death Investigation for Emergency Responders
- FSC 640 Selected Topics in Advanced Forensic Science
- FSC 651 Forensic Pathology
- FSC 652 Forensic Mental Health
- FSC 653 Forensic Toxicology
- FSC 654 Nuclear Forensics
- FSC 661 Firearms & Impression Evidence
- FSC 662 Forensic Entomology
- FSC 663 Bloodstain Pattern Analysis
- FSC 664 Forensic Biochemical Analysis
- FSC 665 Latent Prints
- FSC 667 Forensic Photography
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- FSC 690 Independent Study or Internship in Forensic Science
- IST 602 Digital Forensics
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- LAW 718 Evidence
- LAW 719 Psychology & the Law
- LAW 759 Computer Crimes
- LAW 781 Forensic Evidence
- LIN 601 Introductory Linguistic Analysis
- LIN 631 Phonological Analysis
- LIN 671 Dimension of Bilingualism and Multiculturalism
- LIN 675 Forensic Linguistics
- NUC 520 Radiochemistry, Nuclear Fuel Reprocessing and Nonproliferation
- PSY 674 Advanced Social Psychology

- SWK 724 Psychopathology
- SWK/WGS 626 Persons in Social Context

III. INTERNSHIP or INDEPENDENT STUDY RESEARCH – at least 3 credits required (additional credits may be used to satisfy elective requirements).

- FSC 690 Independent Study in Forensic Science

#### Nuclear Forensics Track

#### I. GATEWAY COURSES - 22 Credits Required

- FSC 606 Advanced Forensic Science
- FSC 631 Statistics for the Forensic Sciences
- FSC 632 Research & Career Resources
- FSC 633 Quality Assurance & Ethics
- FSC 644 Forensic Chemical Analysis
- FSC 654 Nuclear Forensics
- NUC 520 Radiochemistry, Nuclear Fuel Reprocessing and Nonproliferation

#### II. ELECTIVE COURSES – 5 credits required

- ANT 600 Reading the Body
- ANT 633 Advanced Human Osteology
- ANT 634 Anthropology of Death
- ANT 636 Forensic Anthropology
- BIO 575 Biochemistry I
- BIO 576 Biochemistry II
- BIO 631 Population Genetics
- BIO 662 Molecular Genetics
- BIO 663 Molecular Biotechnology
- BIO 665 Molecular Biology Laboratory
- BIO 675 Biochemistry Laboratory
- CHE 575 Organic Spectroscopy
- CHE/BCM 677 Prep & Analysis of Proteins & Nucleic Acids
- FSC 553 Principles of Toxicology
- FSC 635 Medicolegal Death Investigation I
- FSC 636 Medicolegal Death Investigation II
- FSC 637 Medicolegal Death Investigation for Emergency Responders
- FSC 640 Selected Topics in Advanced Forensic Science
- FSC 651 Forensic Pathology
- FSC 652 Forensic Mental Health
- FSC 653 Forensic Toxicology
- FSC 654 Nuclear Forensics
- FSC 661 Firearms & Impression Evidence
- FSC 662 Forensic Entomology
- FSC 663 Bloodstain Pattern Analysis
- FSC 664 Forensic Biochemical Analysis
- FSC 665 Latent Prints
- FSC 667 Forensic Photography
- FSC 668 Crime Scene Investigation
- FSC 671 Firearms & Impression Evidence II
- FSC 690 Independent Study or Internship in Forensic Science
- IST 602 Digital Forensics
- LAW 604 Criminal Law
- LAW 708 Constitutional Criminal Procedure- Investigation
- LAW 718 Evidence
- LAW 719 Psychology & the Law
- LAW 759 Computer Crimes
- LAW 781 Forensic Evidence
- LIN 601 Introductory Linguistic Analysis
- LIN 631 Phonological Analysis
- LIN 671 Dimension of Bilingualism and Multiculturalism
- LIN 675 Forensic Linguistics
- NUC 520 Radiochemistry, Nuclear Fuel Reprocessing and Nonproliferation
- PSY 674 Advanced Social Psychology
- SWK 724 Psychopathology

- SWK/WGS 626 Persons in Social Context

### 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 in Forensic Science

#### Comments

1. 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).

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## French And Francophone Studies Graduate Program

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

Faculty: Beverly Allen, Hope Glidden, Jean Jonassaint, Amy S. Wyngaard

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:

1. An oral defense of a dossier of three term papers ( one hour) or
2. 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.

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## Geography Secondary Teacher Preparation

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](mailto: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 Social Studies (7-12). It is an alternative to the existing undergraduate Arts and Sciences/Education dual program in these areas, and an option that often takes less time and fewer credits than earning the entire master's degree in education after completion of a general Arts and Sciences degree.

The combined bachelor's/master's teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree allows.

Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met – typically at the end of 5 years. Students begin taking education courses as undergraduates, including some in the fourth year that are taken for graduate credit, and apply to become graduate students for their last two semesters. Some summer study (not necessarily at SU) may be required.

The combined program has a two-stage admission process. The first stage involves meeting with the School of Education contact as early as possible to develop a plan, and, if a decision to pursue the program is made, completing a form signed by Education and a new declaration of program of study form in

Arts and Science to declare the Arts and Sciences program with “Teacher Preparation/5 year” appended to the title (e.g., “History (TchrPrep/5yr)” instead of “History”). The second admission stage involves an application to the Graduate School. Each admission stage requires a minimum 3.0 cumulative GPA and a minimum 3.0 GPA in the courses from the subject to be taught. The second stage also requires successful performance in the undergraduate education courses.

The choices of Arts and Sciences majors, and the course requirements for the Arts and Sciences major, the Liberal Arts Core, and other requirements related to the major are the same for these combined programs as those for students completing the dual enrollment undergraduate Arts and Sciences/Education program. These details about specific adjustments necessary to the Liberal Arts Core and to Arts and Sciences major may be found in the section describing Dual Arts and Sciences/ Education Programs.

Because of the specific course requirements and sequencing of courses, it is important that students interested in one of these programs meet with the School of Education contact as soon as possible to develop a plan. EDU 204, the first education course, must be taken no later than spring of the junior year.

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## History Secondary Teacher Preparation

### 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](mailto: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 Social Studies (7-12). It is an alternative to the existing undergraduate Arts and Sciences/Education dual program in these areas, and an option that often takes less time and fewer credits than earning the entire master’s degree in education after completion of a general Arts and Sciences degree.

The combined bachelor’s/master’s teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree allows.

Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master’s degree are conferred at the same time, after all requirements are met – typically at the end of 5 years. Students begin taking education courses as undergraduates, including some in the fourth year that are taken for graduate credit, and apply to become graduate students for their last two semesters. Some summer study (not necessarily at SU) may be required.

The combined program has a two-stage admission process. The first stage involves meeting with the School of Education contact as early as possible to develop a plan, and, if a decision to pursue the program is made, completing a form signed by Education and a new declaration of program of study form in Arts and Science to declare the Arts and Sciences program with “Teacher Preparation/5 year” appended to the title (e.g., “History (TchrPrep/5yr)” instead of “History”). The second admission stage involves an application to the Graduate School. Each admission stage requires a minimum 3.0 cumulative GPA and a minimum 3.0 GPA in the courses from the subject to be taught. The second stage also requires successful performance in the undergraduate education courses.

The choices of Arts and Sciences majors, and the course requirements for the Arts and Sciences major, the Liberal Arts Core, and other requirements related to the major are the same for these combined programs as those for students completing the dual enrollment undergraduate Arts and Sciences/Education program. These details about specific adjustments necessary to the Liberal Arts Core and to Arts and Sciences major may be found in the section describing Dual Arts and Sciences/ Education Programs.

Because of the specific course requirements and sequencing of courses, it is important that students interested in one of these programs meet with the School of Education contact as soon as possible to develop a plan. EDU 204, the first education course, must be taken no later than spring of the junior year.

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## International Relations Secondary Teacher Preparation Program

### 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](mailto: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 Social Studies (7-12). It is an alternative to the existing undergraduate Arts and Sciences/Education dual program in these areas, and an option that often takes less time and fewer credits than earning the entire master’s degree in education after completion of a general Arts and Sciences degree.

The combined bachelor’s/master’s teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree allows.

Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met – typically at the end of 5 years. Students begin taking education courses as undergraduates, including some in the fourth year that are taken for graduate credit, and apply to become graduate students for their last two semesters. Some summer study (not necessarily at SU) may be required.

The combined program has a two-stage admission process. The first stage involves meeting with the School of Education contact as early as possible to develop a plan, and, if a decision to pursue the program is made, completing a form signed by Education and a new declaration of program of study form in Arts and Science to declare the Arts and Sciences program with “Teacher Preparation/5 year” appended to the title (e.g., “History (TchrPrep/5yr)” instead of “History”). The second admission stage involves an application to the Graduate School. Each admission stage requires a minimum 3.0 cumulative GPA and a minimum 3.0 GPA in the courses from the subject to be taught. The second stage also requires successful performance in the undergraduate education courses.

The choices of Arts and Sciences majors, and the course requirements for the Arts and Sciences major, the Liberal Arts Core, and other requirements related to the major are the same for these combined programs as those for students completing the dual enrollment undergraduate Arts and Sciences/Education program. These details about specific adjustments necessary to the Liberal Arts Core and to Arts and Sciences major may be found in the section describing Dual Arts and Sciences/ Education Programs.

Because of the specific course requirements and sequencing of courses, it is important that students interested in one of these programs meet with the School of Education contact as soon as possible to develop a plan. EDU 204, the first education course, must be taken no later than spring of the junior year.

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## Certificate Of Advanced Studies In Language Teaching: TESOL/TLOTE

Certificate of Advanced Studies in Language Teaching: TESOL/TLOTE

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

Faculty Tej K. Bhatia, Amanda Brown, Mary Louise Edwards, Gerald R. Greenberg, Rania Habib, Jaklin Kornfilt, Thomas McKay, Omer Preminger, William C. Ritchie, 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.
- prepares students for teaching English to recent immigrant to the US, international business executives in the US and abroad, university students, and children in private schools in the US and elsewhere.
- enables students to teach languages other than English in various contexts.
- 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.
- 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.

### 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

LIN 621 Introduction to Methods of Language Teaching

LIN 622 Advanced Methods of Language Teaching

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

Spring: LIN 621, Introduction to Methods for Language Teaching

Fall: LIN 622, Advanced Methods for Language Teaching

One elective specialization course in Assessment, Culture and Society, Language Acquisition, Language Structure, Learning Populations, Literacy, Materials Design, or Program Management will also be taken during the period of study.

When available, an accelerated schedule may enable completion of the CAS in Language Teaching: TESOL/TLOTE in six months:

Summer: LIN 601, Introductory Linguistic Analysis

Summer: LIN 621, Introduction to Methods for Language Teaching

Fall: LIN 622, Advanced Methods for Language Teaching

One elective specialization course in Assessment, Culture and Society, Language Acquisition, Language Structure, Learning Populations, Literacy, Materials Design, or Program Management will also be taken during the period of study.

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## Certificate In Latin American Studies

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.

The Dates and Deadlines form provides specific deadlines by which forms must be complete. The Program of Study must be completed and signed by your advisor and the director of PLACA.

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## 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.

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## 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; [tjmckay@syr.edu](mailto:tjmckay@syr.edu)). Students with questions and inquiries concerning procedures regarding joint degrees should contact Keri Foster, Associate Director for Student Life, Suite 444 College of Law (443-1146, [kdfoster@law.syr.edu](mailto:kdfoster@law.syr.edu))

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## Linguistics Studies Graduate Program

Director Jaklin Kornfilt,  
340 H.B. Crouse,  
315-443-2175.

Faculty Tej K. Bhatia, Amanda Brown, Richard W. Buttny, Michael Caie, Kevan Edwards, Mary Louise Edwards, Gerald R. Greenberg, Diane Grimes, Jaklin Kornfilt, Elizabeth D. Liddy, Amy Lutz, Thomas McKay, Linda Milosky, William C. Ritchie, Amardo Rodriguez, Robert A. Rubinstein, Robert Van Gulick, Susan S. Wadley, Bei Yu

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:

1. Information Representation and Retrieval;
2. Language Acquisition;
3. Language, Culture, and Society;
4. Linguistic Theory;
5. Logic and Language; and
6. 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.

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## Mathematics Graduate Program

Chair Eugene Poletsky, 215 Carnegie, 315-443-1472.

Faculty Uday Banerjee, Pinyuen Chen, Dan F. Coman, J. Theodore Cox, Steven Diaz, Helen M. Doerr, Jack E. Graver, Philip S. Griffin, Wu-Teh Hsiang, Tadeusz Iwaniec, Hyune-Ju Kim, Mark Kleiner, Leonid Kovalev, Graham Leuschke, Adam Lutoborski, Joanna O. Masingila, Terry R. McConnell, Claudia Miller, Jani Onninen, Evgeny Poletsky, Declan Quinn, Lixin Shen, John Ucci, Gregory Verchota, Andrew Vogel, Stefan Wehrli, William Wylie, Yuesheng Xu, Yuan Yuan, Dan Zacharia

The graduate programs in this department offer opportunities to study algebra, analysis, combinatorics, numerical analysis, probability, statistics, and topology.

The department cooperates with the L.C. Smith College of Engineering and Computer Science in the study of mathematical computing and combinatorics.

### GRADUATE AWARDS

Figures for graduate appointments represent 2013-2014 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 \$16,742 - \$20,459 in addition to tuition scholarship for 24 credits per year. Additional summer support is generally available.

Syracuse University Graduate Fellowships Stipends will range from \$13,040 - \$23,135 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 library currently holds over 55,000 volumes, including 30,000 books and over 350 print and electronic journal subscriptions. Online databases include MathSciNet, Current Index to Statistics, Jahrbuch Database, MathEduc, ERIC, Scopus, and Web of Science.

In addition to covering a broad range of pure and applied mathematics, the mathematics library contains print and electronic resources in the history of mathematics, mathematics education, and statistics. The following resources are available for student borrowing: TI graphing calculators, geometry kits, and

mathematics education curriculum materials.

Graduate assistants may obtain a free “baseline” computer account that allows them the use of the University’s Computing Services’ facilities, including e-mail. Computing Services manages many public computer clusters. The students may use all software for word processing, graphics, statistical or data analysis, data base management, programming, and telecommunications.

Students have access to printers, plotters, locally written software bulletins, and telephone connections to the consulting center, which offers laser printing, vendor software manuals, help on supported software, and other special services. Most public sites are open 90 hours a week. All mainframe computers run 24 hours a day, seven days a week, except for scheduled maintenance time. By connecting to the campus data network, which runs throughout the residence halls and most off-campus housing, people with their own computers can also use the University’s time sharing and other systems.

## DEGREE PROGRAMS

The department offers the M.S. and Ph.D. degrees.

### M.S. IN MATHEMATICS

The Department of Mathematics offers two programs leading to the master 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.

### 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. Proficiency in one of French, German, or Russian is required. 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/topology, analysis, combinatorics, numerical analysis, and statistics. Students are also required to pass an oral specialty exam. Students who successfully complete the qualifying examination are granted the master 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](http://math.syr.edu).

### M.S. IN MATHEMATICS EDUCATION

The Department of Mathematics in the College of Arts and Sciences and the School of Education offer a program leading to the degree of master 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 43 hours, and requires at least four courses in mathematics and a master’s exam or thesis.

### PH.D. IN MATHEMATICS EDUCATION

This degree program is sponsored by the Graduate School in cooperation with the Department of Mathematics and the School of Education. 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. Generally, a minimum of 48 credits is required in the major area, and a minimum of 33 credits in a minor 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, and 6 credits of internships in K-12 classrooms.

Qualifying examinations, usually written and covering both the major and minor areas, are taken after the completion of approximately 70 credits of coursework.

All candidates take as a minimum the required courses in the master's program or transfer comparable credits from other institutions.

Further information is available from professors Joanna Masingila and Helen Doerr, 203 Carnegie Building.

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## Mathematics Secondary Teacher Preparation Program

Combined Bachelor's/Master's Degrees in Mathematics and Secondary Education (Math) Teacher Preparation Program

School of Education contact: Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall. [mrsarno@syr.edu](mailto:mrsarno@syr.edu)

This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for a New York Teaching certification for grades 7-12 in mathematics. It is an alternative to the existing undergraduate Arts and Sciences/Education dual programs in these areas, and an option that often takes less time and fewer credits than earning the entire master's degree in education after completion of a general Arts and Sciences degree.

The combined bachelor's/master's teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree allows.

Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met – typically at the end of 5 years. Students begin taking education courses as undergraduates, including some in the fourth year that are taken for graduate credit, and apply to become graduate students for their last two semesters. Some summer study (not necessarily at SU) may be required.

The combined program has a two-stage admission process. The first stage involves meeting with the School of Education contact as early as possible to develop a plan, and, if a decision to pursue the program is made, completing a form signed by Education and a new declaration of program of study form in Arts and Science to declare the Arts and Sciences program with “Teacher Preparation/5 year” appended to the title Mathematics. The second admission stage involves an application to graduate school. Each admission stage requires a 3.0 cumulative GPA and a 3.0 GPA in the courses from the subject to be taught. The second stage also requires successful performance in the undergraduate education courses.

The choices of Arts and Sciences majors, and the course requirements for the Arts and Sciences major, the Liberal Arts Core, and other requirements related to the major are the same for these combined programs as those for students completing the dual enrollment undergraduate Arts and Sciences/Education program. These details about specific adjustments necessary to the Liberal Arts Core and to Arts and Sciences major may be found in the section describing Dual Arts and Sciences/ Education Programs.

Because of the specific course requirements and sequencing of courses, it is important that students interested in one of these programs meet with the Education contact as soon as possible to develop a plan. EDU 204, the first education course, must be taken no later than spring of the junior year.

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## Certificate Of Advanced Studies In Medicolegal Death Investigation

Contact:

Michael Sponsler, [sponsler@syr.edu](mailto:sponsler@syr.edu)  
Professor of Chemistry, Director of Curricular Programs for the Forensic and National Security Sciences Institute at Syracuse University  
1-014 Center Sci & Tech  
315-443-4880

Faculty:

Michael Sponsler, [sponsler@syr.edu](mailto:sponsler@syr.edu)  
1-014 Center Sci & Tech  
315-443-4880

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:

##### I. GATEWAY COURSE - 3 Credits Required

FSC 635 Medicolegal Death Investigation I 3 cr.

FSC 636 Medicolegal Death Investigation II 3 cr.

FSC 637 Medicolegal Death Investigation for Emergency Responders 3 cr.

##### II. ELECTIVES - 9 Credits Required

FSC 635 Medicolegal Death Investigation I 3 cr.

FSC 636 Medicolegal Death Investigation II 3 cr.

FSC 637 Medicolegal Death Investigation for Emergency Responders 3 cr.

FSC 640 Special Topics in Forensic Science (approved topics only\*) 3 cr.

FSC 651 Forensic Pathology 3 cr.

FSC 653 Forensic Toxicology 3 cr.

FSC 662 Forensic Entomology 3 cr.

FSC 663 Bloodstain Pattern Analysis 3 cr.

FSC 667 Forensic Photography 3 cr.

FSC 668 Crime Scene Investigation 3 cr.

FSC 690 Independent Study or Internship in Forensic Science 1-6 cr.

\*Relevant workshops will be run under FSC 640, and these will be identified as appropriate for use as electives in this program.

#### Transfer Credit:

Maximum of 3 credits

#### Part-time Study:

May be pursued

#### Degree:

Certificate of Advanced Studies

Advanced Certificate in Medicolegal Death Investigation

Total Credits: 12 (limit of 3 transfer credits)

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## Certificate Of Advanced Study In Middle Eastern Affairs

Program Director: Mehrzad Boroujerdi

332 Eggers Hall

315-443-5877

mborouje@maxwell.syr.edu

Faculty Ahmed E. Abdel-Meguid, Carol Babiracki, Hossein Bashiriyeh, Mehrzad Boroujerdi, Miriam Fendius Elman, Carol Fadda-Conrey, Ken Frieden, Rania Habib, Susan Henderson, Amy Kallander, Tazim R. Kassam, Osamah F. Khalil, Amos Kiewe, Natalie Koch, Jaklin Kornfilt, Sandra Lane, Dana M. Olwan, Kara Richardson, Robert A. Rubinstein, 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:

1. 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 M117CAS.
2. 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):

PSC/MES 682: Social Theory & Middle East Politics  
HST/MES 644: Israel & Palestine: Historical Approaches

2. 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:

- ANT/PAI/MES 668: Middle East in Anthropological Perspective
- ANT/IRP/MES 707: Culture in World Affairs
- ARC 735: Islamic Architecture
- HST/MES 644: Israel & Palestine: Historical Approaches
- PSC/MES 682: Social Theory & Middle East Politics
- PSC/MES/PAI 684: International Relations of the Middle East
- REL/ANT 628: Muslim Rituals, Practices, and Performances
- REL/JSP 676: Advanced Topics in Judaic Literature
- REL 607: Ancient Religious Rhetoric
- REL 625: Pluralism in Islam

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), Bahçesehir 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 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:** The HasanAbdullah Yabroudi 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.

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## M.A. In Pan African Studies

Chair, Kishi Animashaun Ducre  
200 Sims Hall  
315-443-4302

Faculty Joan Bryant, Horace Campbell, Linda Carty, David Kwame Dixon, Kishi Animashaun Ducre, Janis A. Mayes, Micere Githae Mugo, Herbert Ruffin, S.N. Sangmpam, Renate Simson, Kheli R. Willetts

## 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, 610, 611, and 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, Literatures, and Cultures of the Pan African World and AAS 612 Societies and Politics 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 and Pan African Studies
- AAS 610 Seminar in Pan Africanism: Research and Readings
- AAS 611 Arts, Literatures and Cultures of the Pan African World
- AAS 612 Societies and Politics of the Pan African World
  
- AAS 670 External Experience (6 credits)
- AAS 997 M.A. Thesis in Pan African Studies (6 credits)

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

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 Seminar in African American Studies: Research and Readings (AA)
- AAS 501 African American Sociological Practice, 1900-1945 (AA)
- AAS/HST 510 Studies in African American History (AA)
- AAS/WGS 512 African American Women's History (AA)
- AAS/WGS 513 Toni Morrison Black Book Seminar (AA)
- AAS/REL 543 Religious Cultures of the American South (AA)
- AAS 600 Selected Topics in Pan African Studies (A, AA, AC)
- AAS 620 Black Women Writers: African American/Caribbean/African (A, AA, AC)
- AAS/SOC/WGS 627/427 New York City: Black Women Domestic Workers (AC)
- AAS 631 African Drama and Theatre (A)
- AAS/HST 634/434/ Underground Railroad

- ANT 694/494 /ANT 640 Topics in African Archaeology
- AAS/SOC/WGS 645/445 The Caribbean: Sex Workers, Transnational Capital, and Tourism (AC)
- AAS 670 Experience Credit (A, AA, AC)
- AAS 671/PSC 800\*\* Caribbean Intellectual Thought (AC)
- AAS 681/PSC 681 Comparative State-Society Relations (A, AA, AC)
- AAS 690 Independent Study (A, AA, AC)
- AAS 700 Seminar in African American Studies (AA)
- AAS 731/PSC 780\*\* Militarism and Transformation in Southern Africa (A)
- AAS/HST 765 Readings and Research in African History (A)

\*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/WGS 553 Women in Social Change
- ANT 756 Development Anthropology
- SWK/WGS 628 Human Diversity in Social Contexts
- LAW 758 Civil Rights

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 Assistants 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 Assistants 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.

## Philosophy Graduate Program

Contact Director of Graduate Studies,  
541 Hall of Languages,  
315-443-2245.

Faculty Kenneth Baynes, Frederick C. Beiser, Benjamin Bradley, Michael Caie, Kevan Edwards, André Gallois, Jessica Gelber, Samuel Gorovitz, Mark Heller, Kris McDaniel, Thomas McKay, Hille Paakkunainen, Kara Richardson, Emily E. Robertson, John E. Robertson, 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.

#### 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, up to 15 credits of coursework may be waived at the discretion of the

A. 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
- PHI 693 Proseminar: Moral and Political Philosophy
- PHI 687 Proseminar: Language, Epistemology, Mind, and Metaphysics

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.

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## Physics Graduate Program

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

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

The Department of Physics has 29 faculty members, 20 postdoctoral research associates, and about 68 graduate students. The department is housed in the modern, six-floor physics building overlooking the University's main quadrangle. Facilities include the physics library, a UNIX computer cluster, 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](http://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 990) 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, PHY 614 or PHY 651, PHY 621, PHY 641, PHY 661, and PHY 662. No more than three credits of PHY 690 or PHY 890 can count toward the M.S. degree. Students must maintain a B average.

#### 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 nine required courses:

- PHY 581 Methods of Theoretical Physics I
- PHY 614 Graduate Laboratory or PHY 651 Instrumentation in Modern Physics
- PHY 621 Classical Mechanics
- PHY 641 Advanced Electromagnetic Theory I
- PHY 661 Quantum Mechanics I
- PHY 662 Quantum Mechanics II
- PHY 731 Thermodynamics and Statistical Mechanics I

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 four advanced courses.

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 Statistical mechanics of and non-linear collective transport in disordered systems, such as random magnets, quantum dot arrays, flux arrays in superconductors. Superconductivity, dynamics of liquids. Atom-surface interactions and calculations/computer simulations of processed of adsorption, diffusion, and desorption. Short range order in crystalline alloys, surface segregation in binary alloys. Manning, Marchetti, Middleton, Schwarz, Vidali. One postdoctoral fellow.

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.

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; simulations of charge density waves and flux arrays in superconductors; study of dynamical systems and chaos; gravitational waveforms from coalescences of astrophysical binary systems; gravitational wave data analysis; numerical simulations on parallel computers; connections between algorithms and physical principles. 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 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

Relativity and Gravitation Detection of gravitational waves; analysis of data from interferometric gravitational wave detectors. Member of the LIGO (Laser Interferometric Gravitation Wave Observatory) Scientific Collaboration. Ballmer, Brown, Couvares, Fisher, Saulson. Three postdoctoral fellows.

Semiconductors, Thin Films, and Solar Cells Electronic and optical properties of unconventional semiconductors (amorphous silicon, porous titania, and

silicon). Solar cell device physics. Thin-film growth (plasma, hot-wire). Hybrid organic-inorganic semiconductor devices. Surface physics (structure, kinetics, dynamics, and reactions). Schiff.

Quantum mechanics and nanoscale devices Superconducting devices and vortex dynamics Investigations of quantum coherence in nanoscale superconducting devices and vortex systems. Quantum effects in macroscopic systems. Nanofabrication of Josephson junctions and structured vortex pinning potentials. Low temperature measurements, including dilution refrigeration. Development of qubits for quantum computing. Applications of nanoelectromechanical systems. LaHaye, Plourde. Two postdoctoral fellows.

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 2013-2014 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 \$21,866 (2013-2014) and tuition scholarship up to 24 credits (8 courses). Summer assistantships may be available. The assistant spends up to 20 hours a 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 \$21,866 (2013-2014) 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 \$23,135 (2013-2014) for nine months of full-time study; tuition scholarship for a total of 30 credits during the academic year.

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## Physics Secondary Teacher Preparation Program

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](mailto: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 Physics (7-12). It is an alternative to the existing undergraduate Arts and Sciences/Education dual program in these areas, and an option that often takes less time and fewer credits than earning the entire master's degree in education after completion of a general Arts and Sciences degree.

The combined bachelor's/master's teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree allows.

Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met – typically at the end of 5 years. Students begin taking education courses as undergraduates, including some in the fourth year that are taken for graduate credit, and apply to become graduate students for their last two semesters. Some summer study (not necessarily at SU) may be required.

The combined program has a two-stage admission process. The first stage involves meeting with the School of Education contact as early as possible to develop a plan, and, if a decision to pursue the program is made, completing a form signed by Education and a new declaration of program of study form in Arts and Science to declare the Arts and Sciences program with “Teacher Preparation/5 year” appended to the title (e.g., “History (TchrPrep/5yr)” instead of “History”). The second admission stage involves an application to the Graduate School. Each admission stage requires a minimum 3.0 cumulative GPA and a minimum 3.0 GPA in the courses from the subject to be taught. The second stage also requires successful performance in the undergraduate education courses.

The choices of Arts and Sciences majors, and the course requirements for the Arts and Sciences major, the Liberal Arts Core, and other requirements related to the major are the same for these combined programs as those for students completing the dual enrollment undergraduate Arts and Sciences/Education program. These details about specific adjustments necessary to the Liberal Arts Core and to Arts and Sciences major may be found in the section describing Dual Arts and Sciences/ Education Programs.

Because of the specific course requirements and sequencing of courses, it is important that students interested in one of these programs meet with the

School of Education contact as soon as possible to develop a plan. EDU 204, the first education course, must be taken no later than spring of the junior year.

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## Policy Studies Secondary Teacher Preparation Program

Combined Bachelor's/Master's Degrees in Policy Studies and Secondary (Social Studies) Teacher Preparation Program

Contact Marie Sarno, Teaching and Leadership Programs, 138 Huntington Hall [mrsarno@syr.edu](mailto: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 Social Studies (7-12). It is an alternative to the existing undergraduate Arts and Sciences/Education dual program in these areas, and an option that often takes less time and fewer credits than earning the entire master's degree in education after completion of a general Arts and Sciences degree.

The combined bachelor's/master's teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree allows.

Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met – typically at the end of 5 years. Students begin taking education courses as undergraduates, including some in the fourth year that are taken for graduate credit, and apply to become graduate students for their last two semesters. Some summer study (not necessarily at SU) may be required.

The combined program has a two-stage admission process. The first stage involves meeting with the School of Education contact as early as possible to develop a plan, and, if a decision to pursue the program is made, completing a form signed by Education and a new declaration of program of study form in Arts and Science to declare the Arts and Sciences program with “Teacher Preparation/5 year” appended to the title (e.g., “History (TchrPrep/5yr)” instead of “History”). The second admission stage involves an application to the Graduate School. Each admission stage requires a minimum 3.0 cumulative GPA and a minimum 3.0 GPA in the courses from the subject to be taught. The second stage also requires successful performance in the undergraduate education courses.

The choices of Arts and Sciences majors, and the course requirements for the Arts and Sciences major, the Liberal Arts Core, and other requirements related to the major are the same for these combined programs as those for students completing the dual enrollment undergraduate Arts and Sciences/Education program. These details about specific adjustments necessary to the Liberal Arts Core and to Arts and Sciences major may be found in the section describing Dual Arts and Sciences/ Education Programs.

Because of the specific course requirements and sequencing of courses, it is important that students interested in one of these programs meet with the School of Education contact as soon as possible to develop a plan. EDU 204, the first education course, must be taken no later than spring of the junior year.

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## Political Science Secondary Teacher Preparation Program

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](mailto: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 Social Studies (7-12). It is an alternative to the existing undergraduate Arts and Sciences/Education dual program in these areas, and an option that often takes less time and fewer credits than earning the entire master's degree in education after completion of a general Arts and Sciences degree.

The combined bachelor's/master's teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree allows.

Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met – typically at the end of 5 years. Students begin taking education courses as undergraduates, including some in the fourth year that are taken for graduate credit, and apply to become graduate students for their last two semesters. Some summer study (not necessarily at SU) may be required.

The combined program has a two-stage admission process. The first stage involves meeting with the School of Education contact as early as possible to develop a plan, and, if a decision to pursue the program is made, completing a form signed by Education and a new declaration of program of study form in Arts and Science to declare the Arts and Sciences program with “Teacher Preparation/5 year” appended to the title (e.g., “History (TchrPrep/5yr)” instead of “History”). The second admission stage involves an application to the Graduate School. Each admission stage requires a minimum 3.0 cumulative GPA and a minimum 3.0 GPA in the courses from the subject to be taught. The second stage also requires successful performance in the undergraduate education

courses.

The choices of Arts and Sciences majors, and the course requirements for the Arts and Sciences major, the Liberal Arts Core, and other requirements related to the major are the same for these combined programs as those for students completing the dual enrollment undergraduate Arts and Sciences/Education program. These details about specific adjustments necessary to the Liberal Arts Core and to Arts and Sciences major may be found in the section describing Dual Arts and Sciences/ Education Programs.

Because of the specific course requirements and sequencing of courses, it is important that students interested in one of these programs meet with the School of Education contact as soon as possible to develop a plan. EDU 204, the first education course, must be taken no later than spring of the junior year.

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## Religion Graduate Program

Chair James Watts

501 Hall of Languages,  
315-443-5713.

Director of Graduate Studies Joanne P. Waghorne,

501 Hall of Languages,  
315-443-3861.

Faculty Ahmed E. Abdel-Meguid, Philip P. Arnold, Zachary J. Braiterman, Virginia Burrus, Gareth J. Fisher, Ken Frieden, Ann Grodzins Gold, M. Gail Hamner, Tazim R. Kassam, Vincent W. Lloyd, R. Gustav Niebuhr, William A. Robert, Marcia C. Robinson, Joanne P. Waghorne, Ernest E. Wallwork, James W. Watts

Graduate study in the Department of Religion at Syracuse University 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 the following two premises as fundamental to its educational program: 1) in a postmodern and global age, any study of religion must be interdisciplinary, and 2) credible studies 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 graduate program offers incoming students an opportunity to forge a unique, creative, and rigorous program of study. It emphasizes the comparative and theoretical study of religion in its various traditions and forms, and keeps the hermeneutical task always to the fore. The program fosters interdisciplinary approaches, offering training in traditional and contemporary theories and methods in conjunction with substantive investigations of diverse religious traditions and topics. (See “Areas of Study” below.)

The current faculty in the Department of Religion engage in teaching and research in the following interrelated areas, areas whose interrelation represents the department’s long-standing emphasis on innovative and interdisciplinary inquiry. Like the faculty, graduate students will engage at least two of these areas as they pursue their research.

### THEORIES OF RELIGION

Focus on how the category of religion has been theorized as well as on methodologies in the study of religion; includes continental philosophy and theology of religion; the anthropology, sociology, and psychology of religion; history of religions; ethics; issues of globalization.

### HISTORIES OF RELIGION

Focus on historical, cross-cultural, and comparative studies of religion, with an emphasis on interrelations among religion, culture, and society; includes traditions such as Judaism, Christianity, Islam, Hinduism, Buddhism, and indigenous religions, and their development in geographical areas such as South Asia, Europe, the ancient Near East, the Roman Empire, and the Americas.

### ARTS AND AESTHETICS OF RELIGION

Focus on the artistic, literary, performative, and media-related expressions of religion; includes the study of scriptures, literature and literary theory, rhetoric, architecture, sacred space and time, material culture, and various media of popular culture such as music, folklore, film, journalism, and virtual technologies.

### AREAS OF STUDY

Students are required to gain competence in multiple historical periods, religious cultures, as well as approaches to studying religion. We encourage students to make imaginative use of all available resources in the creation of their own distinctive programs of study. Each student must 1) develop expertise in a particular subject area, and 2) cross or transcend traditional boundaries of a discipline and sub-field in innovative ways. By training scholars to think across traditional academic boundaries, the program at Syracuse prepares students for exciting research and teaching opportunities in religion. Currently the department can support the following areas of study for students.

## Historical Periods

### Modern and Contemporary periods in

- the Americas
- south and east Asia
- Europe
- the Middle East

### Medieval periods in

- Europe
- the Middle East

### Greco-Roman

### Ancient Near Eastern

## Religious Cultures

- African American
- American
- Ancient Near Eastern
- Buddhist
- Christian
- European/Continental
- Greco-Roman
- Hindu
- Indigenous (the Americas)
- Islamic
- Japanese
- Judaic
- South Asian

## Approaches of Study

- Comparative Studies
- Contemporary, Historical, and Critical Theology
- Continental Philosophy
- Cultural Anthropology
- Cultural Studies: Film, Media, Journalism
- Ethics/ Bioethics
- Feminist, Marxist, Postcolonial Critical Theory
- Gender Studies
- Globalization
- History of Religions
- Literary Studies
- Material Culture
- Philosophy of Religion
- Religion and Ecology
- Rhetorical Criticism
- Ritual and Performance Studies
- Scriptures Studies
- Social Scientific

## M.A. IN RELIGION

The student seeking the M.A. in religion must complete a minimum of 30 credits of graduate study; 27 of which will be taken in regularly-scheduled religion graduate courses or seminars, and including no more than nine credits in advisor-approved courses offered outside the department.

Additionally, the student must earn three thesis credits by producing and orally defending a thesis. Competence in one language of modern critical discourse (normally French or German) must be demonstrated by the third semester of study.

## 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 two languages of modern

critical discourse, normally German and French, one before matriculation and the other before the beginning of the third semester of study.

The student is required to pass a set of four comprehensive examinations that must fall under the following headings:

1. a period or movement;
2. a person;
3. a text; and
4. a problem.

The dissertation and its oral defense are required.

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## School Psychology

School Psychology

School Psychology\*

Contact: Tanya L. Eckert, Ph.D.

430 Huntington Hall

taeckert@syr.edu

(315)443-3141

The school psychology program at Syracuse University is fully 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](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 (i.e., 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 January 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 GRE scores of 1100 and above. 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 psychological 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 standards governing the profession; and
- (i) contribute to improved student learning and behavior.

Toward these goals, the faculty has established a set of 22 objectives that guide student training as well as descriptions of student performance for demonstrating broad psychological knowledge, research, and clinical practice competencies. These training objectives require all students to:

1. be knowledgeable regarding children's development in cognitive, affective, social, academic, and adaptive domains;
2. be knowledgeable regarding education, school as a setting, instructional practices, and multidisciplinary school personnel;
3. be knowledgeable of empirical research in psychology and education;
4. be able to evaluate a variety of research methodologies;
5. demonstrate rigorous and creative applications of experimental design, data analysis, and interpretation skills;
6. demonstrate "best practices" in home- and school-based intervention and consultation;
7. demonstrate "best practice" in assessment and evaluation;
8. demonstrate "best practice" in counseling;
9. demonstrate diversity awareness and sensitive service delivery;
10. recognize when issues of diversity affect the manner and nature of interactions with others;
11. adapt or modify practices in response to those being served;
12. demonstrate professional skills in a wide range of settings including clinics, hospitals, and homes with diverse student populations and disabilities;
13. engage in data-based problem solving in all professional decisions;
14. demonstrate increasing independence and responsibility in research participation and clinical work throughout graduate training;
15. maintain certification and licensure while attending continuing education functions as necessary and required by the profession;
16. apply and easily generalize problem solving, interpersonal influence, and implementation support skills in all consultation cases;
17. demonstrate the ability to work effectively and collaboratively with people and agencies;
18. demonstrate knowledge and understanding of professional, ethical, and legal standards;
19. uphold professional, ethical and legal standards in professional decision making to enhance the quality of services and protect the rights of all parties;
20. identify and apply sound principles of behavior change in order to design and implement prevention and intervention programs to promote positive changes in children's learning and behavior;
21. help parents, caregivers, and schools develop goals for children, taking into account the need to adjust expectations for individual children; and
22. engage in intervention activities that produce positive changes in student learning and behavior beyond that expected by typical growth.

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.

#### FUNDING

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.

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

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## Social Psychology Graduate Program

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

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 475/675 Social Influences on Human Sexual Behavior  
PSY 640 Psychology of Gender  
PSY 674 Advanced Social Psychology  
PSY 676 Group Processes  
PSY 677 Social Cognition  
PSY 678 Attitude Change  
PSY 693 Advanced Personality  
PSY 775 Seminar in Social Psychology (when topic is appropriate)

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)  
PSY 691 Meta-Analysis  
PSY 775 Seminar in Social Psychology (when topic is appropriate)  
PSY 990 Independent Study (up to nine credits)

Finally, students are required to fulfill an additional 33 credits of departmental requirements. 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.

#### 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.

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## Sociology Secondary Teacher Preparation Program

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](mailto: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 Social Studies (7-12). It is an alternative to the existing undergraduate Arts and Sciences/Education dual program in these

areas, and an option that often takes less time and fewer credits than earning the entire master's degree in education after completion of a general Arts and Sciences degree.

The combined bachelor's/master's teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree allows.

Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met – typically at the end of 5 years. Students begin taking education courses as undergraduates, including some in the fourth year that are taken for graduate credit, and apply to become graduate students for their last two semesters. Some summer study (not necessarily at SU) may be required.

The combined program has a two-stage admission process. The first stage involves meeting with the School of Education contact as early as possible to develop a plan, and, if a decision to pursue the program is made, completing a form signed by Education and a new declaration of program of study form in Arts and Science to declare the Arts and Sciences program with “Teacher Preparation/5 year” appended to the title (e.g., “History (TchrPrep/5yr)” instead of “History”). The second admission stage involves an application to the Graduate School. Each admission stage requires a minimum 3.0 cumulative GPA and a minimum 3.0 GPA in the courses from the subject to be taught. The second stage also requires successful performance in the undergraduate education courses.

The choices of Arts and Sciences majors, and the course requirements for the Arts and Sciences major, the Liberal Arts Core, and other requirements related to the major are the same for these combined programs as those for students completing the dual enrollment undergraduate Arts and Sciences/Education program. These details about specific adjustments necessary to the Liberal Arts Core and to Arts and Sciences major may be found in the section describing Dual Arts and Sciences/ Education Programs.

Because of the specific course requirements and sequencing of courses, it is important that students interested in one of these programs meet with the School of Education contact as soon as possible to develop a plan. EDU 204, the first education course, must be taken no later than spring of the junior year.

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## South Asia Studies Certificate Overview

Faculty Carol Babiracki, Shobha K. Bhatia, Tej K. Bhatia, Himika Bhattacharya, Manan Desai, Tula Goenka, Ann Grodzins Gold, Tazim R. Kassam, Prema Kurien, Chandra Talpade Mohanty, Iswari P. Pandey, Romita Ray, Anoop Sadanandan, Larry Schroeder, Farhana Sultana, Cecilia Van Hollen, Susan S. Wadley, Joanne P. Waghorne

Affiliated Faculty:

Douglas Biklen, Mehrzad Boroujerdi, Richard Breyer, Michael Carey, Gareth Fisher, Rashmi Gangamma, Devashish Mitra, Lars Rodseth, Jaipaul Roopnarine

The Certificate of Advanced Study (CAS) in South Asia 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/SAS 621 Gender & Sexuality in South Asia

ANT 625 Problems in the Anthropology of South Asia

ANT/SAS/PAI 626 Cultures and Politics of Afghanistan and Pakistan

HIN 620 Hindi for Research Purposes

HST 775 Readings and Research in South Asian History

REL 687 Global Hinduism

Candidates can choose three other courses from the list below:

ANT/SAS 621 Gender & Sexuality in South Asia

ANT 625 Problems in the Anthropology of South Asia

ANT/SAS/PAI 626 Cultures and Politics of Afghanistan and Pakistan

ANT/REL 628\* Muslim Rituals, Practices and Performances

ANT 756\* Development Anthropology  
ANT/GEO/WGS 764\* Gender and Globalization  
HIN 620 Hindi for Research Purposes  
HST 715 Readings and Research in American History: Subaltern and New Social History  
HST 775 Readings and Research in South Asian History  
LIN 671\* Dimensions of Bilingualism & Multiculturalism  
LIN 681\* Global Communication through World Englishes  
PAI 707\* Culture in World Affairs  
PAI 715\* Topics in Global Development  
PAI 758\* Local Public Finance in Developing and Transition Economies  
REL 621\* Teaching World Religions in Theory & Practice  
REL 625\* Pluralism in Islam  
REL/SAS 626\* Muslim Women Beyond the Veil  
REL 627\* Globalization and Religion: Process & Problems  
REL 687 Global Hinduism  
REL 692\* Other People's Religions  
REL 696\* Gender and Religion: Theory & Practice  
REL 699\* Writing Religions & Cultures

\* 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.

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## Spanish Language, Literature And Culture

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.

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 for up to three thesis credits and may be exempt from the one exam area most closely related to the thesis.

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## Speech Language Pathology Graduate Program

Speech Language Pathology  
Chair: Linda Milosky, Ph.D.

621 Skytop Road, Suite 1200  
315-443-9637

Faculty Karen Doherty, Mary Louise Edwards, Janet Ford, Soren Lowell, Linda Milosky, Joseph Pellegrino, Kathy R. Vander Werff, plus adjunct instructors for specialty areas including: Bonnie Hulslander, Eileen Marrinan, Emeritus Professor, Raymond Colton

Clinical Staff: Megan Leece, Anita Lightburn, Carrie Tamayo, Ramani Voleti, Ann Libera, Megan Bergett

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 42 to 51 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.

### 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. Courses for the Ph.D. degree are selected from a number of areas related to communication disorders, such as psychology, engineering, linguistics, computer science, statistics, sensory processes, neurosciences, gerontology, and special education, as well as audiology and speech-language pathology.

Students begin their research experiences early in their programs and are mentored in faculty laboratories. The Ph.D. degree requires a minimum of 83 credits beyond the bachelor's degree. Students 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. The academic and research experiences lead to the dissertation, which is typically begun in the third year. The programs may be completed in four years of full-time study.

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## Structural Biology, Biochemistry, And Biophysics Graduate Programs

Contact: Liviu Movileanu  
201 Physics Bldg  
315-443-8078  
lmovilea@syr.edu

#### FACULTY:

Biology: John Belote, Scott Erdman, Anthony Garza, Eleanor Maine, Melissa Pepling, Ramesh Raina, John Russell, Roy Welch

Chemistry: Philip Borer, Mark Braiman, Rob Doyle, Bruce Hudson, Yan-Yeung Luk, Jon Zubieta

Physics: Mark Bowick, Kenneth Foster, Edward Lipson, Martin Forstner, Liviu Movileanu

The Ph.D. program is flexible and adaptable to individual needs. Students are admitted through one of the participating departments, (biology, chemistry, or physics) and choose their Ph.D. mentor in that department before transferring into the Program. The remainder of the student's course of study is planned with a graduate committee composed of members of the program, one of whom will be the student's thesis advisor.

#### 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.

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## Certificate Of Advanced Study In Women's Studies

Chair Gwendolyn Pough, 208 Bowne Hall, 315-443-6745.

Administrative Specialist Susann DeMocker-Shedd, 208 Bowne Hall, 315-443-3560, Fax 315-443-9221

Faculty Kal Alston, Himika Bhattacharya, Nancy Cantor, Vivian M. May, Chandra Talpade Mohanty, Gwendolyn D. Pough, Minnie Bruce Pratt, Robin Riley

Women's and Gender Studies integrates theory and practice with the aim of transforming social relations, representations, knowledges, institutions, and policies. Through interdisciplinary and comparative approaches, students engage in the study of gender intersectionally and transnationally as a means of understanding the complex ways that ideas and practices about gender, past and present, shape the world around us. Issues of justice, social and economic transformation, and women's agency are central and at each level of study the curriculum emphasizes race, ethnicity, nationality, class, age, sexuality, and different abilities as categories of analysis.

#### CERTIFICATE REQUIREMENTS

Matriculated Master's or doctoral students must take a minimum of 12 credits of graduate coursework cross-listed as WGS courses or approved by the Chair of the Women's and Gender Studies Department. 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/GEO 576 Gender, Place, and Space (Y)  
WGS 601 Feminist Theory (Y)  
WGS/SWK 635 Readings in Feminist Psychological Theories (SI)  
WGS/CRS/CCR 636 Feminist Rhetoric(s)  
WGS/REL 644 Feminist Theology (IR)  
WGS/SOC/AAS 645 The Caribbean: Sex Workers, Transnational Capital, and Tourism  
WGS 652 Feminism and Postcolonial Studies  
WGS/SPA 671 Latin American Literature and Feminist Theory  
WGS 673 Women, Rap and Hip-Hop Feminism  
WGS 705 Negotiating Difference: Coming of Age Narratives  
WGS 740 Feminist Theories of Knowing (O)  
WGS/AAS 757 Black Feminist Theories  
WGS 795 The Practice of Transnational Feminism (IR)  
WGS/GEO 876 Feminist Geographies

With departmental approval, various sections of Special Topics courses can satisfy the WGS Theory requirement as well.

Core Graduate WGS Courses:

WGS 601 Feminist Theory (Y)  
WGS/CRS/CCR 636 Feminist Rhetoric(s) (Y)  
WGS 652 Feminism and Postcolonial Studies (Y)  
WGS 673 Women, Rap and Hip-Hop Feminism  
WGS 705 Coming of Age Narratives: Negotiating Difference (IR)  
WGS 740 Feminist Theories of Knowing (O)  
WGS/AAS 757 Black Feminist Theories (Y)  
WGS 795 Practice of Transnational Feminism (Y)

With departmental approval, various sections of Special Topics courses can satisfy the Core WGS requirement as well.

## ADMISSIONS

Students 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, 208 Bowne 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.

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## Women's And Gender Studies Secondary Teacher Preparation Program

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](mailto: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 Social Studies (7-12). It is an alternative to the existing undergraduate Arts and Sciences/Education dual program in these areas, and an option that often takes less time and fewer credits than earning the entire master's degree in education after completion of a general Arts and

Sciences degree.

The combined bachelor's/master's teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree allows.

Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met – typically at the end of 5 years. Students begin taking education courses as undergraduates, including some in the fourth year that are taken for graduate credit, and apply to become graduate students for their last two semesters. Some summer study (not necessarily at SU) may be required.

The combined program has a two-stage admission process. The first stage involves meeting with the School of Education contact as early as possible to develop a plan, and, if a decision to pursue the program is made, completing a form signed by Education and a new declaration of program of study form in Arts and Science to declare the Arts and Sciences program with “Teacher Preparation/5 year” appended to the title (e.g., “History (TchrPrep/5yr)” instead of “History”). The second admission stage involves an application to the Graduate School. Each admission stage requires a minimum 3.0 cumulative GPA and a minimum 3.0 GPA in the courses from the subject to be taught. The second stage also requires successful performance in the undergraduate education courses.

The choices of Arts and Sciences majors, and the course requirements for the Arts and Sciences major, the Liberal Arts Core, and other requirements related to the major are the same for these combined programs as those for students completing the dual enrollment undergraduate Arts and Sciences/Education program. These details about specific adjustments necessary to the Liberal Arts Core and to Arts and Sciences major may be found in the section describing Dual Arts and Sciences/ Education Programs.

Because of the specific course requirements and sequencing of courses, it is important that students interested in one of these programs meet with the School of Education contact as soon as possible to develop a plan. EDU 204, the first education course, must be taken no later than spring of the junior year.

# Courses

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## African American Studies

### AAS 500 Selected Topics 1-3 SI

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. R

### AAS 501 African American Sociological Practice: 1900-45 3 IR

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 3 E

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 3 IR

Crosslisted with: HST 510  
Particular periods or aspects of African American history. R

### AAS 512 African American Women's History 3 O

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 3 E

Crosslisted with: WGS 513  
A multi-dimensional study of Morrison's bookwork: fiction, non-fiction, and scholarship. Involves conceptual frameworks and ideas that link this project with broader understandings and interpretations of Blacks in the world. A wide range of questions (i.e., aesthetics, feminisms, knowing-politics, language, race) derives from Morrison's literary witnessing of Black community life.

### AAS 525 Research Methods in African American Studies 3 Y

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 3-4 Y

Various areas of intellectual and research interests related to the American black experience. Integrates knowledge of historical, cultural, sociological, political, and economic issues. R

### AAS 580 International Course 1-12 IR

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. R

### AAS 590 Independent Study 1-6 IR

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. R

### AAS 600 Selected Topics 1-3 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. R

### AAS 608 Masters of American Black Music 3

Double Numbered with: AAS 408  
Various masters of African American music and how these masters brought beauty and happiness to the common place.

### AAS 609 History of Jazz, 1940 to Present 3

Double Numbered with: AAS 409  
Determine why bebop was the most significant style development in the 20th century. How did it liberate the music from dance music to its own art form? Additional work required of graduate students.

### AAS 610 Seminar in Pan Africanism: Research and Reading 3 Y

Commonalities shared by Africans and people of African descent. Political and intellectual currents developed in the face of these currents. R

### AAS 611 Arts, Cultures and Literatures of the Pan African World 3 Y

Definitions, representations, and critiques of Pan Africanism. African, African American, and African Caribbean artistic, cultural, and literary products explored. Aesthetics, gender, feminisms, reading, research, reflection, and analysis emphasized.

### AAS 612 Histories, Societies and Political Economies of the Pan African World 3 Y

Effects of global encounters on African, African Caribbean, and African American societies examined.

### AAS 620 Black Women Writers 3 SI

Writers whose work creates, expands, and engages knowledge of Pan Africanism. R

### AAS 627 New York City: Black Women Domestic Workers 3 Y

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 3 SI

Exploration of African performance art forms existing since antiquity. Selected contemporary written drama texts. Includes student performance.

### AAS 634 Underground Railroad 3 SI

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 3 Y

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.

AAS670 Experience Credit 1-6  
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. R

AAS671 Caribbean Intellectual Thought 3 IR  
Analysis of principle thinkers who have influenced the philosophy and intellectual culture of the region.

AAS681 Comparative State, Society Relations 3 E  
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.

AAS690 Independent Study 1-6  
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. R

AAS700 Seminar in African American Studies 3 SI  
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. R

AAS731 Militarism and Transformation in South Africa 3 Y  
Issues of militarism in political process in Southern Africa in last 15 years. Understanding background which unleashed war, destabilization, and violence in region.

AAS757 Black Feminist Theories 3 Y  
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.

AAS765 Readings and Research in African History 3 SI  
Crosslisted with: HST 765

AAS997 Master's Thesis 6-9  
R1, 18 credits maximum

## Arts Leadership Administration

ALP 600 Selected Topics 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

ALP 601 Entrepreneurship and Leadership in the Arts 3 IR  
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 3 IR  
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 3 IR  
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 3 IR  
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 3 IR  
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 701 Arts Administration Internship & Capstone Project 3 IR  
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 601,603,610 AND 612..

## Anthropology

ANT 500 Selected Topics 1-3 SI  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

ANT 523 Globalization and its Discontents in Latin America 3 Y  
Crosslisted with: LAS 523  
Effects of and reactions to globalization and neo-liberal policies in rural communities, including industrialization, rural-urban and international migration and ethnic movements.

ANT 553 Women and Social Change 3 E  
Crosslisted with: WGS 553  
Function of changes in women's roles in sociocultural urbanization, revolution, and modernization. Women in Third World countries compared to women in industrialized countries.

ANT 571 Topics in Sociolinguistics 3 SI  
Crosslisted with: LIN 571, SOC 571  
Functions of language in society. Geographical, socioeconomic, and male-female differentiation. Functions of various types of speech events. Requirements include a research project. R1, 6 credits maximum

ANT 574 Anthropology and Physical Design 3 E  
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.

ANT 600 Selected Topics 1-3 SI  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

ANT 611 History of Anthropological Theory 3 Y  
Main theoretical approaches to the study of the origin and development of society and culture: cultural evolutionists, functionalists, diffusionists, structuralists, and historicists.

- ANT 612 Ethnology 3 SI  
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.
- ANT 614 Cities, Spaces and Power 3 O  
Double Numbered with: ANT 414  
Processes of urbanization, migration, adjustments of peasants in cities, ethnic and cultural variation in urban areas. Cultural differences in industrial development. Uses of applied anthropology in urban situations. Sometimes offered abroad.
- ANT 616 Political Anthropology 3 IR  
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.
- ANT 617 Economic Anthropology 3 IR  
Contribution of anthropology to economic theory and the relevance of orthodox economics to cross-cultural and evolutionary studies of society.
- ANT 619 Ritual Theory and Religious Practice 3 IR  
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.
- ANT 620 Readings, Research and Ethnography 3 S  
Individual or group readings and research on topics in ethnography. Student or group works with a faculty member and submits reports as individually arranged. R
- ANT 621 Gender & Sexuality in South Asia 3 O  
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/"third sex" identities. Additional work required of graduate students.
- ANT 624 Negotiation: Theory and Practice 3 Y  
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.
- ANT 625 Problems in Anthropology of South Asia 3 IR  
One topic of theoretical concern to anthropologists dealing with South Asia, e.g., caste, kinship, village Hinduism, economics, urbanization, rural/urban networks.
- ANT 626 Cultures and Politics of Afghanistan and Pakistan 3 E  
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. First offered in Summer 2014
- ANT 627 Brazil: Anthropological Perspectives 3 IR  
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.
- ANT 628 Muslim Rituals, Practices, and Performances 3 IR  
Crosslisted with: REL 628  
Historical, cultural, and sociological analysis of pan-Islamic festivals and rituals. Local, culturally-specific, unofficial practices in Islam.
- ANT 629 Transformation of Eastern Europe 3 IR  
Double Numbered with: ANT 428  
Change and continuity after the demise of communism as experienced by ordinary citizens. Transformations in agriculture, industry, social, and political institutions; the rise of ethnic nationalism; and ethnic conflict. Additional work required of graduate students.
- ANT 631 Method and Theory in Biological Anthropology 3 Y  
Mechanisms of human adaptation to environmental stress; emphasizing human variation. Cultural and biological modes of adaptation. Paradigmatic and methodological issues, with special emphasis on biocultural and contemporary approaches.
- ANT 633 Advanced Human Osteology 3 E  
Forensic uses of human osteology. Skeletal differentiation of living and fossil human populations from mammals. Overview of statistics. Procedures for estimating height, age, sex, and race.
- ANT 634 Anthropology of Death 3 E  
Double Numbered with: ANT 434  
Death in anthropological perspective. Survey of the many ways death has entered into the work of archaeologists, biological anthropologists, ethnographers and social theorists.
- ANT 636 Bioarchaeology 3 IR  
Double Numbered with: ANT 436  
Surveys the analysis of human skeletal remains in archaeological and medico-legal settings. Methods and techniques of analysis and interpretation will be emphasized. Case studies will be used to illustrate application to variable social and historical contexts. Additional work required of graduate students.
- ANT 641 Anthropological Archaeology 3 Y  
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 3 O  
Double Numbered with: ANT 442  
Formulation and conduct of archaeological research with a focus on field and laboratory methods used to obtain and analyze data. Survey techniques, excavation strategies, archaeological classification, and data base management. Additional work required of graduate students.
- ANT 643 Advanced Field Methods in Archaeology 6 SS  
Supervised training in excavating, organizing, coordinating, and directing research on an archaeological site. R

- ANT 644 Laboratory Analysis in Archaeology 3 E  
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 3 IR  
Crosslisted 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 3 IR  
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 648 History of Archaeology 3 IR  
Double Numbered with: ANT 348  
Tracing the discipline's origins with the Renaissance dilettante. Brief survey of scientific and quantitative methods.
- ANT 649 World Heritage Sites 3 E  
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 3 IR  
Crosslisted with: REL 651, SOC 651  
Classical sociological writings of Emile Durkheim and Max Weber and their contemporary significance.
- ANT 652 Anthropology and Public Policy 3 IR  
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 655 Culture and AIDS 3 IR  
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 3 IR  
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 3 IR  
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 3 IR  
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 3 IR  
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 3 IR  
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 3 IR  
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 3 O  
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 3 IR  
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 3 E  
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 3 IR  
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 3 O

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 1-6 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. R

ANT 672 Language, Culture, and Society 3 Y

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 3 IR

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 674 Culture and Folklore 3 IR

Crosslisted with: WGS 674; Double Numbered with: ANT 474

Ways in which folklore (oral and material traditions, including personal narratives), reflects key cultural ideas such as gender, ethnicity, and history. Analytical methods for examining folk traditions. Additional work required of graduate students.

ANT 675 Culture and Disputing 3 IR

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 3 E

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 3 IR

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 3 IR

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 682 Life Histories/Narratives 3 IR

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 3 IR

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 3 IR

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 3 Y

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 3 IR

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 1-6 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. R

ANT 691 Critical Issues in the Study of Native Americans 3 IR

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 3 SI

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 3 IR

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 1-3 SI

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

ANT 701 Seminar on Multilateral Peacekeeping 3 IR  
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 3 Y  
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 3 Y  
Theoretical issues of the past two decades. Includes feminism and anthropology. Reflexive and interpretive ethnography. Sociobiology versus culturology. Marxist anthropology.

ANT 713 Proposal Writing 3 SS  
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 3 Y  
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 3 IR  
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 3 IR  
Crosslisted with: GEO 764, WGS 764  
The impact of the increasing hypermobility of capital and culture flows across borders on gender relations.

ANT 781 Ethnographic Methods 3 IR  
Cultural anthropological research techniques. Participant observation, various types of interviewing, psychological testing devices, use of photographic and tape recording equipment, methods of recording field data, problems of developing rapport.

ANT 800 Selected Topics 1-3 SI  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

ANT 970 Experience Credit 1-6 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. R

ANT 990 Independent Study 1-6 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. R

ANT 997 Masters Thesis 1-6 S  
R

ANT 999 Dissertation 1-15 S  
R

## Arabic

ARB 620 Language Training in Preparation for Research Using Arabic 3  
Language training to prepare students to conduct research in areas that require knowledge of Arabic. R3, 12 credits maximum

## Biochemistry

BCM 630 Journal Club in Molecular Pharmacology & Structural Biology 1 Y  
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. R1, 2 credits maximum

BCM 675 Biochemistry I 3 Y  
Double Numbered with: BCM 475  
Structure and function of nucleic acids and proteins. Protein isolation and characterization. Enzyme kinetics, mechanisms, and regulation. Principles and application of thermodynamic concepts to metabolism. DNA replication, transcription, and translation. Students enrolled in 675 will be required to present a special topic lecture or complete a research paper.

BCM 676 Biochemistry II 3 Y  
Double Numbered with: BCM 476  
Continuation of Biochemistry I. Mechanisms, integration, and regulation of intermediary, autotrophic, nitrogen, and energy metabolism. Structure, function, and metabolism of carbohydrates, lipids, and proteins. Biogenesis and function of subcellular organelles. Students enrolled in 676 will be required to present a special topic lecture or write a research paper.

BCM 677 Preparation and Analysis of Proteins and Nucleic Acids 3 Y  
Crosslisted 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 3 Y  
Crosslisted 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 3 E  
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 3 Y  
Classifications and model systems in cancer. Oncogenes; viral and chemical oncogenesis. Growth control, genetic and epigenetic changes, progression, invasion, metastasis, and tumor immunobiology. Cancer biochemistry, host-tumor interactions, chemotherapy, immunotherapy, and host-response modification.  
PREREQ: BIO 326 AND 327.

BIO 503 Developmental Biology 3 Y  
Regulation of form and differentiation in eucaryotic organisms. Control of development at the molecular, cellular, and organismal levels. Experimental approaches to provide an understanding of developmental processes.  
PREREQ: BIO 326 AND 327.

BIO 565 Cellular Physiology 3 Y  
A lecture course on basic problems of cell function, including energetics, membrane transport, contractility, and properties of excitable membranes.  
PREREQ: BIO 326 AND 327.

BIO 607 Advanced Neuroscience 3 Y  
Double Numbered with: BIO 407  
Detailed analysis of the anatomy, physiology, and chemistry of the nervous system and behaviors that it mediates. Topics include: neurons and electrochemical properties of neurons, sensory and motor systems, homeostasis, sleep, consciousness, learning, and memory. Additional work required of graduate students.  
PREREQ: BIO 211 OR PSY 223.

BIO 610 Graduate Research Laboratory 1-3 S  
Work in research laboratories to acquire skills and techniques. R5, 6 credits maximum

BIO 615 Conservation Biology 3 Y  
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 631 Population Genetics 3 O  
Double Numbered with: BIO 431  
Models of population growth, Hardy-Weinberg equilibrium, X-linkage and two loci, subdivision, inbreeding and finite populations, quantitative characters, selection, migration, mutation, the fundamental theorem, stochastic processes, and requisite mathematics. Computer programming is part of the laboratory requirement. Additional work required of graduate students.  
PREREQ: BIO 345 OR MAT 285 OR 295.

BIO 635 Physical Cell Biology 3 Y  
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 649 Evolutionary Developmental Biology 3 Y  
Double Numbered with: BIO 449  
How does development produce wings, fins, hands and heads? What goes wrong in development when disease occurs? Explore basic principles of animal development and the evolution of developmental diversity. Additional work required of graduate students  
PREREQ: BIO 326.

BIO 651 Ecology 3 E  
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 662 Molecular Genetics 3 Y  
Double Numbered with: BIO 462  
Applications of recombinant DNA methodology to the study of gene function. Mechanism regulating protein function and gene expression. Overview of the molecular causes of spontaneous and inherited diseases. Introduction to genomic and proteomic methods. Additional work required of graduate students.  
PREREQ: BIO 326, 327.

BIO 663 Molecular Biotechnology 4 Y  
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 4 Y  
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 3 Y  
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 675 Biochemistry Laboratory 4 Y  
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 required of graduate students.  
PREREQ: BIO 326, 327; COREQ: 575.

BIO 688 Biological Literature 1-3 S  
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. R

BIO 690 Independent Study 1-6 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. R

BIO 782 Graduate Seminar: Organelles and Membranes 0-2 IR  
Selected topics dealing with the structure and function of organelles and intracellular membranes. Students review, critically evaluate, and summarize recent literature on given topics. Summaries are presented and discussed in class. R

BIO 784 Gene Expression II 0-2 IR  
Selected topics dealing with regulation of RNA processing and subsequent post-transcriptional events. Students review, critically evaluate, and summarize recent literature on given topics. The summaries are presented and discussed in class. R

BIO 787 Graduate Seminar in Functional Genomics 0-2 IR  
Students review, critically evaluate, and present various topics related to genomic methods used for analysis of biological processes in a variety of model organisms. R1, 2 credits maximum

BIO 791 Graduate Seminar in Species Interactions 0-2 IR  
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. R

BIO 792 Animal Ecology & Behavior 0-3 IR  
Students review, critically evaluate, and summarize recent literature on given topics. The summaries are presented and discussed in class. R

BIO 793 Plant Ecology 0-2 IR  
Students review, critically evaluate, and summarize recent literature on given topics. The summaries are presented and discussed in class. R

BIO 795 Speciation 0-2 IR  
Students review, critically evaluate, and summarize recent literature on given topics. The summaries are presented and discussed in class. R

BIO 797 Seminar: Topics in Evolution 0-2 Y  
Sexual selection and conflict, parental care, social evolution, speciation, morphological evolution. Critically evaluate and discuss recent historical and classical literature on the given topics. R

BIO 997 Masters Thesis 1-6 S  
R

BIO 999 Dissertation 1-15 S  
R

## Bengali

BNG 620 Language Training in Preparation for Research Using Bengali 3  
Language training to prepare students to conduct research in areas that require knowledge of Bengali. R3, 12 credits maximum

## College Of Arts And Sciences

CAS611 Living in a Global Environment 1 Y  
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.

CAS713 Proposal Writing 3 Y  
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 3 E  
Examines the histories of composition studies. Analyzes the institutional, political and social forces influencing the theories and practices of composition.

CCR 620 Graduate Readings 1-4 S  
R3, 4 credits maximum

CCR 631 Contemporary Rhetorics 3 E  
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 3 E  
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 3 Y  
Explores histories of and recent developments in communication and information technologies, particularly their rhetorical, cultural, and pedagogical implications

CCR 634 Ancient Rhetorics 3 E  
Surveys and situates ancient rhetorics in their social, political and global contexts. Introduces rhetorical historiography.

CCR 635 Advanced Research Practices 3 E  
Surveys research methods and methodologies. Focuses on reading research rhetorically, crafting researchable questions, and designing research studies.

CCR 636 Feminist Rhetoric(s) 3 E  
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 3 IR  
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 3 IR  
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 3 E  
Current issues in rhetorical theory and its application to the study of writing and written discourses. 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 3 O  
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 3 E  
Explores contemporary controversies and debates in writing pedagogy and curricula. Considers language, power and difference, interdisciplinarity and the transnational.

CCR 733 Rhetoric, Composition, and the Digital Humanities 3 SI  
Examines specific topics emerging from developments in writing and technology. Places these developments in rhetorical, disciplinary, interdisciplinary, and sociocultural contexts.

CCR 744 African American Rhetorics 3 E  
Crosslisted with: CRS 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

CCR 745 Writing Program  
Administration 3 E

Studies the strategies, functions, structures, politics and practices of administering writing programs, writing centers, and writing across the curriculum programs in varied institutional contexts.

CCR 746 Queer Rhetorics 3 E

Crosslisted with: CRS 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

CCR 747 Authorship Studies 3 O

Investigates the social, historical and economic constructions of the author figure. Focuses on publication as a social phenomenon and the effects of print and digital literacy revolutions on text, author, reader, and literacy.

CCR 751 Social History of Rhetoric 3 O

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 3 Y

Seminar on topics in composition or cultural rhetoric. R

CCR 820 Advanced Graduate Readings 1-4  
IR

R3, 4 credits maximum

CCR 887 Doctoral Readings 1-3 Y

Advanced readings and seminar discussion in preparation for doctoral qualifying examination.

CCR 999 Dissertation 1-15 IR

R14, 15 credits maximum

## Chemistry

CHE 546 Molecular Spectroscopy and  
Structure 1-9 Y

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. R5, 12 credits maximum

CHE 575 Organic Spectroscopy 3 Y

Use of mass spectrometry and infrared, ultraviolet-visible, and nuclear magnetic resonance spectroscopy.  
PREREQ: CHE 325.

CHE 611 Inorganic Chemistry 3 Y

Double Numbered with: CHE 411  
Descriptive and structural inorganic chemistry and underlying principles.

CHE 612 Metals in Medicine 3 Y

Double Numbered with: CHE 412  
Bonding, stereochemistry, and properties of metallo-drugs and diagnostic agents. Topics include platinum compounds for treating cancer, gadolinium and technetium in biomedical imaging, and porphyrins in photodynamic therapy. Additional work required of graduate students.

CHE 615 Main Group Chemistry 3 O

The s- and p-block elements and their compounds, chemical properties, reactivity, structure, function, and applications. Organometallic, coordination chemistry and solid state aspects of main group inorganic chemistry employing physical methods to investigate observed trends.

CHE 616 Solid State Chemistry 3 O

The description and understanding of extended chemical structures, phase diagrams, and the interplay of chemical-bonding-structure. Symmetry and other factors governing the structures and physical properties of solid state materials.

CHE 622 Inorganic Laboratory Technique  
1 Y

Double Numbered with: CHE 422  
Basic experimental techniques used in inorganic chemistry.  
PREREQ: CHE 611.

CHE 624 Advances in Inorganic  
Chemistry 1 IR

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 R2, 3 credits maximum

CHE 625 Crystallography 3 E

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.

CHE 626 Organometallic Chemistry 3 E

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 3 Y

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 3 IR

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 3 Y  
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 3 Y

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 1 IR

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 R2, 3 credits maximum

CHE 645 Quantum Mechanics in Chemistry 3 Y

The fundamentals of quantum mechanics with application to simple systems, complex atoms, and molecules.

CHE 655 Quantum Chemistry & Advanced Quantum Mechanics 3 SI

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 3

Phenomenological approach. Chemical equilibria and solution behavior. Principles of molecular thermodynamics introduced.

CHE 666 Statistical Mechanics 3 E

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 3 Y

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 3 Y

Structure and stereochemistry, chirality, conformational analysis. Molecular orbital theories and applications to organic chemistry. Aromaticity. Introduction to organic mechanisms. Methods of deciphering organic mechanisms.

CHE 676 Introduction to Organic Synthesis: Methodology 3 Y

Functional group transformations and carbon-carbon bond-forming reactions. Basic design strategies and advanced synthetic techniques including protection and functional group equivalency.

CHE 677 Preparation and Analysis of Proteins and Nucleic Acids 3 Y

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 3 Y

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 3 Y

Ionic mechanisms: displacements, addition eliminations, arrangements. Catalysis. Free radical mechanisms. Molecular mechanisms, including applications of orbital symmetry and frontier molecular orbital theory to organic reactions.

CHE 686 Advanced Organic Synthesis: Design 3 Y

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 1-6 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. R

CHE 997 Masters Thesis 1-15 S  
R

CHE 999 Doctoral Dissertation 1-15 S  
R

## Chinese

CHI 620 Language Training in Preparation for Research Using Chinese 3

Language training to prepare students to conduct research in areas that require knowledge of Chinese. R3, 12 credits maximum

## Communication Sciences And Disorders

CSD 609 Cognitive Neuroscience of Speech and Language 3 Y

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 3 Y

Neuroanatomy, neurophysiology of brain motor systems. Characteristics, assessment and treatment of the dysarthrias and apraxia 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 615.

CSD 612 Genetics, Cleft Palate and Craniofacial Disorders 3 Y

Genetic bases of craniofacial disorders, cleft palate and other disorders. Basic molecular and clinical genetics. Communicative disorders related to cleft palate and other craniofacial disorders. Anatomy, physiology, craniofacial embryology. Characteristics, diagnosis, treatment of cleft palate.

PREREQ: CSD 315.

CSD 615 Anatomy and Physiology of the Speech and Hearing Mechanisms 3 Y

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 3 Y

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.

CSD 618 Dysphagia 3 Y

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 615.

CSD 622 Development of Speech and Language 3 Y

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 3 Y

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 625 Stuttering 3 Y

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 Articulation Disorders 3 Y

Double Numbered with: CSD 427

Overview of normal articulation and development. Characteristics and description of articulation disorders. Incidence, etiology, related factors. Differences versus disorders. Principles of assessment, types of diagnostic instruments. Elements involved in therapy, various approaches to remediation. Additional work required of graduate students.

PREREQ: CSD 616.

CSD 629 Basic Clinical Audiology 3 Y

Double Numbered with: CSD 429

Fundamentals of psychophysics of audition, anatomy, and physiology of the auditory mechanism. Disorders of hearing. Pure tone and speech audiometry. Differential diagnosis. Special procedures for children. Public school audiometry. Auditory rehabilitation. Additional work required of graduate students.

CSD 635 Aural Rehabilitation 3 Y

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 636 Cultural and Linguistic Issues in Communication Sciences and Disorders 3 Y

Double Numbered with: CSD 436

Communication Sciences and Disorders 3 Discussion of linguistic and cultural variation and comparisons of language acquisition and child socialization across cultures. The assessment and treatment of communication disorders in individuals from culturally and linguistically diverse groups. Additional work required of graduate students.

CSD 637 Instrumentation for Speech and Hearing 3 Y

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 3 Y

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, 627.

CSD 639 Technology and Rehabilitation for Hearing Loss 3 IR

Double Numbered with: CSD 439

Cochlear implants, hearing aids and other assistive devices and technologies used for intervention in adults and children with hearing loss. Approaches to aural rehabilitation. Additional work required of graduate students.

PREREQ: CSD 325, 429 OR 629.

CSD 645 Speech Science 3 Y

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.

CSD 646 Augmentative and Alternative Communication Systems 3 SS

Double Numbered with: CSD 446

Philosophical, theoretical, and practical issues in enhancing communication for individuals with severe disabilities. Assistive technologies, identification and evaluation of systems to meet needs of children and adults. Teaching system use in family, school, community settings. Additional work required of graduate students.

CSD 649 Early Assessment and Intervention with Hearing-Impaired Children 3 IR

Double Numbered with: CSD 449

Development of auditory system; review of diagnosis of childhood hearing impairment; counseling parents of hearing-impaired children; language development of the hearing-impaired; amplification and cochlear implants. Additional work required of graduate students. Additional work required of graduate students.

PREREQ: CSD 629.

CSD 650 Clinical Classroom Practicum 0-4 S

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.. R

CSD 651 Clinical Methods in Speech-Language Pathology 3 Y

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 3 Y

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, 645.

CSD 658 Auditory Anatomy and Physiology 3 Y

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 1 Y

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 3 Y  
Rationale and development of clinical tests of auditory function. Pure tone and speech audiometry, masking, acoustic impedance, special auditory tests, and calibration.

CSD 662 Pediatric Audiology 3 Y  
Developmental anatomy and physiology of the auditory mechanism. Causes and characteristics of childhood auditory disorders. Behavioral and nonbehavioral techniques for auditory assessment. Rehabilitation and counseling of hearing-impaired children.

CSD 663 Evoked Response I 3 Y  
Principles of auditory evoked response measurement techniques and interpretation of results. Focus on early latency evoked responses including the auditory brainstem response in individuals with normal hearing and hearing loss.

PREREQ: CSD 661. COREQ: CSD 658.

CSD 664 Evoked Response II 3 Y  
Otoacoustic emissions in individuals with normal hearing and hearing loss. Middle and longlatency endogeneous and exogeneous electrical potentials in individuals with normal and impaired hearing.

PREREQ: CSD 663.

CSD 665 Medical Audiology 3 Y  
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 429/629.

CSD 666 Speech Perception & Acoustics 3 Y

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 3 Y  
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 1 Y  
Ear canal examination, cerumen and the canal secretory system, cerumen management, audiometric and immittance data, contraindications.

CSD 673 Hearing Aids I 3 Y  
Historical development of hearing aids, electroacoustic measurements of hearing aids, compression technology and ear mold acoustics.

CSD 674 Hearing Aids II 3 Y  
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 3 Y  
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 3 Y  
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 422/622.

CSD 723 Assessment of Children's Language 3 Y  
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 422/622.

CSD 725 Neuropathologies of Language 3 Y

Characteristics, diagnosis, and treatment of aphasia. Other communicative disorders: confused language, language of generalized intellectual impairment, dysarthria, and apraxia. Neuroanatomy, neurophysiology, historical trends, nature of aphasia, diagnosis and treatment.

PREREQ: CSD 315 OR 615.

CSD 731 Language Disorders in School-Age Children 3 Y

Theory and research in oral and written language processing interventions. Curriculum-based assessment; intervention strategies for children and adolescents with language/learning disabilities. Compensatory strategies, environmental adaptations, cultural considerations, behavioral and pharmacological management, motivation, social skills instruction. Background in normal language acquisition and assessment procedures required.

CSD 743 Phonological Assessment 3 IR

Recent approaches; disordered phonology. Practice with phonemic analysis, canonical forms, phonological rules and processes, etc. Methodological considerations and therapeutic applications.

CSD 750 Seminars in Speech-Language Pathology 3 SI

Special topics in speech and language development and disorders, such as pragmatic development in children, stuttering, organic disorders, and recent advances in assessment and management of speech and language disorders. R

CSD 760 Directed Research 1 S

Supervised laboratory experience in conducting research in the speech and hearing sciences. Permission of instructor. R1, 2 credits maximum

CSD 780 Seminar in Audiology 3-9 SI

Special topics, such as special auditory tests, evaluation of special populations, new clinical procedures, and professional issues. R

CSD 781 Hearing Conservation and Environmental Audiology 2 IR

Physiological, medical, and legal aspects of industrial audiology. Concomitant psychological and social ramifications. Current preventive and rehabilitative techniques.

CSD 783 Cochlear Implants 3 Y

Physiology underlying electrical stimulation of the auditory system and perceptual attributes, signal processing of various implant devices, principles of mapping implants, and rehabilitation of cochlear implant recipients.

CSD 785 Professional Issues in Audiology 2 Y

Ethics, licensure, credentialing, multicultural, and other current issues in audiology.

CSD 787 Vestibular Assessment and Management 3 O

Anatomy and physiology of peripheral and central vestibular system; assessment of normal and impaired individuals with focus on electronystagmography; vestibular and balance disorders; rehabilitation techniques.

PREREQ: CSD 663.

CSD 788 Pharmacology in Audiology 2 Y

Pharmacology as it relates to the practice of Audiology. Basic concepts, biochemical basis for hearing, ototoxic and vestibulotoxic agents, patient management, FDA policies, and hair cell regeneration will be covered.

CSD 798 Current Research in Audiology and Speech Pathology 3 Y

Objective evaluation of current research in audiology and speech pathology. Opportunities to gain multiple experiences synthesizing and presenting published research data. Exposure to the research process through independent investigations.

CSD 799 Independent Research in Speech Pathology or Audiology 0-9 S

Specific problems in normal or disordered processes in speech, language, or auditory systems. R4, 9 credits maximum

CSD 996 Internship in Audiology 0-8 S

Supervised internship in a clinic, hospital and rehabilitation center, or school setting with an accredited audiologist. Variable length experience, earn V-grade until complete, leading to a letter grade. Must be in good standing in the audiology program and with permission of audiology clinic director.

Dutch

DUT 600 Selected Topics 1-3 IR

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

Earth Sciences

EAR 510 Paleolimnology 3 IR

The records of environmental change contained within lake sediments. Basic background in limnology followed by field/laboratory research projects and presentations. Upper division undergraduate science majors.

EAR 544 Quaternary Environmental and Climate Change 3

Proxy records from marine, lacustrine, glacial, and terrestrial environments for climate and environmental change during the Quaternary. Comparison with numerical models of atmosphere and oceans. Discussion of current literature and the potential for future global change.

EAR 590 Independent Study 1-3 SI

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. R

EAR 601 Hydrogeology 3 Y

Double Numbered with: EAR 401  
Fundamentals of groundwater hydraulics. Aquifer flow systems analysis and evaluation. Groundwater-surfacewater relationships. Groundwater chemistry. Additional work required of graduate students.

EAR 602 Numerical Methods in Geosciences 3 E

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 3 Y

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 3 E

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 3 Y

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 3 SI

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 3 Y

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.

EAR 610 Applications of GIS in the Earth Sciences 3 Y

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 617 Geochemistry 3 Y

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 619 Environmental Aqueous Geochemistry 3 Y

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 3 O

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 541.

EAR 624 Paleocology 3 SI

Principles and applications of paleocology, using examples from both marine and terrestrial ecosystems. Analysis of fossil communities. Ecology of mass extinctions. Functional morphology. Predator- prey relationships. Effects of climate/environmental change on ecosystems and species. Discussion oriented combination of lecture, lab, and field trips.

PREREQ: EAR 325.

EAR 629 Topics in Paleobiology 3 SI

Double Numbered with: EAR 429

Current research in paleobiology with a topical focus. Subjects might include macroevolution, evolutionary paleocology, extinctions and radiations, stratigraphic paleontology, etc.

Additional work required of graduate students.  
PREREQ: EAR 325. R2, 9 credits maximum

EAR 630 Topics in Thermochronology & Tectonics 2 SI

Double Numbered with: EAR 430

Seminar will focus on research topics in thermochronology and tectonics from current literature. Additional work required of graduate students.

PREREQ: (EAR 431 OR 631) AND (EAR 444 OR 644). R3, 8 credits maximum

EAR 631 Plate Tectonics 3 SI

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 3

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 2 SI

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.. R2, 6 credits maximum

EAR 635 Geophysics 3 SI

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 643 Advanced Topics in Geomorphology 3 E  
Double Numbered with: EAR 443  
This course presents selected papers from the literature that contribute to current thought in geomorphology and later focus on a topic that can vary from year to year. Additional work required of graduate students.  
PREREQ: EAR 542.. R1, 6 credits maximum

EAR 644 Thermochronology 3 SI  
Double Numbered with: EAR 444  
Methods used in Earth Sciences to determine temperature-time histories of crustal terranes including  $^{40}\text{Ar}/^{39}\text{Ar}$ , fission track, and U-Th/He techniques. Diffusion theory and applications of thermochronology to tectonics and landscape evolution, P-T-t paths of crustal terranes. Additional work required of graduate students.  
PREREQ: EAR 418.

EAR 655 Geochemical Patterns in the History of Earth and Life 3 O  
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 617.

EAR 660 Advanced Hydrologic Field Methods 3 O  
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.

EAR 665 Groundwater Modeling 3 E  
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 541.

EAR 670 Experience Credit 1-6 S  
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing. Prereq: permission, in advance, of assigned instructor, department chair, or dean. R

EAR 678 Isotope Geology 3 SI  
Double Numbered with: EAR 478  
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,  $^{14}\text{C}$  dating; O, H, and C isotope geochemistry. Additional work required of graduate students.  
PREREQ: EAR 417 OR 617.

EAR 683 Departmental Colloquium 1 S  
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. R2, 3 credits maximum

EAR 860 Advanced Seminars in Geology 1-3 SI  
Current literature and problems in specialized fields of geology. R

EAR 997 Masters Thesis 0-9 S  
R

EAR 999 Dissertation 1-15 S  
R

## Economics

ECN 500 Selected Topics 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

ECN 505 Mathematical Economics 3 Y  
Introduction to use of basic mathematical techniques in economic analysis.  
PREREQ: (ECN 301 OR 311) AND (MAT 284 OR 285 OR 286 OR 295 OR 296).

ECN 510 Special Topics in Economics 3 IR  
Various special topics of economics issues offered as available.  
PREREQ: ECN 301 OR 311. R5, 18 credits maximum

ECN 521 Economic Statistics 3 S  
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 102) OR 203.

ECN 522 Econometric Methods 3 Y  
Statistical procedures. Problems of estimating parameters in regression models of economic behavior.  
PREREQ: ECN 521 AND (ECN 301 OR 311).

ECN 525 Economics and Gender 3 Y  
Crosslisted with: WGS 525  
Offered only in Strasbourg. European economy, with central focus on economic principles underlying decisions to create and extend scope of European Community and on economic policies EU has followed since creation.

ECN 566 International Macroeconomics and Finance 3 Y  
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 1-12 SI  
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. R

ECN 600 Selected Topics 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. \* R

ECN 601 Survey Microeconomic Theory 3 Y  
Microeconomics. For graduates with little recent work in economics.

ECN 602 Survey Macroeconomic Theory 3 Y

Macroeconomics. For graduates with little recent work in economics.

ECN 604 Economics for Managers 3 IR

Micro- and macroeconomic theory for managerial decision making. Forecasting. Not open to students seeking advanced degrees in economics.

ECN 605 Mathematics for Economists 3 SS

A review of mathematical techniques required in economics. Calculus, matrix, algebra, difference and differential equations, and set theory. Open to economics Ph.D. and Applied Statistics masters students only. Two semesters of calculus required.

ECN 610 Special Topics in Economics 3 IR

Various special topics of economics issues offered as available.

PREREQ: ECN 601. R5, 18 credits maximum

ECN 611 Microeconomics I 3 Y

Consumer and firm theory. Emphasis on the development of analytic techniques and the ability to apply them to economic models.

PREREQ: ECN 301, 302, 602.

ECN 612 Microeconomics II 3 Y

General equilibrium theory and advanced topics in economic theory.

PREREQ: ECN 611.

ECN 613 Macroeconomics I 3 Y

Aggregate economic analysis. Emphasizes macroeconomic models and main currents in contemporary macroeconomic thought.

ECN 614 Macroeconomics II 3 Y

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 3 IR

Economic theories from antiquity to the 20th century.

ECN 620 Foundations of Econometrics 3 SS

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 3 Y

Mathematical formulation of economic models. Statistical problems of estimating parameters in regression analysis.

PREREQ: ECN 605 AND ECN 620.

ECN 622 Econometrics II 3 Y

Estimation problems and techniques in more complex economic models.

PREREQ: ECN 621.

ECN 631 Public Finance 3 Y

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 3 Y

Crosslisted with: PAI 735

Expenditures and revenues of state and local governments. Fiscal aspects of intergovernmental relations.

PREREQ: ECN 601.

ECN 655 Economics of Health and Medical Care 3 Y

Crosslisted with: PAI 736

Economic theory, empirics 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): ECN 601 or equivalent; (for PPA 736): PPA 723.

PREREQ: ECN 601.

ECN 661 Economics of Development 3 Y

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 3 Y

Crosslisted with: PAI 758

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 3 Y

Balance of payments, foreign exchange markets, international trade theory, tariffs, quotas adjustment mechanisms, and exchange controls.

ECN 681 Money, Banking & Monetary Policy 3 SS

Financial instruments and structure, banking organization and regulation. Money supply determination control and policy. The Federal Reserve: structure and policy instruments. Master's or doctoral candidates only.

PREREQ: ECN 602.

ECN 720 Topics in Econometrics 3 IR

Selected topics in applied and advanced econometrics.

PREREQ: ECN 622. R3, 12 credits maximum

ECN 731 Public Expenditures 3 Y

Theory of public goods; incidence of expenditures; intergovernmental relations; expenditure determinants, benefit-cost analysis.

ECN 732 Taxation 3 Y

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 3 Y

Urban land-use patterns, transportation, and housing. Theoretical and quantitative framework.

ECN 745 Regional Economics 3 E

Theory and analysis of regional economics; interregional income theory and factor movements, regional growth, accounts, and policy.

ECN 751 Labor Economics I 3 Y

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 3 Y

Income distribution, effects of health on work and wages, discrimination, retirement decisions, and impacts of government programs and policies.

PREREQ: ECN 751.

ECN 765 Advanced International Trade 3 Y

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 3 Y

Crosslisted with: PAI 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. PREREQ: PAI 723 OR ECN 601.

ECN 777 Economics of Environmental Policy 3 Y

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 820 Dissertation Workshop I 3 Y

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. R

ECN 821 Dissertation Workshop II 3 Y

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. R

ECN 865 Topics International Economics 3 Y

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 665.

ECN 997 Masters Thesis 1-6 S  
R

ECN 999 Dissertation 1-15 S  
R

## English

ENG 615 Open Poetry Workshop 3 Y

Participants write original poems, receive each other's critiques, and revise.

ENG 617 Open Fiction Workshop 3 Y

Participants write original stories, receive each other's critiques, and revise.

ENG 630 Graduate Proseminar 3

Introduction to a comprehensively defined field or period that places literary, cultural, and cinematic texts in historical and critical perspective. R

ENG 631 Critical Theory 3 Y

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 3 S

Students in Forms courses will analyze assigned writings with the purpose of discovering the author's intent. R3, 12 credits maximum

ENG 700 Graduate Reading 3 Y

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

ENG 715 First Poetry Workshop 3 Y

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 3 Y

Secondary poetry workshop in the M.F.A. program sequence. PREREQ: ENG 715.

ENG 717 First Fiction Workshop 3 Y

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 3 Y

Second fiction workshop in the M.F.A. program sequence. PREREQ: ENG 717.

ENG 719 Third Poetry Workshop 3 Y

Third poetry workshop in the M.F.A. program sequence. PREREQ: ENG 715, 716.

ENG 721 Third Fiction Workshop 3 Y

Third fiction workshop in the M.F.A. program sequence. PREREQ: ENG 717, 718.

ENG 730 Graduate Seminar 3

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. R

ENG 748 Studies in British Literature: 1832-1914 3 IR

Selected topics in historical and social perspectives.

ENG 799 M.F.A. Essay Seminar 3 Y

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 716 OR ENG 717 AND 718.

ENG 825 Advanced Seminar in Critical Theory 3 Y

Studies in particular modes of critical inquiry, such as marxism, feminism, psychoanalysis, and queer theory. PREREQ: ENG 631 AND 641. R3, 12 credits maximum

ENG 826 Advanced Seminar in Critical Theory 3 Y

Studies in particular modes of critical inquiry, such as marxism, feminism, psychoanalysis, and queer theory. PREREQ: ENG 631 AND ENG 641. R3, 12 credits maximum

ENG 890 Advanced Seminar in Cultural Studies 3 Y

Advanced investigation of special problems, including film. R

ENG 990 Independent Study 1-6 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. R

ENG 996 Graduate Readings 3

To be used for field exam study, and where necessary, study to meet language requirement. May be taken four times for credit. R3, 12 credits maximum

ENG 997 Thesis 1-6 S  
R

ENG 999 Dissertation 1-15 S

Credit designated from time to time as the dissertation progresses. Maximum total of 30 credits. R

## English As A Second Language

ENL 610 Oral Communication in Teaching 0 S

Language, culture, and teaching strategies needed for effective communication in academic and social situations. Laboratory and individualized language instruction included. For international teaching assistants. PREREQ: ENL 207. R

ENL 615 Enhancing Listening, Speaking and Presentation Skills in English 0 S  
Develops oral communication and pronunciation for academic and non-academic settings. The work includes activities to enhance listening, speaking, and presentation skills regarding cultural and field-specific topics, while developing effective teamwork strategies.

ENL 620 Advanced Oral Communication in Training 0

Continuing course in language, culture, and teaching strategies needed for effective communication in academic and social situations. For international teaching assistants.

PREREQ: ENL 207 OR ENL 610.

## French And Francophone Studies

FRE 600 Selected Topics 1-3 Y

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

FRE 605 French Culture in Age of Louis XIV 3 O

Double Numbered with: FRE 405  
Study of French literature, aesthetics and culture of absolutism. Conducted in French. Additional work required of graduate students.

FRE 607 French Libertine Fictions 3 E

Double Numbered with: FRE 407  
Analysis of seventeenth- and eighteenth-century French libertine texts and their relation to philosophy, art, religion, and society. Conducted in French. Additional work required of graduate students.

FRE 609 French Culture and Revolution 3 O

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 3 E

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 3 E

Crosslisted with: WGS 612; Double Numbered with: FRE 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.

FRE 617 "Impressions

d'Afrique": Caribbean Gazes 3 O

Double Numbered with: FRE 417

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 619 Sembene Ousmane and the African Cinema 3 E

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.

FRE 620 Language Training in Preparation for Research Using French 3

Language training to prepare students to conduct research in areas that require knowledge of French. R3, 12 credits maximum

FRE 621 Francophone African Criticism 3 E

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 3 Y

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 3 Y

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.

## Forensic Science

FSC 606 Advanced Forensic Science 3 S

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 3 Y

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 3 Y

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 3 Y

Application of the ISO standard for accredited forensic laboratories. Ethical 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 3 Y

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 3 Y

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 3 Y  
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 3 S  
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.  
R

FSC 644 Forensic Chemical Analysis 4 Y  
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 3 Y  
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 3 Y  
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 3 Y  
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 3 IR  
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 661 Firearms and Impression Evidence 3 Y  
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 3 O  
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 3 Y  
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 0 Y  
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 667 Forensic Photography 3 Y  
Double Numbered with: FSC 467  
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 3 Y  
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 671 Firearms and Impressions Evidence II 3 SS  
Modeled after an internationally recognized firearms examiner training program. Students operate comparison microscopes, perform firearms comparisons, receive operability/armorer's training, and view firearms manufacturing processes to understand the forensic identification of fired ammunition components.  
PREREQ: FSC 661.

## Geography

GEO 500 Topics in Geography 1-3 Y  
In-depth studies of selected topics. R

GEO 510 Research on North America 1-3 IR  
Reading and special work R

GEO 520 Research on Latin America 1-3 IR  
Crosslisted with: LAS 520  
Reading and special work R

GEO 530 Research on Africa 1-3 IR  
Reading and special work. R

- GEO 537 Environmental Policy in a Development Context 3 S  
Crosslisted with: LAS 537  
Offered only in Santiago. Examines historical/intellectual/ material processes that transformed nature into natural resources to be exploited; ways global political process has guided global responses to environmental problems; Chilean environmental policy over the last 20 years.
- GEO 538 Research on Europe 1-3 IR  
Reading and special work. R
- GEO 540 Research on Southern and Eastern Asia 1-3 IR  
Reading and special work. R
- GEO 550 Research on Physical Geography 1-3 IR  
Reading and special work. R
- GEO 560 Research: Economic Geography 1-3 IR  
Reading and special work. R
- GEO 561 Global Economic Geography 3 IR  
Globalization, world economic processes, international development, and policy issues; emphasizing geographical perspectives.
- GEO 563 The Urban Condition 3 IR  
Contemporary cities. Economic growth and decline. Social polarization. Construction of the built environment. Case studies from around the world.
- GEO 564 Urban Historical Geography 3 O  
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 570 Research on Cultural Geography 1-3 IR  
Reading and special work. R
- GEO 572 Landscape Interpretation in Cultural Geography 3 SI  
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 3 O  
In-depth reading of Marx's Capital to understand: (a) the relationship between political economy and the geographical landscape; (b) the formative role of "Capital" in contemporary geographic theory.
- GEO 576 Gender, Place, and Space 3 IR  
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 1-12 IR  
Reading and special work. R
- GEO 583 Environmental Geographical Information Science 3 Y  
Data types, collection techniques, and processing strategies in natural resource survey. Monitoring and environmental sciences. Basic concepts of GIS data structures and algorithms. Data quality issues. User requirements, management aspects, and implementation experience.  
PREREQ: GEO 383 OR 683.
- GEO 595 Geography and the Internet 3 Y  
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.
- GEO 600 Selected Topics 1-3 Y  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R
- GEO 602 Research Design in Geography 3 Y  
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 3 Y  
Historical survey of development of Geography. Emphasis on 20th century: regionalism, positivism, humanism, Marxism, feminism, post-structuralism/post-colonialism
- GEO 606 Development and Sustainability 3 Y  
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 1-3 S  
Topics to be selected in conference with advisor for individual program of study and research.
- GEO 655 Biogeography 3 E  
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 1-6 S  
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. R
- GEO 672 Geopolitics in Theory and Practice 3 IR  
Review of geopolitical theories, their historical origins, and influence on the practice of statecraft and foreign policy; focus on contemporary U.S.-global relations, especially in the European context. Critical approach to applied geopolitical thinking.
- GEO 681 Map Design 3 Y  
Principles of cartographic design. Expository cartography for geographic research. Projections, symbolization, generalization, and use of electronic publishing technology.
- GEO 682 Remote Sensing for Environmental Applications and Research 3 Y  
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 4 S**

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 686 Advanced Quantitative Geographic Analysis 3 E**

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 3 E**

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 3**

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 705 Theories of Development 3 E**

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 3 Y**

Research seminar on contemporary problems in human and regional geography, emphasizing development and socio-economic issues. R

**GEO 730 Political Economy of Nature 3 O**

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 3 Y**

Advanced work in climatology, land forms, and other aspects of physical geography. R

**GEO 754 Seminar in Environmental History 3**

Origins of field, key debates, research methods relating to the historical geography of humans and the environment.

**GEO 755 Seminar in Political Ecology 3 IR**

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 3**

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 764 Gender and Globalization 3**

Crosslisted with: ANT 764, WGS 764

The impact of the increasing hypermobility of capital and culture flows across borders on gender relations.

**GEO 772 Seminar: Cultural Geography 3 O**

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. R

**GEO 773 Seminar in Economic Geography 3**

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.

**GEO 774 Seminar: Historical Geography 3 Y**

Research seminar on current historiographic issues and archival methodologies in historical geography. R

**GEO 781 Seminar: Cartography 3 Y**

Research seminar devoted to topics of current interest in geospatial technology, cartographic communication, and the history of cartography in the twentieth-century.

**GEO 815 Seminar in Urban Geography 3 Y**

Research seminar on theoretical and empirical issues in urban geography.

**GEO 870 Seminar on Population Geography 3 SI**

Specialized research topics dealing with the application of demographic measurements to geographic problems. R

**GEO 876 Feminist Geography 3 O**

Crosslisted with: WGS 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.

**GEO 970 Experience Credit 1-6 S**

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. Permission, in advance, of assigned instructor, department chair, or dean. R

**GEO 997 Master's Thesis 1-6 S R**

**GEO 999 Doctoral Dissertation 1-15 S R**

## German

**GER 580 International Course 1-12 IR**

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. R

**GER 620 Language Training in Preparation for Research Using German 3**

Language training to prepare students to conduct research in areas that require knowledge of German. R3, 12 credits maximum

## Greek

**GRE 500 Greek Prose Authors 1-3 SI**

Readings from selected Greek prose authors. R

GRE 620 Language Training in Preparation for Research Using Greek 3  
Language training to prepare students to conduct research in areas that require knowledge of Greek. R3, 12 credits maximum

## Hebrew

HEB 620 Language Training in Preparation for Research Using Hebrew 3  
Language training to prepare students to conduct research in areas that require knowledge of Hebrew. R3, 12 credits maximum

## Hindi

HIN 620 Language Training in Preparation for Research Using Hindi 3 S  
Crosslisted with: SAS 621  
Language instruction to prepare students to conduct research in areas that require knowledge of Hindi. Permission of instructor. R4, 12 credits maximum

## History Of Art

HOA 500 Selected Topics 1-3 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. R

HOA 510 Italian Medieval Architecture and Urbanism 3 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 3 IR  
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 3 IR  
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 3-4 IR  
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 3 IR  
This course examines the production of drawings and prints, mainly in Flanders (modern-day Belgium) and the Netherlands during what is known as the early modern period: 1400-1700.

HOA 540 17th Century Dutch Painting 3-4 IR  
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 Art and Ideas in the 17th Century 3-4 IR  
Crosslisted with: HOM 541  
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 3-4 Y  
Selected period, major figure(s) or monument(s) in painting, sculpture, or architecture.  
PREREQ: HOA 105 AND 106. R3, 16 credits maximum

HOA 560 Arts and Ideas in the Nineteenth Century 3-4 IR  
Crosslisted with: HOM 560  
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 3 S  
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 3-4 IR  
Crosslisted with: HOM 575  
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 3-4 O  
Critical exploration of an important American movement, theme, period, or artist. Emphasizing discussion and recent scholarship. Topic announced each semester.  
PREREQ: HOA 106 OR 276 OR ANY HOA 300 LEVEL.

HOA 577 Introduction to Preservation 3 Y  
Crosslisted with: ARC 566  
Problems and methods in implementing continued use for quality segments of the humanly built environment.  
PREREQ: ARC 134 OR CAS 134.

HOA 600 Selected Topics in Fine Arts 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. \* R

HOA 620 Seminar: Renaissance Art 3-6 Y  
European art of the 15th and 16th centuries. Topic areas determined each semester. R

HOA 621 Seminar in Florentine Art 3-6 Y  
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 3-6 Y  
Preparation for study and research in Florence, Italy. Required of Florence Program participants; open to other students by permission. R3, 12 credits maximum

HOA 635 Seminar in Arts and Ideas 3-6 IR

Selected topics in the arts and their relation to relevant societies. Topics determined each semester. R3, 12 credits maximum

HOA 640 Seminar on Women in Art 3-4 IR

Crosslisted with: WGS 649

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 3-6 Y

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 4 IR

Variable topics relating to art produced in the Dutch Republic and/or Flanders during the 17th century. R2, 12 credits maximum

HOA 651 Seminar/Iconography 3-6 IR

Selected topics in iconographical problems to be determined each semester. R3, 12 credits maximum

HOA 652 Vermeer and Dutch Genre Painting 3 IR

This course examines the art of Johannes Vermeer in relation to that of his contemporaries.

HOA 655 Proseminar in Graduate Research Methods and Scholarly Writing 3 Y

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 3-4 Y

Leading trends in art criticism from the 16th to the early 21st century.

HOA 657 Contemporary Art Criticism 3-4 IR

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 1-6 IR

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. R

HOA 676 Seminar in American Art 3-6 IR

A specified topic is announced each time the course is offered. R

HOA 680 International Course 1-12

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. R

HOA 690 Independent Study 1-6 SI

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. R

HOA 720 Seminar Medieval Art 3-6 IR

In depth exploration of a problem relating to medieval art and/or architecture. Topic determined each semester. R

HOA 740 Seminar/Baroque Art 3-6 IR

Selected topics in the arts of the 17th century. Topics determined each semester. R

HOA 756 Seminar in Modern Art 3-6 IR

Selected topics in the arts of the 20th century. Topics determined each semester. R

HOA 757 Art History Symposium Project 3 Y

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.

HOA 758 Selected Readings in Arts & Ideas 1-6 IR

Selected readings on the arts and their relationship to their times. Subject areas and readings determined each semester.

## History Of Music

HOM 500 Selected Topics 1-3 IR

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

HOM 512 World Music and Film 3 IR

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 541 Art and Ideas in the 17th Century 3-4 IR

Crosslisted with: HOA 541

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.

HOM 560 Arts and Ideas in the Nineteenth Century 3-4 IR

Crosslisted with: HOA 560

Music and the visual arts in 19th-century European culture.

HOM 561 Music and Shakespeare 3-4 IR

Crosslisted with: DRA 561

A discussion-based course investigating the place of music in Shakespeare's plays. Also considers the role of music in early modern English culture as well as later musical adaptations of Shakespeare.

HOM 562 Bach and Handel 3 IR

Explores the careers and compositional output of Bach and Handel. Considers issues of genre, style, theology and religion, nationhood, and patronage.

PREREQ: ANY HOM 100-699 LEVEL OR ANY MHL 100-699 LEVEL.

HOM 563 The Operas of Wagner 3 O

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 3 IR  
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. R1, 6 credits maximum

HOM 571 Popular Music Studies 3 IR  
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 3 IR  
The American art song, emphasizing the 20th-century composers. Musical style of works, placed in their social and cultural contexts.

PREREQ: MTC 146.

HOM 575 Arts and Ideas in Contemporary Culture 3-4 IR  
Crosslisted with: HOA 575

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.

HOM 600 Selected Topics 1-3 SI  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

HOM 680 International Course 1-12 IR  
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. R

## History

HST 500 Selected Topics 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

HST 510 Studies in African American History 3 IR  
Crosslisted with: AAS 510  
Particular periods or aspects of African American history. R

HST 600 Selected Topics 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

HST 615 Graduate Preparation 3 S  
Sections offered corresponding to the major areas of history so graduate students may prepare for more advanced graduate study. R

HST 622 Empire 3 SI  
Seminar on classic texts about empire from Thucydides to The Federalist. Studied from 432 B.C. to the present.

HST 625 The European Union 3 IR  
Crosslisted with: SOS 625  
Interdisciplinary introduction to history, politics, and economics of the European community.

HST 634 Underground Railroad 3 SI  
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 3 SI  
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 3 IR  
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 3 IR  
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 3 Y  
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 3 IR  
Race and law in American history, 1600-1960, the historical experience of African-Americans, the indigenous peoples, and Asian-Americans.

HST 690 Independent Study 1-6  
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. R

HST 693 Oral History Workshop 3 IR  
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 3 Y  
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 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

HST 715 Readings and Research in American History 3 S  
R

HST 725 Readings and Research in Latin American History 3 SI  
Secondary readings in Latin American history. R

HST 735 Readings and Research in European History 3 S  
R

HST 738 American Legal History: Modern Public Law 3 IR  
A history of American constitutional law from reconstruction to c. 1960.

HST 755 Readings and Research in Eastern European History 3 SI  
Secondary literature in Eastern European history.

HST 765 Readings and Research in African History 3 S  
Crosslisted with: AAS 765

HST 775 Readings and Research in South Asian History 3 S  
Crosslisted with: SAS 775  
Graduate seminar introducing main debates in the historiography of late medieval and modern South Asia.

HST 800 Selected Topics 1-3  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

HST 801 Historiography 3 Y

HST 802 Modes of Analysis in History 3 IR  
The colloquium will discuss a large variety of articles and monographs in European and American history.

HST 803 Theories and Philosophies of History 3 IR  
History of historical thought and practice in the development of modern historical method.

HST 804 First-Year Graduate Research Seminar 3 Y  
Seminar geared to particular research interests of first-year students.

HST 805 Seminar in American History 3 S

HST 806 Seminar in European History 3 Y

HST 950 Documentary Film and History Program Paper 3  
Alternative to TRF 650 for Documentary Film and History students. Substantial research paper with accompanying documentary treatment.

HST 990 Independent Study 1-6  
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. R

HST 996 Graduate Readings 3 S  
To be used for field exam study. One year of coursework in the Ph.D. program is required. R1, 6 credits maximum

HST 997 Masters Thesis 1-6 S  
R

HST 999 Doctoral Dissertation 1-15 S  
R

## Humanities

HUM 501 Humanism and the Arts in Renaissance Italy 6 SS  
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 3  
Language training to prepare students to conduct research in areas that require knowledge of Italian. R3, 12 credits maximum

ITA 670 Teaching Experience 1 IR  
For qualified seniors and graduate students. Supervised practical experience in teaching beginning and/or intermediate oral Italian. R

## Japanese

JPS 620 Language Training in Preparation for Research Using Japanese 3  
Language training to prepare students to conduct research in areas that require knowledge of Japanese. R3, 12 credits maximum

## Judaic Studies Program

JSP 600 Selected Topics 1-3  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

JSP 676 Religion and Judaic Literature 3 IR  
Crosslisted with: REL 676  
Readings in Judaic literature, with emphasis on allegorical, hasidic, neohasidic, and anti-hasidic writing by Nahman of Bratslav, Joseph Perl, I.L. Peretz, Franz Kafka, Isaac Babel, and S. Y. Agnon.

JSP 690 Independent Study 1-6 IR  
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. R

## World Language Prog: Korean

KOR 620 Language Training in Preparation for Research in Korean 3 S  
Language instruction to prepare students to conduct research in areas that require knowledge of Korean. Permission of instructor. R3, 12 credits maximum

## Latino-Latin American Studies

LAS 520 Research on Latin America 1-3 S  
Crosslisted with: GEO 520  
Reading and special work R

LAS 523 Globalization and its Discontents in Latin America 3 Y  
Crosslisted with: ANT 523  
Effects of and reactions to globalization and neo-liberal policies in rural communities, including industrialization, rural-urban and international migration and ethnic movements.

LAS 537 Environmental Policy in a Development Context 3 S  
Crosslisted with: GEO 537  
Offered only in Santiago. Examines historical/intellectual/ material processes that transformed nature into natural resources to be exploited; ways global political process has guided global responses to environmental problems; Chilean environmental policy over the last 20 years.

## Latin

LAT 620 Language Training in Preparation for Research Using Latin 3  
Language training to prepare students to conduct research in areas that require knowledge of Latin. R3, 12 credits maximum

## Linguistics

LIN 571 Topics in Sociolinguistics 3 SI  
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. R1, 6 credits maximum

LIN 580 International Course 1-12 SI  
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. R

LIN 591 Second Language Acquisition 3 Y  
Survey of research on second-language acquisition; biological, cognitive, effective, and social factors.

PREREQ: LIN 301 OR 601.

LIN 600 Selected Topics 1-3

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

LIN 601 Introductory Linguistic Analysis 3 Y

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 3 Y

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 3 Y

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 3 Y

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 3 Y

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 621/421.

LIN 626 Structure of Standard Arabic 3 IR  
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 3 Y

Double Numbered with: LIN 431

Introduction to analysis of sound systems of natural languages. Extra work required of graduate students.

PREREQ: LIN 601/301.

LIN 641 Syntactic Analysis 3 Y

Double Numbered with: LIN 441

Introduction to analysis of morphological and syntactic systems of natural languages. Extra work required of graduate students.

PREREQ: LIN 601/301.

LIN 651 Morphological Analysis 3

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 301/601.

LIN 661 Introduction to Historical Linguistics 3 Y

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 601/301.

LIN 671 Dimension of Bilingualism and Multiculturalism 3 Y

Double Numbered with: LIN 471

Foundations, theory, and practice of bilingual/bicultural education. Critical concepts of linguistic, sociolinguistic, psycholinguistic issues and methods as applied to bilingualism/multiculturalism. Additional work required of graduate students.

LIN 672 Language, Culture, and Society 3 Y

Crosslisted with: ANT 672, WGS 672; Double Numbered with: LIN 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.

LIN 673 Language Variation and Change 3 IR

Double Numbered with: LIN 473

An exploration of the theories, qualitative and quantitative methods, and the ideological, social, cultural, linguistic and structural factors involved in the study of language variation and change. Additional work required of graduate students.

LIN 675 Forensic Linguistics 3 E

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 3 Y

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 3 Y

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 441/641.

LIN 735 Advanced Phonology 3 IR

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 3 O  
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 1-6 SI

### Literature In English Translation

LIT 510 Studies in Greek and Roman Literature in Translation 3 SI  
Selected topics in Greek or Roman literature studied in English. No knowledge of Greek or Latin required. R

LIT 521 Mythology 3 IR  
Greek, Roman, and Norse myths. Knowledge of foreign languages not required.

### Mathematics

MAT 511 Advanced Calculus 3 Y  
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 3 Y  
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 3 Y  
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 511 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES.

MAT 517 Partial Differential Equations and Fourier Series 3 Y  
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 3 Y  
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 3 S  
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 3 Y  
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 3 Y  
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 3 Y  
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 3 SI  
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 3 Y  
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 3 IR  
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 3 Y  
Crosslisted with: CIS 545  
Permutations, combinations, recurrence relations, generating functions, inclusion-exclusion and applications, introductory graph theory.  
PREREQ: MAT 375 OR CIS 275 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES.

MAT 551 Fundamental Concepts of Geometry 3 IR  
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 3 IR  
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 511 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES.

MAT 562 Elementary Topology 3 IR  
Metrics and metric spaces, topologies and topological spaces, separation properties, compactness, connectedness, and continuity.  
PREREQ: (MAT 375 OR CIS 275) AND MAT 512) OR GRADUATE STANDING IN MATHEMATICAL SCIENCES.

MAT 581 Numerical Methods with Programming 3 Y  
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 3 IR  
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 3 IR  
Topic Chosen by the instructor. Permission of department.

MAT 601 Fundamentals of Analysis I 3 Y  
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 3 Y  
Riemann-Stieltjes integration, functional sequences and series, functions of several variables.  
PREREQ: (MAT 601 AND 631) OR GRADUATE STANDING IN MATHEMATICAL SCIENCES.

MAT 631 Introduction to Algebra I 3 Y  
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 534) OR GRADUATE STANDING IN MATHEMATICAL SCIENCES.

MAT 632 Introduction to Algebra II 3 Y  
Continuation of MAT 631.  
PREREQ: MAT 631 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES.

MAT 645 Graph Theory 3 Y  
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 3 IR  
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 3 Y  
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 3 Y  
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 3 IR  
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 3 IR  
Point estimation by least squares, regression, curve fitting, testing a linear hypothesis, analysis of variance, simple experimental designs.  
PREREQ: (MAT 525 AND 531) OR GRADUATE STANDING IN MATHEMATICAL SCIENCES.

MAT 661 Introduction to Point Set Topology 3 Y  
Topological spaces, continuous mappings and homeomorphisms, space-filling curves, metric spaces, Tietze extension theorem, separation axioms, compact spaces. Arcwise connectedness, connectedness, product and quotient spaces, and the fundamental group.  
PREREQ: MAT 601 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES.

MAT 682 Numerical Linear Algebra 3 O  
Solution of linear equations. Norms and conditioning. Calculation of eigenvalues and eigenvectors. Least squares approximation and orthogonal functions. Error analysis and writing computer programs.  
PREREQ: MAT 511 AND MAT 531.

MAT 683 Methods of Numerical Analysis I 3 Y  
Numerical methods of interpolation, approximation, integration, and differentiation, solutions of nonlinear equations, ordinary and partial differential equations. Error analysis and writing computer programs.  
PREREQ: (MAT 511 AND 531) OR GRADUATE STANDING IN MATHEMATICAL SCIENCES.

MAT 684 Methods of Numerical Analysis 3 Y

Numerical methods of interpolation, approximation, integration, and differentiation, solutions of nonlinear equations, ordinary and partial differential equations. Error analysis and writing computer programs.

PREREQ: MAT 683 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES.

MAT 687 Introduction to Applied Mathematics 3 IR

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.

MAT 690 Independent Study 1-6 SI

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. R

MAT 701 Real Variables I 3 Y

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 3 Y

Norms, seminorms, and inner products on linear spaces. Standard theorems on linear functionals and operations. Dual spaces and weak topologies, classical spaces and their duals. Applications.

PREREQ: (MAT 631 AND 661 AND 701) OR GRADUATE STANDING IN MATHEMATICAL SCIENCES.

MAT 704 Differential Equations 3 IR

Existence theorems for ordinary differential equations, linear differential equations and systems, Euler variational equations, typical Cauchy and boundary-value problems for partial differential equations.

PREREQ: (MAT 632 AND 701) OR GRADUATE STANDING IN MATHEMATICAL SCIENCES.

MAT 705 Calculus on Manifolds 3 IR

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 3 Y

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 3 Y

Measure and integration. Random variables, their distributions and transforms. Modes of convergence. Classical limit laws. Markov chains.

PREREQ: (MAT 602 AND MAT 701) OR GRADUATE STANDING IN MATHEMATICAL SCIENCES.

MAT 722 Probability II 3 Y

Conditional expectation. Martingales. Brownian motion. Ergodic theorem. Random walks.

PREREQ: MAT 721 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES.

MAT 731 Rings and Modules 3 IR

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 632) OR GRADUATE STANDING IN MATHEMATICAL SCIENCES.

MAT 732 Homological Algebra 3 Y

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 3 IR

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 3 IR

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 3 IR

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 3 IR

Crosslisted with: STT 750

Experience in working with real data taken from current projects in the statistical laboratory and from published papers. R

MAT 752 Statistical Ranking, Selection, and Multiple Comparisons 3 IR

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 3 IR

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 3 IR  
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 3 IR  
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 3 Y  
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.

MAT 762 Algebraic Topology 3 IR  
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 3 IR  
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 3 IR  
Numerical methods of linear algebra. Numerical treatment of large linear systems. Matrix inversions and eigenvalue analysis. Boundary and eigenvalue problems for ordinary and partial differential equations. Laboratory.  
PREREQ: (MAT 632 AND MAT 684 AND MAT 704) OR GRADUATE STANDING IN MATHEMATICAL SCIENCES.

MAT 782 Advanced Numerical Methods II 3 IR  
Continuation of MAT 781.  
PREREQ: MAT 781 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES.

MAT 800 Topics In Analysis 3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

MAT 802 Real Variables II 3 IR  
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 3 IR  
Abstract integration, Radon-Nikodym theorem. Representation of set functions by integrals. Ergodic theorems. Duality. Weak topologies, convex sets, and extreme points. Elements of spectral theory.  
PREREQ: MAT 702 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES.

MAT 805 Partial Differential Equations 3 IR  
First-order linear equations. Hamilton, Jacobi, and Lie transformations. Classifications of second-order linear equations. Boundary- and initial-value problems. Sturm-Liouville problems and connections with integral equations. Nonlinear equations.

MAT 807 Integral Equations 3 IR  
Classification and examples of regular integral equations. Fredholm's theorems, Hilbert-Schmidt theory. Applications to differential equations. Nonlinear integral equations. Connections with general functional analysis.  
PREREQ: MAT 804 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES.

MAT 812 Functions of a Complex Variable 3 IR  
Continuation of MAT 712  
PREREQ: MAT 602 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES.

MAT 820 Topics in Probability 3 IR  
R

MAT 830 Topics in Modern Algebra 3 IR  
R

MAT 850 Topics in Statistics 3 IR  
Contents vary from semester to semester. May be repeated for credit with permission.

MAT 860 Topics in Topology 3 IR  
R

MAT 880 Topics in Numerical Analysis and Applied Mathematics 3 IR  
R

MAT 890 Advanced Seminar 1-6 IR  
For advanced graduate students and staff members; credit determined by extent of participation in the seminar. R

MAT 999 Dissertation 0-15 S  
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. R14, 30 credits maximum

### Middle Eastern Studies

MES 626 Beyond the Veil: Gender Politics in Islam 3 Y  
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 3

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 3 IR

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 3 IR

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 3 Y

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 1-6 R

MES 707 Culture in World Affairs 3

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.

### Native American Studies

NAT 600 Selected Topics 1-3 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. R

NAT 645 Public Policy and Archaeology 3 IR

Crosslisted with: ANT 645; 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 656 Representations of Indigenous Peoples in Popular Culture 3 IR

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 3 IR

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 3 IR

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.

### Philosophy

PHI 500 Selected Topics 1-3 IR

Study of a significant philosopher or philosophical movement. R

PHI 510 Topics in Ancient Philosophy 3 Y

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. R

PHI 533 Philosophy of Mind 3 IR

Classical and modern theories on the nature of the human mind.

PREREQ: PHI107 OR PHI109 OR ANY 2 PHI.

PHI 550 Selected Topics in Philosophy 1-3 IR

Study of a significant philosophical problem. R

PHI 551 Mathematical Logic 3 IR

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 3 IR

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 3 IR

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 3 IR

Concept and phenomenon of language. Logical, epistemological, and metaphysical ramifications of natural language and speech. PREREQ: PHI 251.

PHI 573 Philosophy of Physical Science 3 IR

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 3 O

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 583 Metaphysics 3 IR

Introduction to metaphysical inquiry. PREREQ: ANY PHI OR JUNIOR OR SENIOR STANDING.

PHI 593 Ethics and the Health Professions 3 IR

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 3

Crosslisted with: REL 552

Use of ethical theory in thinking about case problems in health care. Moral dilemmas: use of reproductive technologies, abortion, surrogate motherhood, research with humans, refusal and withdrawal of treatment, physician-assisted suicide.

PHI 600 Selected Topics 1-6 IR

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

PHI 615 Kant's Critique of Pure Reason 3 IR

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 3 Y

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 3 IR  
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 3 IR

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 640 Continental Philosophy of Religion 3 IR

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 onto-theology; phenomenology, deconstruction and theology; return of religion. R1, 6 credits maximum

PHI 650 Selected Topics in Philosophy 3 IR

R

PHI 651 Logic and Language 3 Y

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 3 IR

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. R

PHI 673 The Structure of Science 3 IR

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 3 IR

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 3 S

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 3 IR

Chief aesthetic theories from Plato to the present. Application to literature and the fine arts.

PHI 696 Selected Problems in Aesthetics 3 IR

Philosophical issues that arise within the various arts and literature. PREREQ: PHI 695.

PHI 700 Research in History of Philosophy 3 IR

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

PHI 710 Seminar in Ancient and Medieval Philosophy 3 IR

R

PHI 730 Seminar in Modern Philosophy 3 IR

R

PHI 740 Seminar in Contemporary Philosophy 3 IR

R

PHI 750 Seminar in Current Philosophical Problems 3 IR

R

PHI 840 Seminar in Metaphysics 3 IR

R

PHI 850 Seminar in Theory of Knowledge 3 IR

R

PHI 860 Seminar in Ethics and Value Theory 3 IR

R

PHI 870 Seminar in Aesthetics 3 IR

R

PHI 880 Seminar in Social and Political Philosophy 3 IR

R

PHI 997 Masters Thesis 1-15 S

R

PHI 999 Dissertation 1-15 S

R

### Physics

PHY 523 Advanced Mechanics 3 Y

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 3 Y

Laws of thermodynamics, temperature, work, heat. Thermodynamic potentials and methods. Application to special systems, low-temperature physics. Classical statistical mechanics. Quantum statistics. Connections between thermodynamics and statistical mechanics. PREREQ: PHY 361.

PHY 567 Introduction to Quantum Mechanics I 4 Y

Problems with classical physics; one dimensional Schrodinger equation, concepts and illustrative problems; N particle systems including separation of center of mass, identical particles, and Pauli principle; Schrodinger equation in three dimensions. PREREQ: PHY 361 AND (PHY 424 OR ELE 324).

PHY 568 Introduction to Quantum Mechanics II 3 Y

Angular momentum including raising/ lowering operators and spherical harmonics; hydrogen atom; spin and addition of angular momentum; time independent perturbation theory; structure of and radiation from atoms; scattering; and elementary particles. PREREQ: PHY 567.

PHY 576 Introduction to Solid-State Physics 3 Y

Crosslisted with: ELE 642  
Elementary aspects of physics of solids; crystal lattices and diffraction, phonons and thermal properties in crystals, elementary band theory, and semi-conductor physics. PREREQ: PHY 567.

PHY 580 International Course 1-12  
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. R

PHY 581 Methods of Theoretical Physics I 3 Y

Calculus of variations. Fourier series and integrals. Matrices. Linear vector spaces. Orthogonal polynomials. Sturm-Liouville equations. Singular points of differential equations. Special functions. Distributions. PREREQ: MAT 511.

PHY 607 Computational Physics 3 E

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 3 Y

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 3 Y

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 3 Y

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 3 Y

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 641 Advanced Electromagnetic Theory I 3 Y

Review of Maxwell's equations, Relativity and Covariant electrodynamics, conservation laws, Green function approach. Radiation from point and extended sources. Radiation reaction. PREREQ: PHY 425 OR ELE 325.

PHY 642 Advanced Electromagnetic Theory II 3 Y

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 3 Y

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 3 Y

Origins of quantum mechanics. Schrödinger and Heisenberg formulation. Problems in one, two, and three dimensions. Abstract formalism. Angular momentum and spin. Scattering theory. Symmetry properties. Perturbation methods. Identical particles. Applications to atomic and nuclear systems. PREREQ: PHY 567.

PHY 662 Quantum Mechanics II 3 Y

Origins of quantum mechanics. Schrödinger and Heisenberg formulation. Problems in one, two, and three dimensions. Abstract formalism. Angular momentum and spin. Scattering theory. Symmetry properties. Perturbation methods. Identical particles. Applications to atomic and nuclear systems. PREREQ: PHY 567 AND 661.

PHY 663 Problem Solving in Graduate Physics 3 Y

Problem solving skills and topics not covered in courses the previous year. PREREQ: PHY 662.

PHY 676 Condensed Matter Physics 3 E  
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 1-3 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. R

PHY 731 Thermodynamics and Statistical Mechanics 3 Y

First and second laws of thermodynamics, Boltzman's integrodifferential equation, Gibb's statistical mechanics, petit and grand ensembles, quantum statistics.

PREREQ: PHY 531.

PHY 750 Topics in Advanced Condensed Matter/Physics Theory 3 IR

Electron band theory. Electron-phonon interaction. Superconductivity. Impurities in crystals. Many-body Green's function. Disorder and localization. Amorphous materials.

PREREQ: PHY 731 AND PHY 763. R

PHY 765 Models of Condensed Matter 3 IR

Theoretical models for phases of condensed matter. Superconductivity, 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) AND PHY 763.

PHY 771 High Energy Particle Physics I 3 E

Classification of subatomic particles. Passage of particles through matter. Production, selection, and detection of high-energy particles. Invariance principles and dynamic laws of strong, electromagnetic, and weak interactions: their experimental discovery and confirmation. Review of outstanding problems.

PREREQ: PHY 662.

PHY 772 High Energy Particle Physics II 3 E

Classification of subatomic particles. Passage of particles through matter. Production, selection, and detection of high-energy particles. Invariance principles and dynamic laws of strong, electromagnetic, and weak interactions: their experimental discovery and confirmation. Review of outstanding problems.

PREREQ: PHY 662.

PHY 775 High Energy Particle Theory I 3 O

Detailed treatment of modern unified weak-electromagnetic and strong theories of matter. Methods of treating the underlying gauge theories. Applications to elementary particle processes.

PREREQ: PHY 763.

PHY 776 High Energy Particle Theory II 3 O

Detailed treatment of modern unified weak-electromagnetic and strong theories of matter. Methods of treating the underlying gauge theories. Applications to elementary particle processes.

PREREQ: PHY 763.

PHY 785 Theory of Relativity I 3 O

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 3 O

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 3 SI

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 3 Y

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 3 Y

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. R1, 3 credits maximum

PHY 885 Quantum Field Theory I 3 O

Physical foundations of field quantization. Free fields. Fock space. Lagrangian and functional formulations. Interacting fields: quantum electrodynamics, weak and strong interactions. Renormalization. Path integrals. Symmetry and invariance. Nonabelian gauges.

PREREQ: PHY 763.

PHY 886 Quantum Field Theory II 3 O

Physical foundations of field quantization. Free fields. Fock space. Lagrangian and functional formulations. Interacting fields: quantum electrodynamics, weak and strong interactions. Renormalization. Path integrals. Symmetry and invariance. Nonabelian gauges.

PREREQ: PHY 763.

PHY 890 Minor Problems In Physics 1-3 S

Independent study and experimentation in some subject in physics. R

PHY 990 Independent Study 1-6 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. R

PHY 997 Masters Thesis 1-6 Y

R

PHY 999 Dissertation 0-15 Y

R

## Polish

POL 620 Language Training in Preparation for Research Using Polish 3 S

Language training to prepare students to conduct research in areas that require knowledge of Polish. R3, 12 credits maximum

## Portuguese

POR 620 Language Training in Preparation for Research Using Portuguese 3 S

Language training to prepare students to conduct research in areas that require knowledge of Portuguese. R3, 12 credits maximum

## Persian

PRS 620 Language Training in Preparation for Research Using Persian 3 S

Language instruction to prepare students to conduct research in areas that require knowledge of Persian. Permission of instructor. R3, 12 credits maximum

## Political Science

PSC 500 Selected Topics 1-3

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

- PSC 600 Selected Topics 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R
- PSC 602 Public Policy Analysis: Theory and Practice 3 Y  
Crosslisted with: SOS 604  
Overview of policy literature, including political economy and practical politics. Formal analyses and case studies.
- PSC 611 American Parties and Elections 3 IR  
Political parties, interest groups, and electoral behavior in American political context.
- PSC 612 Development of the American Administrative State 3 IR  
Origins, development, and character of the American administrative state from 1877 to the present. Welfare state, regulatory state, and the civil state.
- PSC 621 Theories of American Politics 3 IR  
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 3 Y  
Contemporary theories of international relations. Approaches to understanding and explaining international behavior at single-nation, multiple-nation, and systematic levels.
- PSC 655 Global Information Technology Policy 3 Y  
Crosslisted with: PAI 655  
Policy implications of the increasingly important interaction between information technology development and the governance process.
- PSC 670 Experience Credit 1-6 S  
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. R
- PSC 671 Comparative Political Analysis 3 Y  
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 3 E  
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 3 IR  
Crosslisted with: MES 682  
Orientalist, Marxian, 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 3 Y  
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 1-6 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. R
- PSC 691 Logic of Political Inquiry 3 Y  
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 3 Y  
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 3 Y  
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 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R
- PSC 704 Comparative Political Economy 3 Y  
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 3 IR  
Crosslisted with: PAI 718  
Current problems in planning and administering national security policy in the United States.
- PSC 707 National Planning and Capacity to Govern 3 IR  
Crosslisted with: PAI 728  
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.
- PSC 711 American Constitutional Development 3 IR  
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 3 IR  
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 3 IR  
Separate and shared powers of Congress and the Presidency. Consequences for policy making.

**PSC 714 Federalism, State, and Local Politics 3 IR**

Origins and significance of federalism for American politics. Role of states and localities. Sources of conflicts in state-local politics. Nature of state-local political processes. Intergovernmental relations.

**PSC 715 Judicial Politics 3 IR**

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 3 Y**

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 3 SI**

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 3 Y**

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 752 International Law and Organizations 3 IR**

Foundations and application of international law. Institutional and political capability of international organizations. Recent theoretical and methodological development.

**PSC 753 International Political Economy 3 Y**

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 3 IR**

Forms of international conflict and explanations for occurrence and resolution.

**PSC 755 Politics and Governance in the Information Age 3 IR**

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 3 Y**

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 3 IR**

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 3 IR**

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 3 Y**

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 3 Y**

Selected aspects of foreign policy, such as American foreign policy, Soviet foreign policy, and foreign policy analysis. R

**PSC 769 Comparative Parties and Politics 3 IR**

Political parties, interest groups, the electorate, and legislative behavior in a comparative political context.

**PSC 779 Political and Social Change 3 IR**

Effects of long-term changes in societies on political behavior and institutions. Modernization.

**PSC 780 Seminar on Political Systems 3 Y**

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. R

**PSC 781 Politics of the Developing World 3 IR**

The socio-economic, political, and cultural issues shaping people's lives in the more than 140 state-societies that constitute the "Third World."

**PSC 782 Politics of China 3 Y**

Political development, political institutions, and political economy of China and Chinese foreign relations, emphasizing the reform era.

**PSC 783 Comparative Foreign Policy 3 S**

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 3 IR**

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 3 IR**

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 3 IR**

Political institutions and political development of Russia and other post-Soviet and post-communist states, particularly since 1991.

**PSC 787 Democracy and Democratization 3 IR**

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 3 Y**

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 3 Y  
Logic of designing research in political science. Conceptual, theoretical, and empirical analysis. Focus on developing dissertation proposals.

PSC 793 Constructing the World Polity 3 IR  
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 3 IR  
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 795 Antonio Gramsci and the Development of Cultural Marxism 3 SI  
Power, cultural hegemony, and ideological struggle in capitalist societies. Theoretical currents running through Marx, Gramsci, and contemporary interpreters. Includes substantial readings from Gramsci's major theoretical statement, the "Prison Notebooks."

PSC 796 Formal Theories of Choice 3 IR  
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 3 Y  
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 3 SI  
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 1-3 IR  
Seminar R

PSC 810 Selected Topics in Public Administration 3 IR  
Seminar R

PSC 820 Selected Topics in American Politics 3 IR  
Seminar R

PSC 860 Selected Topics in International Relations 3 IR  
Seminar R

PSC 880 Selected Topics in Comparative Politics 3 IR  
Seminar R

PSC 901 Readings and Research on Political Theory and Methodology 1-3 S  
R

PSC 911 Readings and Research on Public Administration and Policy 1-3 S  
Crosslisted with: PAI 930  
R2, 9 credits maximum

PSC 920 Readings and Research on American Politics 1-3 S  
R

PSC 960 Readings and Research on International Relations 1-3 S  
R

PSC 970 Experience Credit 1-6 S  
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing. R

PSC 980 Readings and Research on Comparative Politics 1-3 S  
R

PSC 990 Independent Study 1-6 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. R

PSC 999 Dissertation 1-15 S  
R

## Psychology

PSY 611 Proseminar Methods and Topics in Cognitive Psychology 3 SS  
Discussion of methods, theories, and findings for student selected and faculty-selected topics in cognitive psychology. R3, 12 credits maximum

PSY 612 Advanced Experimental Psychology 3 O  
Current theories, topics, and methods in experimental psychology. Analysis and critique of research that uses experimental methods. Permission from Instructor.

PSY 615 Behavioral Pharmacology 3 SI  
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 621 Contemporary Behavioral Approaches in Health Psychology 3 E  
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 3 O  
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 3 O  
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 3 Y  
Application of experimental and correlational methods to clinical psychology. Experimental design. Regression techniques. Single-subject research. Writing and critiquing research in clinical psychology. Permission from Instructor.

PSY 626 Cognitive Neurochemistry 3 IR  
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 3  
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 3 IR  
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. R

PSY 647 Clinical Assessment I 3 Y  
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 649 Ethical and Professional Issues in Clinical Psychology 3 Y  
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 3 IR  
Application of statistical methods. Exploratory data analysis and graphical display. Statistical indices, distributions, and data reexpression. Uses and limitations of correlation and regression. Foundations of statistical inference. Additional work required of graduate students. Permission of Instructor.

PSY 653 Psychological Measurement 3 SI  
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 3 Y  
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 3 E  
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 3 IR  
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 3 E  
Research and theory. Social communication, group cohesiveness, social norms and roles, leadership, group productivity, and related topics. Permission of Instructor.

PSY 677 Social Cognition 3 O  
Social inference, attribution theory, psychological control, social schemata, attention, person memory and social cognition biases. Permission of Instructor.

PSY 678 Attitude Change 3 E  
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 3 IR  
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 3 Y  
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 3 IR  
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 3 IR  
Statistical procedures, as well as practical issues involved in the conduct of meta-analyses. Permission of Instructor.  
PREREQ: PSY 655.

PSY 693 Advanced Personality 3 IR  
Concepts and research in the development, motivation, and organization of personality. Recent empirical findings.

PSY 696 Neuropsychology 3 IR  
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 3 E  
Discussion, readings, and projects in experimental psychology. Topics vary. Permission of Instructor. R1, 6 credits maximum

PSY 734 Developmental Psychology: Infancy and Childhood 3 IR  
Infant and child behavior. Research methods and strategies, empirical relationships, theories of child development, and theories of behavior. Permission of Instructor.

PSY 736 Developmental Psychology: The Adult Years and Aging 3 O  
Developmental theory relating to the adult years and aging. Developmental trends in such areas as psychomotor function, performance, abilities motivation, personality. Permission of Instructor.

PSY 737 Experimental Psychology: Cognition and Human Aging 3 IR  
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 745 Introduction to Psychotherapy 3 Y

Major approaches to adult psychotherapy and their relationship to personality development and change. Permission of Instructor.

PSY 746 Survey to Psychotherapy Research 3 SI

Seminar on research philosophies, experimental designs, methodological issues, and major findings in psychotherapy research. Permission of Instructor.

PSY 756 Experimental Design and Statistical Methods II 3 Y

Correlational and survey research design. Reliability, bivariate correlation, partial and part correlation, bivariate regression, multiple regression, and logistic regression. Statistical mediation and moderation. Introduction to bootstrapping.  
PREREQ: PSY 655.

PSY 757 Multiple Correlation and Regression 3 IR

Regression versus correlation models. Interpreting regression coefficients, and multiple, partial, and semipartial correlation coefficients. Choosing and cross-validating models. Locating outlying and influential cases. Computer packages and extensive application to behavioral science data.  
PREREQ: PSY 756.

PSY 761 Introductory Seminar in School Psychology 3 O

Scientist-practitioner model: theory, research, legal and ethical issues in databased practice of school psychology. Roles, functions, and goals. Service-delivery approaches within educational and sociocultural contexts. Permission of Instructor.

PSY 762 Cognitive Intellectual Assessment 3 O

Theory and research on intellectual change and standardization of intelligence tests. Experience in administering, scoring, and interpreting recent measures of intelligence and cognitive functioning in practicum component. Measurement, bias, legal and ethical issues in assessment component. Permission of Instructor.

PSY 763 Direct Academic Assessment 3 E

Direct assessment of children's academic performance using curriculum-based measures and systematic observation. Research comparing direct assessment to norm-referenced testing and legal and ethical issues in using direct assessment for classification and intervention. Permission of Instructor.

PSY 764 Socioemotional Assessment 3 E

Research on socioemotional assessment from multiple theoretical perspectives. Experience administering, scoring, and interpreting diverse measures of socioemotional functioning. Measurement, legal, and ethical issues in assessment for classification and intervention. Permission of Instructor.

PSY 765 Principles of Behavior Modification 3 O

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 3 IR

Discussion, readings, and projects in selected topics in social psychology. Permission of instructor. R3, 12 credits maximum

PSY 780 Introduction to Structural Equation Modeling 3 O

Multivariate statistical model-building and applications of structural equation modeling techniques to date in the behavioral and psychological sciences. Path analysis, confirmatory factor analysis, and structural regression models. First offered in Summer 2014  
PREREQ: PSY 756.

PSY 840 Advanced Practicum in Clinical Health Psychology 3 S

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 3 Y

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 3 Y

Theory, technique, and supervised experience in conducting psychotherapy. Supervision and training of novice psychotherapists. Permission of Instructor.

PSY 849 Advanced Practicum in Clinical Psychology 3 IR

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. R1, 6 credits maximum

PSY 851 Clinical Therapy Experience Practicum 0 O

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 3 Y

Experimental design and appropriate statistical tests. Use of the analysis of variance and covariance techniques.

PSY 854 Statistical Analysis in Research Design 3 E

Applications of logic transformation to models for binary responses and design of observational studies. Issues of reliability, research design, and analysis.  
PREREQ: PSY 853.

PSY 857 Multivariate Analysis 3 IR

Statistical techniques dealing with situations involving many variables. Multivariate analysis of variance, discriminant analysis, canonical correlations, and classification procedures.

PSY 860 Topics in Psychology 3 IR

Special topics of current interest. Topics vary from semester to semester. May be taken for credit three times. Permission of Instructor. R2, 9 credits maximum

PSY 861 Consultation Processes 3 E

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 3 E  
Supervised practical experience in consultation process: problem identification and analysis, treatment implementation, and process and outcome evaluation. Databased indirect service delivery consistent with ethical and legal guidelines.

PSY 863 Developmental Psychopathology 3 SI  
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 3 IR  
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 3 O  
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 865.

PSY 870 Internship in School Psychology 0-6 Y  
Supervised internship in school and/or other child/youth agency. Permission of Instructor.  
R

PSY 880 School Psychology Practicum 3 Y  
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. R

PSY 894 History and Systems Psychology 3 IR  
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 3 Y  
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 3 O  
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 3-6 Y  
Permission of Instructor.

PSY 970 Experience Credit 1-6 Y  
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing. Permission of Instructor. R

PSY 990 Independent Study 1-6 Y  
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. R

PSY 996 Internship in Clinical Psychology 0-6 S  
Supervised internship at an accredited clinical psychology internship site. R

PSY 997 Masters Thesis 1-6 S  
Permission of Instructor. R

PSY 999 Dissertation 1-15 S  
Permission of Instructor. R

### Queer Sexuality

QSX 746 Queer Rhetorics 3 E  
Crosslisted with: CCR 746, CRS 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

### Religion

REL 500 Selected Topics 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

REL 551 Ethics and the Health Professions 3 Y  
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 3 Y  
Crosslisted with: PHI 594  
Use of ethical theory in thinking about case problems in health care. Moral dilemmas: use of reproductive technologies, abortion, surrogate motherhood, research with humans, refusal and withdrawal of treatment, physician-assisted suicide.

REL 557 Modern Theology 3 E  
Introduction to major figures and movements in twentieth-century theology. Upper division standing.

REL 595 Religion, Art, and Aesthetics 3 IR  
Intersection between religion, art, and philosophy. Sources culled from Western religious thought and philosophy.

REL 600 Selected Topics 1-3 Y  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

REL 602 Gnosticism 3 IR  
Gnosticism as a structure of religious belief; as sectarian movement within "mainline" traditions of late antiquity (Judaism, Christianity, paganism); as a literary-critical perspective on religious texts and traditions in antiquity and contemporary thinking.

REL 605 Religion and the Body in Late Antiquity 3 IR  
Crosslisted with: WGS 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.

REL 607 Ancient Religious Rhetoric 3 IR  
Rhetoric of ancient Near Eastern and Mediterranean religious texts, including parts of the Bible; role of persuasion in ancient religion and its effects on literature, power, and on conceptions of knowledge and text in antiquity.

REL 611 The Idea of Scripture 3 IR  
The religious, literary, and political factors that affected the development and canonization of Jewish and Christian scriptures and shaped the idea of authoritative scripture in Western religious traditions.

REL 616 The Torah/Pentateuch as a Scripture 3 Y  
Double Numbered with: REL 416  
How the Pentateuch became the Torah, the first Jewish scripture: its origins, rhetorical use, performance in various media, and ritual function as an iconic book. Additional work required of graduate students.

REL 619 Ritual Theory and Religious Practice 3 IR  
Crosslisted with: ANT 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.

REL 621 Teaching World Religions in Theory and Practice 3 IR  
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 3 IR  
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 3 IR  
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 Islams in contemporary local contexts.

REL 626 Beyond the Veil: Gender Politics in Islam 3 Y  
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 3 IR  
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 3 O  
Crosslisted with: ANT 628  
Historical, cultural, and sociological analysis of pan-Islamic festivals and rituals. Local, culturally-specific, unofficial practices in Islam.

REL 640 The Philosophical Foundations of Religion 3 IR  
Philosophic and religious heritage highlighted by Pythagoras, Socrates, Plato, Aristotle, Plotinus, Augustine, and Aquinas. Focus varies from year to year. R

REL 642 Critical Issues in the Study of Native Americans 3 IR  
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 3 IR  
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 3 IR  
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. R1, 6 credits maximum

REL 651 Classics in the Sociology of Religion and Morals 3 IR  
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 3 IR  
Psychoanalysis and its implications for religious ethics.

REL 653 Postmodern Ethics 3 IR  
Selected philosophical and religious perspectives on postmodern ethics. Readings from Rorty, Stout, Kristeva, Wyschogrod, MacIntyre, Nussbaum, and others.

REL 654 Religious Corporealities 3 SI  
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 3 IR  
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 3 E  
The significance of the Other in contemporary religious and philosophical ethics. Readings in Levinas, Lacan, Derrida, Kristeva, Critchley, Caputo.

REL 659 Kierkegaard Seminar 3 Y  
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. R2, 9 credits maximum

REL 660 Continental Philosophy of Religion 3 O  
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. R1, 6 credits maximum

REL 661 Self, Body, Transcendence 3 IR  
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 3 IR  
Texts from Marx and Foucault are read for their implications for Religion scholars.

REL 663 Religion and Revolution 3 IR  
Texts from theology and political theory that examine their mutual terms, themes, and concerns.

REL 665 Religion and Mass Culture 3 IR  
Twentieth-century theories of mass culture are read for their use and implications for religion scholars. [Effective spring 2009]

REL 667 Postmodern Theology 3 O  
Philosophical background of postmodernism and its theological and cultural expressions. Content varies. R

REL 668 Critical Theory in Theology 3 O  
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 3 E  
Contemporary psychoanalytic theories and their implications for interpreting religious phenomena: Melanie Klein, Jacques Lacan, D.W. Winnicott, Erick Erickson, Hans Leowald, Heinz Kohut, Christopher Bollas, and others.

REL 676 Religion and Judaic Literature 3 IR  
Crosslisted with: JSP 676  
Readings in Judaic literature, with emphasis on 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 686 Zen Master Dogen 3 IR  
Selected writings of the thirteenth-century Japanese Zen master dogen Zenji. Related Mahayana Buddhist texts.

REL 687 Global Hinduism 3 E  
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 3 IR  
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 3 Y  
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 3 IR  
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 3 IR  
Methodological issues related to the interpretation of diverse religious phenomena including architecture, the body, and land.

REL 696 Gender and Religion: Theory and Practice 3 IR  
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 699 Writing Religions and Cultures: Ethnographic Practice 3 IR  
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 3-6 S

REL 739 Research and Writing in the History and Thought of Israel 3-6 S

REL 749 Research and Writing in Religion and Society 3-6 S  
R

REL 759 Research and Writing in Religious History and Thought 3-6 S

REL 769 Research and Writing in Philosophy of Religion and Theology 3-6 S  
R

REL 779 Research and Writing in Religion and Culture 3-6 S

REL 789 Research and Writing in History of Religions 3-6 S

REL 791 Theories and Methods in the Study of Religion 3 IR  
Introduction to "classic" literature and issues in the field of religion.

REL 799 Research and Writing in Methodology 3-6 S

REL 997 Master's Thesis 1-6 S  
R

REL 999 Dissertation 1-15 S  
R

## Russian

RUS 620 Language Training in Preparation for Research Using Russian 3 S  
Language training to prepare students to conduct research in areas that require knowledge of Russian. R3, 12 credits maximum

## South Asian Studies

SAS 620 Language Training in Preparation for Research Using Tamil 3  
Crosslisted with: TML 620  
Language training to prepare students to conduct research in areas that require knowledge of Tamil. R3, 12 credits maximum

SAS 621 Language Training in Preparation for Research Using Hindi 3 S  
Crosslisted with: HIN 620  
Language instruction to prepare students to conduct research in areas that require knowledge of Hindi. Permission of instructor. R4, 12 credits maximum

SAS 622 Gender & Sexuality in South Asia 3 O

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 3 E

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. First offered in Summer 2014

SAS 690 Independent Study 1-6 IR

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. R

SAS 775 Readings and Research in South Asian History 3 S

Crosslisted with: HST 775

Graduate seminar introducing main debates in the historiography of late medieval and modern South Asia.

## Science Teaching

SCI 544 Teaching of College Science 3 Y

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 1-6

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. R

SCI 701 General Science Comprehensive Paper 3 Y

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.

## Sociology

SOC 500 Selected Topics 1-3 SI

In-depth selected study of certain social problems. R

SOC 513 Statistics for Social Science 3 Y

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 3 SI

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. R1, 6 credits maximum

SOC 600 Selected Topics 1-3 IR

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

SOC 606 Quantitative Methods 3 Y

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 3 Y

Exam-ination 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 3 S

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 3 SI

Major contemporary approaches to sociological theory. Reading representative works and comparing their application to selected topics.

SOC 625 Feminist Organizations 3 Y

Crosslisted with: WGS 625; Double Numbered with: SOC 425

Women's movement history in the United States and internationally. Successes and problems of organizations built by feminist activism. Implications for a new generation of feminist (and other) activism. Additional work required of graduate students.

SOC 627 New York City: Black Women Domestic Workers 3 Y

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 3 IR

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 3 Y

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 3 IR

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 3 IR  
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 3 IR  
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 3 IR  
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 3 SI  
Life and structure of American cities. Sociological perspectives on urban life, growth, decline, and restructuring of cities.

SOC 664 Aging and Society 3 Y  
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 666 Sociology of Formal Organizations 3 IR  
Formal and informal structure and decision making in industrial, governmental, religious, educational, and professional organizations. Their potential for democratization. Interorganizational relationships.

SOC 677 Class, Status, and Power 3 SI  
Double Numbered with: SOC 377  
Structures, causes, and consequences of socioeconomic inequalities in modern societies. Poverty and wealth, social mobility, and the persistence of inequality. Comparison and assessment of theories of social stratification.

SOC 704 Science, Technology, and Society 3 IR  
Sociology and social history of science and technology. Interaction of science, technology, and society. Technical controversies. Planning technological change. Suggested complement to PSC 705.

SOC 714 Intermediate Social Statistics 3 Y  
Introduction to multivariate statistical techniques to social science data. PREREQ: SOC 513.

SOC 810 Readings on Theory and Methodology 3 IR  
R

SOC 811 Advanced Seminar in Qualitative Research I 3 Y  
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 3 Y  
Crosslisted with: EDU 815  
Applications to issues of special education and related educational or human service settings.

SOC 813 Advanced Social Statistics 3 SI  
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 3 SI  
Crosslisted with: WGS 821  
The feminist critique and its implications for planning, conducting, and reporting on empirical studies.

SOC 825 Foundations of Organizational Sociology 3 O  
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 3 SI  
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 880 Seminar: Selected Areas of Social Organization and Change 3 S  
Provides an opportunity for staff and students to select and explore currently significant areas in the study of social organization and change. R

SOC 997 Master's Thesis 1-6 S

SOC 999 Dissertation 1-15 S  
R

## Social Science

SOS 575 Philosophy of Social Science 3 O  
Crosslisted with: PHI 575  
Philosophical and methodological issues in social and behavioral science. Role of laws in explanation of human action, methodological individualism and holism, functional explanation, value-neutrality, behaviorism, and computer simulation.

SOS 601 Fundamentals of Conflict Studies 3 S  
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 3 Y  
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 3 Y  
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. R

SOS 621 Mediation: Theory and Practice 3 SS  
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 3 SS

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 3 SS

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 3 IR

Crosslisted with: HST 625

Interdisciplinary introduction to history, politics, and economics of the European community.

SOS 705 Theories of Development 3 E

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 3 IR

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 1-9 IR

Interdepartmental seminars for graduate students enrolled in the social sciences program. Open to students in the respective disciplines. R

SOS 890 Readings and Research in International Development Policy 3 IR

For students preparing research for Ph.D. or Masters thesis, or in-depth research papers. Permission of instructor. R

SOS 991 Social Science Dissertation Proposal 3 IR

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 1-15 S

## Spanish

SPA 601 Literary Theory and Research Methods 3 IR

Reading in semiotics and research theory concerning literary texts.

SPA 620 Language Training in Preparation for Research Using Spanish 3

Language training to prepare students to conduct research in areas that require knowledge of Spanish. R3, 12 credits maximum

SPA 635 Spanish Phonetics and Phonology 3

Double Numbered with: SPA 435

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 3

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 3

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 3

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 3 IR

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 3 IR

Critical reading of significant literary works drawn from the Middle Ages and the 16th and 17th centuries.

SPA 643 Cervantes 3 IR

Don Quixote, with selections from other representative works by Cervantes.

SPA 652 Spanish Enlightenment to Modernism: Aesthetics and Power 3

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 3

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 3 O

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) 3

A diachronic study of the Spanish theater and poetry. Literary works will include texts by Valle-Inclán, Machado, Garcia Lorca, Alexandre, Cernuda, Sastre, Buero Vallejo, among others.

SPA 658 Narrative and Film in Spain (1940 to the Present) 3

Diachronic study of the "art of adaptation" in Spain. Exploration of the language of translation. Exchange between literature and film during and after Franco.

SPA 662 Latin American Colonial Literature 3

Literature written during the Colonial period and contemporary criticism and theory about that period.

SPA 663 Latin American Theater 3

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 664 Nineteenth Century Latin American Literature 3**

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 3**

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 671 Latin American Literature and Feminist Theory 3**

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 672 Gay and Lesbian Hispanic Caribbean Literature 3**

Caribbean poetry and fiction in homosexual literature. Includes literary theories and social, political, cultural, and religious values related to homosexuality.

**SPA 673 Afro-Hispanic Literature of the Caribbean 3**

Evolution of the African culture within the Cuban Literature of the 20th century. The relationship of Santeria/Revolution is especially emphasized.

**SPA 674 Cuban Neo-Baroque 3**

Analysis of three contemporary Cuban writers: Alejo Carpentier, José Lezama Lima, and Severo Sarduy. Literary theories of novel, poetry, and lectures.

**SPA 678 Latin American Literature in the New Millennium 3 SI**

This course will trace the major developments in 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 3**

Contemporary trends in Latin-American literature.

**SPA 681 U.S. Latina/o Literature 3**

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 3 IR**

Precursors, modernists, and postmodernists

**SPA 686 Thinking/Writing the Nation 3 Y**

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 3 E**

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 1-6 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. R

**Applied Statistics**

**STT 690 Independent Study 1-6**

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. R

**STT 750 Statistical Consulting 3 IR**

Crosslisted with: MAT 750

Experience in working with real data taken from current projects in the statistical laboratory and from published papers. R

**Kiswahili**

**SWA 620 Language Training in Preparation for Research Using Kiswahili 3 S**

Language instruction to prepare students to conduct research in areas that require knowledge of Kiswahili. Permission of instructor. R3, 12 credits maximum

**Tamil**

**TML 620 Language Training in Preparation for Research Using Tamil 3 S**

Crosslisted with: SAS 620

Language training to prepare students to conduct research in areas that require knowledge of Tamil. R3, 12 credits maximum

**Turkish**

**TRK 620 Language Training in Preparation for Research Using Turkish 3 S**

Language training to prepare students to conduct research in areas that require knowledge of Turkish. R3, 12 credits maximum

**Women's And Gender Studies**

**WGS 500 Selected Topics 1-3 IR**

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

**WGS 512 African American Women's History 3 O**

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 3 E**

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 3 Y**

Crosslisted with: ECN 525

Offered only in Strasbourg. European economy, with central focus on economic principles underlying decisions to create and extend scope of European Community and on economic policies EU has followed since creation.

**WGS 553 Women and Social Change 3 E**

Crosslisted with: ANT 553

Function of changes in women's roles in sociocultural urbanization, revolution, and modernization. Women in Third World countries compared to women in industrialized countries.

WGS 555 Food, Culture and Environment 3 Y

Crosslisted with: NSD 555

Understand the environment in which nutrition education and communication occur. The broader environment includes cultural diversity, the food system from farm to table, as well as functionality of food components.

WGS 576 Gender, Place, and Space 3 Y

Crosslisted with: GEO 576

Contemporary debates in feminist geography on the gendered construction of space and the spatial construction of gender.

WGS 600 Selected Topics 1-3 Y

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

WGS 601 Feminist Theory 3 Y

How feminists have identified social problems, challenged dominant paradigms, and imagined change. Challenges the universalization of the category "women." How "theory" takes many forms and how differences in positionality and experience shape theoretical goals and models.

WGS 605 Religion and the Body in Late Antiquity 3 IR

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 3 E

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 3 S

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 3 IR

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 3 Y

Crosslisted with: SOC 625; Double Numbered with: WGS 425

Women's movement history in the United States and internationally. Successes and problems of organizations built by feminist activism. Implications for a new generation of feminist (and other) activism. Additional work required of graduate students.

WGS 626 Persons in Social Context 3 Y

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 3 Y

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 3 Y

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 3 SI

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) 3 IR

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 3 SI

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. R

WGS 644 Feminist Theology 3 IR

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 3 Y

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 3-4 IR

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 3 Y

Double Numbered with: WGS 452

Introduction to postcolonial studies and its engagement with feminism. Focus on cross-cultural feminist analysis of colonialism, neo-colonialism, decolonization, orientalism, and racism/racialization. Emphasis on questions of representation, agency, and subjectivity. Additional work required of graduate students.

WGS 653 Sinner and Saints in 19th and 20th Century Spanish Literature and Film 3

Crosslisted with: SPA 653

Representations of women in novel, poetry, theater, and film through diverse theoretical approaches. Issues of power, sex, hierarchy, and institution.

WGS 655 Culture and AIDS 3 IR

Crosslisted with: ANT 655; Double Numbered with: WGS 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.

WGS 661 Self, Body, Transcendence 3 IR

Crosslisted with: REL 661

Examines Continental and American feminist and gender theory for intersections between religion, subjectivity, and bodily practice.

WGS 662 Youth, Schooling and Popular Culture 3 Y

Crosslisted with: CFE 662, DSP 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.

WGS 664 Aging and Society 3 Y

Crosslisted with: SOC 664; 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 671 Latin American Literature and Feminist Theory 3 IR

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 672 Language, Culture, and Society 3 Y

Crosslisted with: ANT 672, LIN 672; Double Numbered with: WGS 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.

WGS 673 Women, Rap and Hip-Hop Feminism 3 IR

Double Numbered with: WGS 473

Links between feminism, rap music and hip-hop culture. We explore the work of actual women in hip-hop, images of women, and feminist critiques of the music and the culture. Additional work required of graduate students.

WGS 674 Culture and Folklore 3 IR

Crosslisted with: ANT 674; Double Numbered with: WGS 474

Ways in which folklore (oral and material traditions, including personal narratives), reflects key cultural ideas such as gender, ethnicity, and history. Analytical methods for examining folk traditions. Additional work required of graduate students.

WGS 690 Independent Study 1-6 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. R

WGS 700 Selected Topics 1-3

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

WGS 701 Intersectionality 3 IR

Intersectionality (the concept that different identities, social structures, and systems interconnect) is pivotal to feminist inquiry.

An overview of Intersectionality's history, central ideas, and range of applications in terms of theory, methods, and politics.

WGS 705 Negotiating Difference: Coming of Age Narratives 3 IR

Using a range of genres, seminar; explores influence of place, family, and social expectations on self-definition; examines politics of everyday life, including trauma; and considers how authors craft stories in ways that resist marginalization.

WGS 710 Feminist Inquiries 3 Y

Advanced critical inquiry of interdisciplinary approaches to feminist theories, methods, methodologies, and epistemologies. Examines how feminism is defined, understood, practiced, and researched. Interrogates what it means to ask feminist questions.

WGS 725 Gender and Race in Higher Education 3 Y

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.

WGS 740 Feminist Theories of Knowing 3 O

Key debates raised by feminist theorists about the knowledge/power nexus. Explores what typically counts as knowledge; issues of power and the politics of difference; marginalized knowledge models; and interdisciplinary inquiry.

WGS 746 Queer Rhetorics 3 E

Crosslisted with: CCR 746, CRS 746, QSX 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

WGS 757 Black Feminist Theories 3 IR

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 3 IR

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 3 IR

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 3 IR

Advanced seminar on issues of central concern for transnational feminist praxis and working space for discussion of ongoing student research. Anti-capitalist struggles; hegemonic feminisms; racialization; politics of knowledge; nationalism and sexual politics; anti-imperialist projects.

WGS 812 Advanced Seminar in Qualitative Research I 3 Y  
Crosslisted with: EDU 810, SOC 811  
Expand fieldwork skills and increase theoretical understanding; emphasis on "thinking qualitatively;" intensive fieldwork.

WGS 821 Feminist Methodologies 3 SI  
Crosslisted with: SOC 821  
The feminist critique and its implications for planning, conducting, and reporting on empirical studies.

WGS 833 Race, Class and Gender 3 SI  
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 3 O  
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 617 Advanced Technical Documentation 3 IR  
Double Numbered with: WRT 417  
Course builds on technical writing fundamentals by focusing on practical writing techniques and providing extensive practice in designing and writing technical product/process documents. Additional work required of graduate students.

WRT 619 Advanced Technical Writing Workshop 3 IR  
Double Numbered with: WRT 419  
Intensive experience in writing technical texts. Additional work required of graduate students.

WRT 627 Writing in Design and Development Environments 3 IR  
Double Numbered with: WRT 427  
Advanced technical writing course for professionals in design and development environments, focusing on writing that design and development teams perform regularly, with emphasis on writing embedded in system analysis, design, and implementation processes. Additional work required of graduate students.

WRT 637 Information Architecture and Technical Documents 3 IR  
Double Numbered with: WRT 437  
The relationship between technical writing and information architecture, integrating theories of design with technical composition techniques, and introducing formal structures used to represent, organize, retrieve, and apply information in technical documents. Additional work required of graduate students.

WRT 647 Technical Communication in Global Environment 3 IR  
Double Numbered with: WRT 447  
Complexities arising in writing technical documents for a wide range of audiences, including other races and cultures both domestically and internationally. Addresses ways that systems of knowledge, interfaces, design processes, and instructional mechanisms affect users. Additional work required of graduate students.

WRT 670 Practicum: Teaching College Writing 0-3 Y  
Presentation and discussion of classroom, conference, and paper grading techniques. Planning and evaluating the student's own teaching. R

# Faculty

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Ahmed E. Abdel-Meguid, Assistant Professor

Ph.D. Emory University, 2011

Islamic theology and philosophy; German transcendental philosophy, phenomenology, and hermeneutics.

Omanii Abdullah, Adjunct Instructor  
M.A., University of Tennessee-Knoxville, 1974

Poetry

Meera Adya, Director of Research, Burton Blatt Institute, College of Law  
Ph.D., University of Nebraska-Lincoln, 2004;  
J.D., University of Nebraska-Lincoln, 2002  
Affiliated Faculty, Psychology; Law-psychology, decision-making, employment discrimination, genetic discrimination, disability

Lois Agnew, Associate Professor, Writing Program  
Ph.D., Texas Christian University, 1999  
History of rhetoric and composition studies, classical and British rhetorical theories, ethics and public discourse, stylistics, rhetoric and philosophy, rhetoric, composition

R. Craig Albertson, Assistant Professor, Biology  
Ph.D., University of New Hampshire, 2002  
Developmental Biology, quantitative genetics, comparative vertebrate morphology

Seth Aldrich, Adjunct Assistant Professor  
Ph.D., Syracuse University, 1990

Christine Allen, Adjunct Assistant Professor  
Ph.D., Pennsylvania State University, 1987

David M. Althoff, Assistant Professor  
Ph.D., Washington State University, 1998  
Species interactions, molecular ecology, insect community ecology

Ran Dani Anbar, Adjunct Assistant Professor  
M.D., University of Chicago, 1983

Douglas R. Anderson, Professor Emeritus  
Ph.D., Yale University, 1966  
Algebraic topology

Kevin Antshel, Associate Professor and Director of Clinical Training  
Ph.D., University of Kentucky  
Developmental psychopathology with particular emphasis on attention deficit / hyperactivity disorder (ADHD) and autism spectrum disorders (ASD). Cognitive / behavioral interventions designed to improve functioning in these populations.

Cristian Armendariz-Picon, Associate Professor  
Ph.D., Ludwig-Maximilians Universitat, Munich (Germany), 2001  
Cosmology, relativity, elementary particles, theory

Philip P. Arnold, Associate Professor  
Ph.D., University of Chicago, 1992  
History of Religions, Indigenous Traditions of the Americas

Marina Artuso, Professor  
Ph.D., Northwestern University, 1986  
Elementary particles, experiment

Carol Babiracki, Associate Professor  
Ph.D., University of Illinois, 1991  
Art and Music Histories: Ethnomusicology, South Asian music and dance, ethnic and immigrant music and dance in the U.S., music of the Middle East

A. Balachandran, Joel Dorman Steele Professor of Physics  
Ph.D., Madras University, 1962  
Elementary particle theory

Suzanne L. Baldwin, Professor  
Ph.D., State University of New York at Albany, 1988  
Noble gas thermochronology, P-T-t evolution of crustal terranes, plate boundary processes in the Southwest Pacific, continental extensional tectonics

Stefan Ballmer, Assistant Professor  
Ph.D. MIT, 2006  
Theoretical Astrophysics, gravitational Waves

Uday Banerjee, Professor  
Ph.D., University of Maryland, 1985  
Numerical solutions of differential equations

Crystal Bartolovich, Associate Professor  
Ph.D., Emory University, 1993  
Marxism, early modern studies, cultural studies

Kenneth Baynes, Professor, Philosophy and Political Science  
Ph.D., Boston University, 1987  
Social and political philosophy, critical theory, continental philosophy

Frederick C. Beiser, Professor  
D.Phil., Oxford University (United Kingdom), 1980  
Early modern philosophy, Kant, German idealism, 19th Century Philosophy

John M. Belote, Professor  
Ph.D., University of North Carolina, Chapel Hill, 1979  
Developmental genetics, genetic and molecular analysis of sex determination in *Drosophila*

Patrick W. Berry, Assistant Professor, Writing Program  
Ph.D., University of Illinois at Urbana-Champaign, 2011  
Literacy Studies; Qualitative Research Methods; Computers and Writing; Teacher Education; Cultural Historic Activity Theory; Higher Education in Prison; Professional Writing and Publishing; and Histories of Rhetoric & Composition.

Tej K. Bhatia, Professor  
Ph.D., University of Illinois, 1978  
Hindi, linguistics; Indic languages, literature, and linguistics

Himika Bhattacharya, Assistant Professor  
Ph.D., University of Illinois at Urbana-Champaign, 2008  
Feminist Theory, Third World and Transnational Feminisms, Feminist Ethnography

Marion E. Bickford, Professor Emeritus  
Ph.D., University of Illinois, 1960  
Petrologist and isotope geochemist

Benita A. Blachman, Trustee Professor; Coordinator, Learning Disabilities  
Ph.D., University of Connecticut, 1981  
Educational psychology, reading and other learning disabilities, teacher preparation

Marlene F. Blumin, Associate Professor; Director, Study Skills Program  
Ph.D., Cornell University, 1988  
Curriculum and instruction, college reading/study skills

Steven Blusk, Associate Professor  
Ph.D., University of Pittsburgh, 1995  
Experimental high-energy physics

Philip N. Borer, Professor  
Ph.D., University of California, Berkeley, 1972  
Biophysical chemistry, nucleic acid chemistry, nuclear magnetic resonance analysis of RNA, DNA and peptides

- Molly Bourne, Adjunct Faculty, Florence Harvard University, Ph.D., Specialist in Gonzaga court circa 1500; artistic patronage, villa design, cartography, and the domestic interior in Renaissance Mantua
- Mark Bowick, Professor Ph.D., California Institute of Technology, 1983  
Condensed matter theory
- Benjamin Bradley, Associate Professor Ph.D., University of Massachusetts, Amherst, 1999  
Ethical theory, environmental ethics, philosophy of death
- Mark S. Braiman, Professor Ph.D., University of California, Berkeley  
Solar photoreduction of carbon dioxide for carbon sequestration and energy storage; membrane protein expression, purification, and crystallization; time-resolved vibrational spectroscopy applied to photochemical systems.
- Zachary J. Braiterman, Professor Ph.D., Stanford University, 1995  
Modern Jewish thought and culture specializing in 20th-century thinkers, religion, art
- Susan Branson, Associate Professor; Professor, Director of American Studies Ph.D., Northern Illinois University, 1992  
Early American History
- Collin G. Brooke, Associate Professor, Writing Program Ph.D., University of Texas at Arlington, 1997  
Rhetorics of technology, histories and theories of rhetoric, critical theory
- Amanda Brown, Assistant Professor Ph.D., Boston University, 2007  
Languages, literatures, and Linguistics, applied linguistics
- Danielle Brown, Assistant Professor Ph.D., New York University, 2009  
Caribbean; Latin American music
- Duncan Brown, Associate Professor Ph.D., University of Wisconsin-Milwaukee, 2004  
Theoretical astrophysics, relativity
- Erella Brown, Instructor Ph.D., Cornell University, 1989  
Modern and postmodern Jewish, Israeli, European, and American prose fiction, drama, and contemporary literary theory.
- Stuart Scott Brown, Professor
- Kevin Browne, Assistant Professor, Writing Program Ph.D., Pennsylvania State University, 2009  
Contemporary rhetorical theory, specializing in ethnic rhetoric, vernacular rhetoric, and rhetoric(s) of the Caribbean and the African Diaspora.
- 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 M.F.A., University of Iowa, 1973  
Creative writing, poetry
- Virginia Burrus, W. Earl Ledden Professor Ph.D., Graduate Theological Union, 1991  
Ancient Christianity including: gender, sexuality, the body; martyrdom and asceticism; ancient novels and hagiography; constructions of orthodoxy and heresy; histories of theology and historical theologies
- Michael Caie, Assistant Professor Ph.D., University of California, Berkeley, 2011  
Philosophical logic, philosophy of language, epistemology
- Dympna Callaghan, Dean's Professor in the Humanities 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
- Nancy Cantor, Chancellor, Professor Ph.D. Stanford University, 1978  
Personality and social psychology; personality and cognition.
- Kate B. Carey, Professor Ph.D., Vanderbilt University, 1985  
Substance abuse, stress and coping processes, mentally ill chemical abusers
- Michael P. Carey, Professor Ph.D., Vanderbilt University, 1986  
Sexual dysfunctions, health psychology, HIV prevention
- Robert Carey, Adjunct Associate Professor Ph.D., University of Chicago, 1966
- Jeffrey S. Carnes, Associate Professor Ph.D., University of North Carolina, 1986  
Greek poetry, mythology and Augustan Rome
- Linda Carty, Associate Professor Ph.D., University of Toronto (Canada), 1989  
Race, class, and gender studies; comparative sociology; international development post-colonial discourse; Third World feminisms
- Luis Castañeda, Assistant Professor of Art History Ph.D., Institute of Fine Arts, New York University, 2011  
Latin American Art, Art & Design in the Americas
- Theo Cateforis, Associate Professor Ph.D., State University of New York at Stony American music, 20th-century music, popular music, jazz
- Simon Catterall, Professor Ph.D., Oxford University (United Kingdom), 1988  
Elementary particles, theory, computational physics
- Joseph Chaiken, Professor Ph.D., University of Illinois, 1982  
Physical chemistry, inter-/intramolecular energy transfer, molecular beam/laser spectroscopy, laser chemistry, fractals, coalescence growth systems, biomedical spectroscopy
- Arindam Chakraborty, Assistant 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, Assistant Professor  
Ph.D., SUNY Buffalo, 2008  
Organic and organometallic chemistry;  
catalytic reaction development; natural  
product synthesis
- Steven Cohan, Professor  
Ph.D., University of California, Los Angeles,  
1974  
Film studies, narrative theory, gender studies
- Heather Coleman, Assistant Professor  
PhD, University of British Columbia, 2008  
Genetic and environmental control of cell wall  
formation, biotechnology, molecular farming,  
functional genomics
- Dan F. Coman, Professor  
Ph.D., University of Michigan, 1997  
Several complex variables
- Catherine A. Cornwell, Associate  
Professor  
Ph.D., Massachusetts Institute of Technology,  
1975  
Neurobiology of learning and memory
- J. Theodore Cox, Professor  
Ph.D., Cornell University, 1976  
Probability
- Amy H. Criss, Assistant Professor  
Ph.D., Indiana University, 2004  
Human memory; mathematical modeling
- Pedro Cuperman, Associate 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
- Manan Desai, Assistant Professor, English  
Ph.D., University of Michigan, 2011  
20th Century American literature, Asian  
American literature, African American  
literature, South Asian colonial and  
postcolonial literature.
- Steven Diaz, Associate Professor  
Ph.D., Brown University, 1982  
Algebraic geometry
- 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, Associate Professor  
Ph.D., University of Wisconsin-Madison,  
1994  
Audiology, psychoacoustics, hearing aids,  
speech perception
- Steve Dorus, Associate Professor  
Ph.D., The University of Chicago, 2004  
Evolutionary genetics and genomics of  
reproductive systems
- Sharon Dotger, Assistant Professor  
Ph.D., North Carolina State University, 2006  
Science teacher education, inclusive science  
education
- Robert P. Doyle, Associate Professor  
Ph.D., University of Dublin, Trinity College,  
2002, Anderson Foundation Fellow, Yale  
University, 2004  
Peptide conjugate chemistry, chemical  
biology, biochemistry
- 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  
Ph.D., Yale University, 1991  
Twentieth-century American literature,  
modernism, African American literature,  
theories of the body
- Kevan Edwards, Assistant Professor  
Ph.D., Rutgers University, 2006  
Philosophy of mind, philosophy of language,  
cognitive science
- Mary Louise Edwards, Professor  
Ph.D., Stanford University, 1979  
Phonetics, phonology, articulation,  
phonological development and disorders
- Scott E. Erdman, Associate Professor  
Ph.D., University of California, Davis, 1994  
Regulation of cell differentiation
- Kathryn Everly, Associate Professor  
Ph.D., University of Texas, 2000  
Contemporary Peninsular Spanish literature,  
Catalan literature and women writers
- Craig K. Ewart, Professor  
Ph.D., Stanford University, 1978  
Health psychology, behavioral medicine,  
psychophysiology
- Carol Fadda-Conrey, Assistant 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, Assistant Professor  
Ph.D., University of Virginia, 2006  
Buddhism, Chinese Buddhism, contemporary  
religion, globalization

- Paul G. Fitzgerald, Professor, Earth Sciences  
Ph.D., University of Melbourne (Australia), 1988  
Low temperature thermochronology (fission track, U-Th/He), tectonics, landscape evolution of Antarctica
- Arthur Flowers, Associate Professor  
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
- Janet Ford, Professor of Practice
- Chris Forster, Assistant Professor  
Ph.D., University of Virginia, 2011  
Modernism, British twentieth century literature and culture, digital humanities
- Martin B. Forstner, Assistant Professor  
Ph.D. University of Texas, Austin, 2003  
Biophysics, experimental soft condensed matter, biophotonics
- Kenneth Foster, Professor  
Ph.D., California Institute of Technology, 1972  
Biophysics of rhodopsin-based photoreceptors
- Rodney Foster, Assistant Professor  
Ph.D., Syracuse University, 1998  
Eighteenth-century music
- Wayne Franits, Professor  
Ph.D., Institute of Fine Arts, New York University, 1987  
Baroque art, 17th-century Dutch painting
- Douglas A. Frank, Professor  
Ph.D., Syracuse University, 1990  
Plant and ecosystem ecology, emphasizing the effects of ungulates on grasslands
- Jason D. Fridley, Associate Professor  
Ph.D., University of North Carolina, Chapel Hill, 2002  
Patterns of biodiversity, functional significance of biodiversity for ecological systems
- Ken Frieden, B.G. Rudolph Professor  
Ph.D., Yale University, 1984  
Comparative literature, Hebrew and Yiddish fiction; European and American Judaic traditions; psychoanalysis and literary theory
- Jannice Friedman, Assistant Professor  
Ph.D., University of Toronto, 2009  
Plant evolutionary biology, ecological genetics, evolution of plant reproductive systems
- André Gallois, Professor  
B. Phil., University of Oxford, 1971  
Epistemology, metaphysics, philosophy of mind, ethics
- Myrna Garcia-Calderon, Associate Professor  
Ph.D., University of California, Berkeley, 1989  
Caribbean literature
- Anthony Garza, Associate Professor  
Ph.D., Texas A and M University, 1995  
Microbiology, gene expression in development
- Jessica Gelber, Assistant Professor  
Ph.D., University of California, Berkeley 2010  
Ancient Greek and Roman philosophy
- Stefano Giannini, Assistant Professor  
Ph.D., Johns Hopkins University, 2002  
Italian
- Mark A. Ginsberg, Adjunct Associate Professor  
Ph.D., Southern Illinois University, 1975
- Hope Glidden, Professor  
Ph.D., Columbia University, 1976  
French
- Ann Grodzins Gold, The Thomas J. Watson Professor of Religion  
Ph.D., University of Chicago, 1984  
Teaching and research on religion in South Asia, popular Hinduism, women's expressive traditions, religions and environment, folklore, oral history
- Paul Gold, Distinguished Professor of Biology
- Mike Goode, Associate Professor  
Ph.D., University of Chicago, 2001  
British Romantic and early Victorian literature and culture, gender studies
- Jerry Goodisman, Professor  
Ph.D., Harvard University, 1963  
Physical chemistry, sedimentation and agglomeration, platinum anticancer drugs, light scattering from skin.
- Michael Gordon, Adjunct Associate Professor  
Ph.D., Ohio State University, 1977
- Judith Gorovitz, Adjunct Assistant Professor  
Ph.D., Case Western Reserve University, 1973
- Samuel Gorovitz, Professor  
Ph.D., Stanford University, 1963  
Ethics, public policy, decision making
- Richard M. Gramzow,  
Ph.D. University of North Carolina, Chapel Hill, 1997  
The self, groups, psychophysiology
- Jack E. Graver, Professor  
Ph.D., Indiana University, 1966  
Combinatorics and graph theory
- David Greenberg, Adjunct Associate Professor  
Ph.D., Indiana University, 1966  
Combinatorics and graph theory
- Gerald R. Greenberg, Associate Professor, Associate Dean  
Ph.D., Cornell University, 1985  
Russian, Slavic linguistics
- Roger P. Greenberg, Adjunct Professor  
Ph.D., Syracuse University, 1968
- Philip S. Griffin, Professor  
Ph.D., University of Minnesota, 1982  
Probability.
- Erika Haber, Associate Professor  
Ph.D., University of Michigan, 1993  
Russian language and literatures
- Rania Habib, Assistant Professor  
Ph.D., University of Florida, 2008  
Languages, Literatures and Linguistics; Linguistics, Arabic, Middle Eastern Studies
- F. Reed Hainsworth, Professor  
Ph.D., University of Pennsylvania, 1968  
Physiological ecology and comparative physiology, emphasizing energetic relationships in small mammals and birds
- Sarah Hall, Assistant Professor
- Roger Hallas, Associate Professor  
Ph.D., New York University, 2002  
Cinema studies
- M. Gail Hamner, Professor  
Ph.D., Duke University, 1997  
Pragmatism, critical theory, women's studies, film, and popular culture
- Chris Hanson, Assistant Professor  
Ph.D., University of Southern California, 2010  
New media screen studies.

- John F. Harkulich, Adjunct Assistant Professor  
Ph.D., Florida State University, 1979
- Brooks Haxton, Professor  
M.A., Syracuse University, 1981  
Creative writing, poetry
- Daniel W. Hayes, Assistant Professor
- Mark Heller, Professor  
Ph.D., Syracuse University, 1984  
Metaphysics, epistemology
- H. Ernest Hemphill, Associate Professor  
Ph.D., Cornell University, 1967  
Microbiology, microbial genetics
- James A. Hewett, Associate Professor  
Ph.D., Michigan State University, 1991  
central nervous system, inflammation, arachidonic acid metabolism, therapeutics, gene expression, cell culture.
- Sandra J. Hewett, Beverly Petterson Bishop Professor of Neuroscience  
Ph.D., Michigan State University, 1992  
Mechanisms underlying cell death in the central nervous system: the interplay between excitotoxicity and inflammation
- Margaret Himley, Professor  
Ph.D., University of Illinois, Chicago, 1983  
Composition and critical pedagogy, curriculum design, LGBT studies and queer rhetoric, phenomenological theories of children and childhood
- Joseph T. Himmelsbach, Adjunct Associate Professor  
Ph.D., Syracuse University, 1972
- Gregory D. Hoke, Assistant Professor  
Ph.D., Cornell University, 2006  
Geomorphology, sedimentary geology, tectonics
- Richard Holmes, Research Assistant Professor  
Ph.D., University of Maryland, 1985  
Elementary particles, experiment
- Jeehee Hong, Assistant Professor  
Ph.D. University of Chicago, 2008  
Art of China; Arts of East Asia
- Peter D. Horn, Assistant Professor  
Ph.D., Rice University, 2009  
Knot concordance and Heegaard Floer homology
- James Hougland, Assistant Professor  
Ph.D., University of Chicago, 2005  
Bioorganic chemistry; biochemistry; enzymology; substrate selection and molecular recognition in protein posttranslational modification
- Marc W. Howard, Associate Professor  
Ph.D., University of Chicago, 1999  
Human memory, cognitive neuroscience, mathematical and computational modeling
- William J. Hoyer, Professor  
Ph.D., West Virginia University, 1972  
Life-span developmental psychology, learning and memory, cognitive aging, and aging
- Wu-Teh Hsiang, Associate Professor  
Ph.D., University of Pennsylvania, 1977  
Differential geometry and differential equations
- Jay Hubisz, Assistant Professor  
Ph.D. Cornell University, 2006  
Theoretical particle physics, cosmology
- Bruce S. Hudson, Professor  
Ph.D., Harvard University, 1972  
Molecular spectroscopy and biophysical chemistry; inelastic neutron scattering studies of molecular crystals, especially those with unusual hydrogen bonding and comparison with theory; biophysical applications of fluorescence
- Marsha A. Hunt, Part-time Instructor  
J.D., Syracuse University, 1987
- Sydney Hutchinson, Assistant Professor  
Ph.D. New York University, 2008  
Ethnomusicology
- Richard Ingersoll, Ph.D.  
Ph.D., University of California; Berkeley  
16th century Italian architecture and survey of Italian urbanism.
- Linda C. Ivany, Professor  
Ph.D., Harvard University, 1997  
Evolutionary paleoecology, paleontology, paleoclimatology
- Tadeusz Iwaniec, John Raymond French Distinguished Professor of Mathematics at Syracuse University and FiDiPro (Finland Distinguished Professor) at the University of Helsinki.  
Ph.D., University of Warsaw, 1975  
Geometric Function Theory, Nonlinear Analyses and Partial Differential Equations with applications to Elasticity Theory and Material Sciences.
- Mary M. Jackowski, Adjunct Assistant Professor  
Ph.D., State University of New York Health Science Center, 1979
- Mary E. Jeannotte, Adjunct Assistant Professor  
Ph.D., State University of New York at Buffalo, 1993
- Annette Jenner, Assistant Professor  
Ph.D., Harvard University, 1998  
Neuroscience, neurobiology of language
- Jean Jonassaint, Associate Professor  
Ph.D., Universite de Montreal (Canada), 1990  
Francophone studies, Haitian novel
- Harold Jones, Emeritus  
Ph.D., Princeton University, 1968  
Spanish golden age literature
- Randall S. Jorgenson, Associate Professor  
Ph.D., University of Kansas, 1983  
Health psychology, effects of personality coping, stress and heredity on cardiovascular reactivity
- Christopher Junium, Assistant Professor, Earth Sciences  
Ph.D., Penn State University, 2010  
Paleoclimatology
- Tara Kahan, Assistant Professor  
Ph.D., University of Toronto, 2010  
Physical chemistry, analytical chemistry, atmospheric and environmental chemistry, spectroscopy, developing a molecular-level understanding of physical and chemical processes occurring at environmental surfaces
- Bette Kahler, Instructor  
M.Mus., Syracuse University, 1971  
Organ performance and instruction, music history and theory
- James Kallmerten, Professor  
Ph.D., Brown University, 1979  
Organic chemistry, organic synthesis, emphasizing methods and strategies for the preparation of biologically active natural products and electro-optical materials
- Mary Karr, Jesse Truesdell Peck Professor of English Literature  
M.F.A., Goddard College, 1980  
Creative writing, poetry
- Jeffrey A. Karson, Professor, Earth Sciences  
Ph.D., State University of New York at Albany, 1977  
Structural geology and tectonics

- Tazim R. Kassam, Associate Professor  
Ph.D., McGill University, 1993  
History of religions, specializing in Islamic traditions and religions of South Asia
- Christopher Kennedy, Associate Professor  
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  
Ph.D., Johns Hopkins University, 1995  
Nineteenth-century British literature and culture, feminist theory, women's studies, gender studies, and imperialism
- Mark Kleiner, Professor  
Ph.D., Kiev (USSR) State University, 1972  
Representations of finite dimensional algebras
- Ivan V. Korendovych, Assistant Professor  
Ph.D., Tufts University, 2006  
Bioinorganic chemistry, biophysics, inorganic chemistry, chemical biology
- Jaklin Kornfilt, Professor  
Ph.D., Harvard University, 1984  
Syntactic theory, typology, German syntax, Turkish and Turkic linguistics
- Donna Korol, Associate Professor
- Timothy M. Korter, Associate Professor  
Ph.D., University of Pittsburgh, 2001  
Laser spectroscopy and computational chemistry
- Leonid Kovalev, Assistant Professor  
Ph.D. Washington University, 2005  
geometric function theory
- Thomas J. Krisher, Adjunct Assistant Professor  
Psy.D., Hahnemann University, 1986
- Robert Kuehnel, Adjunct Assistant Professor  
Ph.D., University of Maine, 1988
- Matthew LaHaye, Assistant Professor  
Ph.D. University of Maryland, College Park, 2005  
Experimental condensed matter physics
- John Laiho, Assistant Professor, Physics  
Ph.D., Princeton University, 2004  
Lattice QCD, Flavor Physics & CP Violation, Chiral 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
- Laura K. Lautz, Associate Professor  
Ph.D., Syracuse University, 2005  
Hydrology, hydrogeology
- Graham Leuschke, Associate 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, Assistant 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, nanometer-scale 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  
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, Assistant Professor,  
Physics  
Ph.D., University of California, Santa Barbara, 2008  
Defects and deformation in disordered solids and glasses; Surface tension and emergent mechanical properties in developing embryonic tissues; Mitotic waves and pattern formation in biological tissues; Constitutive models for friction and shear banding
- M. Cristina Marchetti, William R. Kenan Jr. Professor, Chair Department of Physics  
Ph.D., University of Florida, 1982  
Condensed-matter theory

- Brian K. Martens, Professor  
Ph.D., University of Nebraska, Lincoln, 1985  
Applied behavior analysis and school  
consultation
- Charles Martin, Visiting Professor  
Ph.D., State University of New York at  
Buffalo, 1987  
Poetry
- Joanna 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, Assistant 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, Associate Professor  
Ph.D., University of Massachusetts-Amherst,  
2004  
Metaphysics, philosophy of religion, ethics
- Moira A. McDermott, Assistant Professor  
Ph.D., University of Michigan, 1996  
Commutative Algebra, Computational Algebra  
(M2), Mathematics of Phylogenetics
- Thomas McKay, Professor  
Ph.D., University of Massachusetts, 1974  
Philosophy of logic, philosophy of language,  
metaphysics
- Dennis J. McKillop, Adjunct Assistant  
Professor  
Ph.D., University of Arizona, 1984
- Alick McLean, Ph.D.  
Ph.D., Princeton University School of  
Architecture  
Italian Romanesque, Gothic and Renaissance  
architecture and urban design.
- Jeff Meyer, Assistant Professor  
Ph.D., University of Illinois, 1997  
Number theory, special functions
- Stephen Meyer, Associate Professor  
Ph.D., SUNY Stony Brook, 1996  
Eighteenth and 19th century music, history of  
opera
- Alan Middleton, Professor  
Ph.D., Princeton, 1990  
Condensed matter, theory; computational  
physics
- Claudia Miller, Professor  
Ph.D., University of Illinois at Urbana-  
Champaign, 1997  
Commutative algebra
- Linda Milosky, Associate Professor  
Ph.D., University of Wisconsin, Madison,  
1986  
Language development and disorders, discourse  
processing, pragmatics, cognition and language
- Chandra Talpade Mohanty, Professor  
Ph.D., Education, University of Illinois,  
Urbana-Champaign, 1987  
Transnational feminist theory, anti-racist  
pedagogy, post-colonial and third world  
studies, cultural studies and radical education
- Patricia Moody, Associate Professor of  
English  
Ph.D., University of Texas at Austin, 1972  
English language histories and history of  
linguistics, Discourse analysis, particularly  
medieval, Reception of the medieval, and  
Critical pedagogy
- Rebecca Moore Howard, Professor, Writing  
Program  
Ph.D., West Virginia University, 1984  
Theory of authorship, print culture studies,  
stylistics, composition history,  
sociolinguistics, writing across the curriculum,  
composition pedagogy, writing program  
administration
- Kevin Morrison, Assistant Professor  
Ph.D., Rice University, 2009  
Victorian literature and culture
- Donald E. Morton, Professor  
Ph.D., Johns Hopkins University, 1971  
Marxism, critical and social theory, feminism,  
queer theory, cultural studies and cybertheory
- Robert Moucha, Assistant Professor, Earth  
Sciences  
Ph.D., University of Toronto, 2003  
Geodynamics, Geophysics and High  
Performance Computing
- Raymond Mountain, Research Assistant  
Professor  
Ph.D., Notre Dame, 1992  
Elementary particles, experiment
- Liviu Movileanu, Associate Professor  
Ph.D., University of Bucharest, 1997  
Biophysics
- Micere Githae Mugo, Laura J. and L.  
Douglas Meredith Professor  
Ph.D., University of New Brunswick (Canada),  
1973  
Orature, literature, creative writing, Pan-  
Africanist studies, education
- Henry T. Mullins, Professor  
Ph.D., University of North Carolina, Chapel  
Hill, 1978  
Tropical carbonate platforms, oceanography,  
and the Lacustrine Record of Quaternary  
climate change in the Finger Lakes and Ireland
- Jonathan Nelson, Ph.D.  
Ph.D. in Art History, Institute of Fine Arts,  
New York University  
Renaissance art history.
- Leonard Newman, Associate Professor;  
Director, Graduate Training Program in Social  
Psychology  
Ph.D., New York University, 1990  
Social cognition, social stigma, attitudes,  
psychology of genocide
- Cathryn R. Newton, Professor  
Ph.D., University of California, Santa Cruz,  
1983  
Paleobiology, paleoecology of mass  
extinctions, environmental stratigraphy
- Richard M. O'Neill, Adjunct Associate  
Professor  
Ph.D., State University of New York at  
Buffalo, 1983

- Dana M. Olwan, Assistant Professor  
Ph.D., Queens College, 2009  
Transnational Feminist Theories of Race,  
Gender, and Religion; Gendered and Sexual  
Violence and the Honor Crime;  
Representations of Arab and Muslim women;  
Indigenous and Feminist Solidarities.
- Jani Onninen, Associate Professor  
Ph.D., University of Jyväskylä (Finland),  
2002  
Nonlinear analysis and geometric function  
theory
- Stephanie Ortigue, Assistant Professor  
Ph.D., Geneva University of Medicine and  
Savoy University, 2004  
Implicit perception, self-consciousness and its  
relationship to social cognition.
- Hille Paakkunainen, Assistant Professor  
Ph.D., University of Pittsburgh 2011  
Ethics, philosophy of action
- Tibor Palfai, Professor  
Ph.D., University of Waterloo, 1969  
Psychopharmacology, effects of drugs on  
learning and memory
- Iswari P. Pandey, Assistant Professor,  
Writing Program  
Ph.D., University of Louisville, 2006  
Literacy studies, writing, (critical)  
ethnography, global/post-colonial rhetorics,  
multimodal compositions
- Aesoon Park, Assistant Professor  
Ph.D., University of Missouri-Columbia, 2006  
Longitudinal person-environment interplay on  
alcohol misuse across emerging and young  
adulthood.
- Stephen Parks, Associate Professor, Writing  
Program  
Ph.D., University of Pittsburgh, 1993  
Rhetoric, composition, community  
literacy/publishing, language politics, cultural  
studies
- Susan Parks, Assistant Professor  
Ph.D., Massachusetts Institute of  
Technology/Woods Hole Oceanographic  
Institution, 2003  
Behavioral ecology, acoustic communication,  
marine science, conservation biology
- Joseph Pellegrino, Clinical Assistant  
Professor  
Au.D., University of Florida, 2004  
Adult audiologic assessments and hearing aids
- Melissa Pepling, Associate Professor  
Ph.D., State University of New York at Stony  
Brook, 1995  
Mouse germ line development, oogenesis
- Susan Pepling, Assistant Professor  
Ph.D., Massachusetts Institute of  
Technology/Woods Hole Oceanographic  
Institution, 2003  
Behavioral ecology, acoustic communication,  
marine science, conservation biology
- Scott Pitnick, Professor  
Ph.D., Arizona State University, 1992  
Microevolutionary processes and  
macroevolutionary relationships
- Donald Planty, Professor
- Britton Plourde, Associate Professor  
Ph.D., University of Illinois, Urbana-  
Champaign, 2000  
Condensed matter, experiment
- Evgeny Poletsky, Professor  
Ph.D., University of Moscow (Russia), 1973  
Geometric theory of functions of real and  
complex variables
- Gwendolyn D. Pough, Associate Professor  
Ph.D., Miami University, Ohio, 2000  
African American rhetorical traditions,  
feminist rhetorics, popular culture, writing,  
rhetoric, composition, Black feminist theory,  
public sphere theory, popular culture
- Minnie Bruce Pratt, Professor  
Ph.D., University of North Carolina, 1979  
Feminist theory and intersections of race,  
class, gender, and sexuality; intersection of  
lesbian, gay, bisexual, and transgender lives and  
issues; creative nonfiction and poetry; story  
telling and activism
- Omer Preminger, Assistant Professor  
Ph.D., Massachusetts Institute of Technology  
syntax-semantics and syntax-morphology  
interfaces
- Beth Prieve, Professor  
Ph.D., University of Iowa, 1989  
Auditory physiology, the diagnosis of hearing  
loss
- Julian Professor Eileen,  
MS-HED
- Declan Quinn, Professor  
Ph.D., University of Wisconsin, 1985  
Algebra, algebraic geometry, graph theory
- Gary M. Radke, Professor  
Ph.D., Institute of Fine Arts, New York  
University, 1980  
Italian Medieval and Renaissance art
- Ramesh Raina, Associate Professor  
Ph.D., Jawaharlal Nehru University (India),  
1991  
Molecular signaling mechanisms between  
plants and their pathogens
- Surabhi Raina, Assistant Professor  
Ph.D., Banaras Hindu University, 1992  
Plant molecular genetics, biotechnology
- Romita Ray, Associate Professor  
Ph.D., Yale University, 1999  
18th- and 20th-century European and British  
Empire art/architecture, South Asian art
- Kara Richardson, Assistant Professor  
Ph.D., University of Toronto, 2008  
Medieval philosophy, early modern  
philosophy
- Brian Rieger, Adjunct Assistant Professor  
Ph.D., Fordham University, 1996
- Robin Riley, Assistant Professor  
Ph.D., Syracuse University, 2000  
Gender, war and militarism, transnational  
feminism, gender studies and queer theory,  
feminist international relations theory,  
feminist methodologies, popular culture,  
feminist theory, feminist pedagogy
- Alicia Rios, Associate Professor  
Ph.D., University of Maryland, 1992  
Latin American literature and culture
- Mark Ritchie, Professor  
Ph.D., University of Michigan, 1987  
Biodiversity, plant-herbivore interactions,  
conservation biology
- William C. Ritchie, Associate Professor  
Ph.D., University of Michigan, 1969  
Linguistics, adult second-language learning,  
applied linguistics
- William A. Robert, Assistant Professor  
Ph.D., University of California, Santa Barbara,  
2005  
Continental philosophy of religion;  
Christianity; mysticism; gender; ethics.
- John E. Robertson, Assistant Professor  
Ph.D., University of Texas, 1975  
Ancient philosophy, Aristotle's metaphysics,  
philosophy of mind, theory of action

- Marcia C. Robinson, Assistant Professor  
Ph.D., Emory University, 2001  
Christian thought, African American religion and art
- Carl Rosenzweig, Professor  
Ph.D., Harvard University, 1972  
Elementary particle theory, relativistic quantum field theory, gauge theory, cosmology
- Zaline M. Roy-Campbell, Associate Professor  
Ph.D., University of Wisconsin-Madison  
Cultural and linguistic diversity, successful schools for African American students
- Patricia Roylance, Assistant Professor  
Ph.D., Stanford University, 2005  
Early American literature and culture
- Herbert Ruffin, Assistant Professor  
Ph.D., Claremont Graduate University, 2007  
African American history, U.S. West history, urban history.
- Karin Ruhlandt, Distinguished Professor, Chair  
Dr.rer.nat., Philipps University, Marburg (Germany), 1991  
Inorganic and organometallic chemistry, crystallography, synthesis and structural characterization of inorganic compounds and their application in synthetic, solid state, and polymer chemistry
- John M. Russell, Professor  
Ph.D., University of Utah, 1971  
Cellular physiology, ion transport, effects of viruses on cellular homeostatic processes
- Natalie Russo, Assistant Professor  
Ph.D., McGill University, 2007  
Autism Spectrum Disorders, ADHD, & sensory processing disorders.
- Scott D. Samson, Professor  
Ph.D., University of Arizona, 1990  
U-pb geochronology, chemical evolution of the crust-mantle system, evolution of neoproterozoic circum-Atlantic orogens
- Jurepan Saranak, Research Assistant Professor  
Ph.D., Mt. Sinai Medical School, 1981  
Biophysics
- Peter Saulson, Martin A. Pomerantz '37 Professor in Physics  
Ph.D., Princeton University, 1981  
Relativity, astrophysics experiment
- George Saunders, Professor  
M.F.A., Syracuse University, 1988  
Creative writing, fiction
- Douglas J. Scaturro, Adjunct Associate Professor  
Ph.D., Claremont Graduate School, 1979
- Joseph Schechter, Professor  
Ph.D., University of Rochester, 1965  
Elementary particle theory
- Eileen E. Schell, Associate Professor, Writing Program  
Ph.D., University of Wisconsin-Milwaukee, 1993  
Composition theory, 19th- and 20th-century rhetorical theory, women's rhetoric, feminist theory
- Eric A. Schiff, Professor  
Ph.D., Cornell University, 1979  
Amorphous and crystalline semiconductors: defects, transport and recombination
- Richard Schnee, Assistant Professor  
Ph.D., University of California-Santa Cruz, 1996  
Experimental observational cosmology
- Christopher A. Scholz, Associate Professor  
Ph.D., Duke University, 1989  
Sequence stratigraphy, lacustrine and rift basin sedimentation and reflection seismology
- Jennifer Schwarz, Associate Professor  
Ph.D., Harvard, 2002  
Condensed matter theory
- Sascha Scott, Assistant Professor  
Ph.D, Rutgers University, 2008  
19th- and 20th-century American art, art of the American West, representations of American Indians
- Tony Scott, Associate Professor, Writing Program  
Ph.D., University of Louisville
- Kari A. Segraves, Associate Professor  
Ph.D., Vanderbilt University, 2003  
Plant-insect interactions, mutualism, coevolution, and phylogenetics
- Lixin Shen, Associate Professor  
Ph.D., Zhongshan University, 1996  
Wavelets and image processing
- Stephanie Shirilan, Assistant Professor  
Ph.D., Brandeis University, 2009  
Seventeenth-century literature and culture
- Donald I. Siegel, Professor, Chair, Earth Sciences  
Ph.D., University of Minnesota, 1981  
Regional hydrogeology, wetland hydrogeology, groundwater geochemistry
- Robert Silver, Professor
- Renate Simson, Part-time Assistant Professor  
Ph.D., Syracuse University, 1974  
Nineteenth-century African American literature
- Tomasz Skwarnicki, Professor  
Ph.D., Institute of Nuclear Physics, Krakow (Poland), 1986  
Elementary particles, experiment
- Bruce Smith, Professor  
M.A., Bucknell University, 1971  
Creative writing, poetry
- Joshua M. Smyth, Professor  
Ph.D., State University of New York at Stony Brook, 1998  
Health psychology/behavioral medicine, stress and coping, psychological interventions
- Mitchell Soderberg, Assistant Professor  
Ph.D. University of Michigan, 2006  
Elementary particles, experiment
- Karl Solibakke,
- Paul Souder, Professor  
Ph.D., Princeton University, 1971  
Medium energy experiments
- James T. Spencer, Laura J. and L. Douglas Meredith Professor, Associate Dean  
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, Assistant Professor  
B.A., Evergreen State College, 1992  
Creative writing, fiction
- Michael B. Sponsler, Professor  
Ph.D., California Institute of Technology, 1987  
Organic and organometallic chemistry, liquid crystalline holographic materials
- Robert P. Sprafkin, Adjunct Professor  
Ph.D., Ohio State University, 1968

- W. Thomas Starmer, Professor  
Ph.D., University of Arizona, 1972  
Population genetics, evolutionary biology, ecological genetics
- Sanford Sternlicht, Professor Emeritus  
Ph.D., Syracuse University, 1962  
Drama, fiction
- Sheldon Stone, Professor  
Ph.D., University of Rochester, 1972  
Elementary particles, experiment
- Kevin Sweder, Professor of Practice  
Ph.D., California Institute of Technology  
Biochemistry, Biochemical methods in bioforensic and bioterrorism detection, DNA repair mechanisms, and genetic toxicology.
- Melody Troeger Sweet, Assistant Professor  
Ph.D., University of Pennsylvania, 1985  
Physiology and molecular biology
- Zofia Sztechmiler,
- Harvey A. Taub, Adjunct Professor  
Ph.D., University of Massachusetts, 1963
- Harvey Teres, Professor  
Ph.D., University of Chicago, 1986  
Twentieth-century American literature and culture, Marxist theory, American studies
- Greg Thomas, Associate Professor  
Ph.D., University of California-Berkeley, 1999  
African/diasporic literature and culture, studies in sex and sexuality, world political criticisms
- Laurence Thomas, Professor, Philosophy and Political Science  
Ph.D., University of Pittsburgh, 1976  
Ethical theory, social philosophy, the Holocaust
- Maria Emma Ticio Quesada, Assistant Professor  
Ph.D., University of Connecticut, 2003  
Languages, Literatures and Linguistics; Linguistics
- John W. Tillotson, Associate Professor  
Ph.D. University of Iowa, 1996  
Science teacher education, teachers' beliefs and practices, rural education
- Silvio Torres-Saillant, Associate Professor  
Ph.D., New York University, 1991  
Caribbean, United States, Latino, and comparative literature
- Nancy I. Totah, Associate Professor  
Ph.D., Yale University; 1990  
New methods for organic synthesis, asymmetric synthesis of natural products
- Joseph T. Tupper, Professor  
Ph.D., State University of New York at Albany, 1970  
Growth-factor regulation of cell proliferation
- John Ucci, Professor  
Ph.D., University of California, Berkely, 1964  
Algebraic topology
- J. Albert L. Uy, Associate Professor  
Ph.D., University of Maryland-College Park, 2000  
Sexual selection, animal communication, speciation
- Edwin I.S. Van Bibber-Orr, Assistant Professor of Chinese  
Ph.D., Yale University, 2013  
Chinese Language, Premodern Chinese Poetry, Chinese Song Lyric (Ci), Chinese Women Writers, Reception History, Translation Theory, Print Culture in Premodern China, Ming and Qing Fiction
- Matthieu H. van der Meer, Assistant Professor  
Ph.D., University of Groningen, 2006  
The history of Platonic literature in Antiquity and the Middle Ages with a special emphasis of the reception of Platonism by the philosopher Nicholas of Cusa (1401-1464).
- Robert Van Gulick, Professor  
Ph.D., University of California, Berkeley, 1976  
Philosophy of mind, philosophy of psychology
- Peter A. Vanable, Associate Professor  
Ph.D., University of Illinois at Chicago, 1997  
Health psychology, HIV/AIDS prevention, substance use disorders
- Kathy R. Vander Werff, Associate Professor  
Ph.D., University of 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
- Gianfranco Vidali, Professor  
Ph.D., Pennsylvania State University, 1982  
Surface physics: adsorption/desorption phenomena, two-dimensional matter, thin-film growth; lowtemperature physics
- Andrew Vogel, Professor  
Ph.D., University of Kentucky, 1989  
Partial differential equations
- Karina von Tippelskirch, Assistant Professor  
Ph.D., Marburg University (Germany), 1997  
German literature
- Joanne P. Waghorne, Professor  
Ph.D., University of Chicago, 1976  
History of religions, South Asian religion, globalization
- Ernest E. Wallwork, Professor  
Ph.D., Harvard University, 1971  
Ethics, religion, the social sciences, and bioethics
- Jianchun Wang, Research Associate Professor  
Ph.D., Massachusetts Institute of Technology, 1997  
Elementary particles, experiment
- B.R. Ware, Professor  
Ph.D., University of Illinois, 1972  
Biophysical chemistry
- Betsy B. Waterman, Adjunct Assistant Professor  
Ph.D., Syracuse University, 1990
- Mark E. Watkins, Professor Emeritus  
Ph.D., Yale University, 1964  
Combinatorics, algebraic graph theory
- Scott Watson, Assistant Professor, Physics  
Ph.D. Brown University, 2005  
Particle physics; cosmology theory

James W. Watts, Professor  
Ph.D., Yale University, 1990  
Hebrew Bible and ancient Near Eastern  
religious traditions

Laura Webb, Research Professor  
Ph.D., Stanford University, 1999  
Structural geology, thermochronology,  
tectonics

Stefan Wehrli, Assistant Professor,  
Mathematics  
Ph.D. University of Zurich, 2007  
Topology

Roy Welch, Associate Professor  
Ph.D., University of Wisconsin-Madison,  
1997  
Biochemistry, molecular signaling mechanisms

Louise Wetherbee Phelps, Emeritus  
Professor  
Ph.D., Case Western Reserve University,  
1980  
Composition and rhetoric (theory,  
phenomenological description, criticism,  
pedagogy), writing program administration

Jason R. Wiles, Assistant 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

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 Wylie, Assistant Professor  
Ph.D., University of California, Santa Barbara,  
2006  
Riemannian geometry, geometric flows, global  
geometric analysis.

Amy S. Wyngaard, Associate Professor  
Ph.D., University of Pennsylvania, 1998  
French Literature

Yuesheng Xu, Professor  
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

Jon Zubieta, Distinguished Professor  
Ph.D., Columbia University, 1971  
Inorganic chemistry, coordination complexes,  
polyoxometalates, microporous materials,  
technetium-based radiopharmaceuticals

# School Of Education

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Douglas Biklen, 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 School of Education is accredited by the National Council for Accreditation of Teacher Education (NCATE). NCATE will transform into the Council for the Accreditation of Educator Preparation (CAEP) in summer 2013.

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.

CAEP is active in the development of educator preparation programs. It requires schools of education to use performance based assessments to measure a candidate's proficiencies, a programs' success in achieving its goals, and a unit's operations in support of candidates and programs.

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.

Refer to both NCATE and CAEP websites for additional information on accreditation:

<http://www.ncate.org/> <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.) is the first degree beyond the bachelor's degree. Each M.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 than the M.S.

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 and the M.Mus. in music education. Selected areas of study lead to public school teacher certification; others prepare students for roles in various educational and non-educational settings. Many M.S. degrees 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, and Human Ecology. 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 STUDIES (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, the Cultural Foundations of Education program 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.

The Instructional Design, Development and Evaluation Department offers two Certificate of Advanced Study programs in Educational Technology (15 credits) and Professional Practice in Educational Technology (24 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.

### Concurrent Degrees

A number of concurrent degrees are offered by the School of Education. Students wishing to apply for a concurrent degree may complete 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 receiving either degree.

### Concurrent Master's Preparation Programs in English Education and Literacy Education (5-12) or English Education and Teaching English Language Learners M.S. Programs

Students in the English Education master's preparation program have the unique opportunity to be concurrently enrolled in either Literacy Education (5-12) OR Teaching English Language Learners (all grades). For more information on this possibility, please contact Dr. Marcelle Haddix, 200 Huntington Hall, 315-443-4755, mhaddix@syr.edu.

### NONMATRICULATED 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 (nonmatriculated student). Some courses require approval of the instructors. Enrolling in coursework as a nonmatriculated student does not allow the nonmatriculated 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 of Education is accredited by the National Council for Accreditation of Teacher Education (NCATE). NCATE will transform into the Council for the Accreditation of Educator Preparation (CAEP) in summer 2013.

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 get the most out of 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 Laurie Deyo, Graduate Admissions Recruiter, School of Education, 111 Waverly Avenue, Suite 230, Syracuse, N.Y. 13244-2340; e-gradrcrt@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 [finmail@syr.edu](mailto:finmail@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 33% of the student's tuition.

Students in the following preparation/professional M.S. programs are eligible to receive the scholarship:

- Art Education
- Childhood Education
- Clinical Mental Health Counseling (for Selected Studies in Education students ONLY)
- Early Childhood Special Education
- English Education
- Inclusive Special Education (1-6 and 7-12)
- Inclusive Special Education (Severe/Multiple Disabilities)
- Instructional Technology
- Literacy Education (B-6 and 5-12)
- Mathematics Education
- Music Education
- School Counseling
- Student Affairs Counseling (for Selected Studies in Education students ONLY)
- Science Education (Earth Science, Biology, Chemistry, and Physics)
- Social Studies Education
- Teaching English Language Learners

The tuition scholarship program covers 33% of the tuition charges students are responsible for paying each semester during which the student is enrolled as a full-time student in the approved program. 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 an eligible program. The tuition scholarship program applies to M.S. programs only. While the scholarship may be combined with most other financial aid, the scholarship is applied first to the tuition owed before all other funding is awarded. There will be no cash refunds or payouts. The scholarship is offered to eligible students in their admission packet from the Graduate School. Students who sign the letter of acceptance for the scholarship are automatically credited 33% of their tuition

each semester of study in their program.

For further information please contact Laurie Deyo (315) 443-2505 or lldeyo@syr.edu.

## Professional Preparation For 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 33% 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 programs are eligible to receive the award:

- Concurrent M.S. teacher preparation programs with Inclusive Special Education (1-6 or 7-12) or Literacy Education (B-6 or 5-12) or Teaching English Language Learners
- Instructional Technology (all grades)
- Literacy Education (B-6 and 5-12)
- 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

Eligible students complete a scholarship application each semester. Scholarships are awarded and credited to student bursar accounts typically within two weeks of the University financial aid deadline for dropping courses. The value of the scholarship is calculated based on the total number of credit hours for which the student is registered, combined with any outside scholarships/funding. The tuition bill for which the students is responsible is then credited 33% of the student's tuition. The deadline for submitting scholarship forms is typically one week after the University add deadline of the current semester, although forms should be submitted as soon as students have completed their registration for the semester. No exceptions will be made for late submissions.

For additional information contact:

Laurie Deyo  
lldeyo@syr.edu  
(315) 443-2505

## Robert Noyce Scholars Program

The Robert Noyce Scholars program, funded by the National Science Foundation and offered jointly through Syracuse University's College of Arts and Sciences and School of Education, responds to the critical need for mathematics and science teachers by encouraging talented science, technology, engineering, and mathematics (STEM) students and STEM professionals to pursue teaching careers in high-needs K-12 schools.

The funds granted from the Syracuse University Noyce Scholars Program are intended to assist persons who wish to make a commitment to teach science or mathematics in high-needs urban or rural schools. Qualifying graduate students receive up to \$20,000 for one year of study.

Download the SU Noyce Scholar Program brochure at

For additional information contact:

John W. Tillotson, Ph.D., Associate Professor  
Syracuse University Noyce Scholars Program  
101 Heroy Geology Lab  
Syracuse, NY 13244-1070  
(315) 443-2586 or noyce@syr.edu

## School Of Education Scholarships

The School of Education offers several competitive scholarships. These scholarships are specific to the School of Education and vary in number of tuition credits and monetary awards. Approximately 15% of School of Education students will receive one of these scholarships.

For additional information contact:  
Angela Flanagan, Scholarship Coordinator  
Awards & Scholarship Committee  
250 Huntington Hall  
Syracuse, New York 13244-2340  
Phone: (315) 443 – 4752

## SU Office Of Sponsored Programs

This office offers information on a wide range of external funding opportunities for SU graduate students. Click on the Funding Opportunities link and then the Graduate Student Funding Opportunities link at <http://osp.syr.edu>.

## TEACH Grant

The College Cost Reduction and Access Act of 2007 created the Teacher Education Assistance for College and Higher Education (TEACH) Program that provides grants of up to \$4,000 per year to students who intend to teach in a public or private elementary or secondary school that serves students from low-income families.

For additional information, call (315) 443-1513, email [finmail@syr.edu](mailto:finmail@syr.edu), or visit: [http://www.syr.edu/financialaid/financialliteracy/teach\\_grant.html](http://www.syr.edu/financialaid/financialliteracy/teach_grant.html).

## Student Services

### THE OFFICE OF ACADEMIC AND STUDENT SERVICES

The Office of Academic and Student Services was created to ensure that students get the most out of their college experience. The staff in the office provides a thorough and effective system of support for both undergraduate and graduate students from the admissions process through graduation and beyond.

From academic support to career advice to information about opportunities to study abroad, the professionals in Academic and Student Services have the experience and knowledge to answer questions, provide advisement, and make referrals as necessary.

#### Publications

Academic and Student Services publishes a newsletter each semester which provides students, faculty, and staff current information about certification, career services, and advising. The current and previous newsletters can be found online at: [http://soe.syr.edu/current/student\\_services/default.aspx](http://soe.syr.edu/current/student_services/default.aspx)

#### Forms

Official forms most commonly requested by students can be found in the Office of Academic and Student Services, and also on the website at: [http://soe.syr.edu/current/student\\_services/forms.aspx](http://soe.syr.edu/current/student_services/forms.aspx)

If a form that is relevant to a specific academic situation cannot be found on the website, students can stop by the Office of Academic and Student Services for assistance.

Academic and Student Services  
111 Waverly Avenue, Suite 230  
Syracuse, NY 13244  
Phone (315) 443-9319  
Fax (315) 443-5732

#### Undergraduate Advising

All undergraduate students in the School of Education are encouraged to make use of the facilities of the Office of Academic and Student Services. Located at 111 Waverly Avenue, Suite 230, Academic and Student Services has the resources to help students better understand academic requirements, negotiate academic policies and processes, and get the most out of their college experience.

The mission of Academic and Student Services is to help students succeed by providing information, fostering personal development and responsibility, and offering supportive services. Students have an open invitation to stop by with questions or concerns regarding academic programs, advising, career issues, and certification. If an answer is not provided here, our staff is dedicated to helping students find what they need.

Services available to undergraduates through the Office of Academic and Student Services include the following:

- Advising (faculty and staff)
- Peer Advising
- Admissions
- Academic and Personal Support
- Career Services
- Teacher Certification

## Graduate Advising

The Office of Academic and Student Services provides advice and guidance on School of Education and Syracuse University policies, advocates for student concerns, and offers a range of services to assist students as they work toward their academic and career goals.

The mission of Academic and Student Services is to help students succeed by providing information, fostering personal development and responsibility, and offering supportive services. Students have an open invitation to stop by with questions or concerns regarding academic programs, advising, career issues, and certification. If an answer is not provided here, our staff is dedicated to helping students find what they need.

Services available to graduate students through the Office of Academic and Student Services include the following:

- Advising (faculty and staff)
- Admissions
- Academic and Personal Support
- Career Services
- Teacher Certification

## New York State Teacher Certification

### Initial Certification

- Is the first New York State certificate and is effective for 5 years from the issuance date.
- Complete School of Education approved undergraduate or graduate teacher prep program.
- Pass New York State teacher exams.
- Complete fingerprinting process at least 2 months prior to graduation.
- Candidates should apply for this certification within 2 years of graduation to be eligible for School of Education's recommendation.

### Professional Certification

- Must be earned before initial certificate expires.
- New York State teacher exams are not required (with the exception of Speech & Language Disabilities).
- Requires completion of a 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 Bachelors Level

- Earn Masters degree leading to professional certification in area of initial certification.
- Earn Masters degree in a new certification area.
- Earn 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).

### 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](http://www.nystce.nesinc.com).
- Apply for fingerprinting clearance at least 2 months prior to graduation at 111 Waverly Avenue, Suite 230 (above the Health Center) or call 315-443-4759.
- 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.
- Complete the Child Health & Life Safety online seminar. Call 315-443-9319 for more information regarding registration.
- Apply for certification through NYSED TEACH Online Services at [www.highered.nysed.gov/tcert/](http://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.

## Child Health & Life Safety Seminar

- If you are in a teacher preparation program leading to a New York State Certification, you are required to complete the Child Health & Life Safety Seminar.
- The Office of Academic and Student Services is offering this mandated seminar in an online format via Blackboard.
- The six required topic areas are: Child Abuse Recognition, Violence Prevention, Alcohol/Drug/Tobacco Prevention, Child Abduction Prevention, Fire and Arson Prevention, and Highway/General Safety.
- The seminar is free of charge to Syracuse University students, who will be eligible for institutional recommendation for New York State Certification and/or need the seminar for graduation.
- Upon completion of the seminar, you will need to arrange to take an online final exam, which is being offered by the Office of Academic and Student Services.
- You must complete the seminar and pass the exam BEFORE student teaching.
- Call 315-443-9319 for more information regarding registration.

## Fingerprinting

- Required for New York State certification.
- Apply for fingerprinting clearance at least 2 months prior to graduation.
- Please check the website for hours of processing: [http://soe.syr.edu/current/student\\_services/default.aspx](http://soe.syr.edu/current/student_services/default.aspx)
- Fingerprinting will take place at 111 Waverly Avenue, Suite 230 (above the Health Center).
- Requires SUID and a \$94.25 money order made payable to New York State Education Department. Cash and personal checks not accepted.
- Call 315-443-4759 for additional inquiries regarding this process.
- Inquiries regarding whether previous fingerprinting applies for certification, please contact Office of School Personnel Review and Accountability, New York State Education Department, 987 Education Building Annex, Albany, NY 12234. Phone 518-473-2998 or email [OSPRA@mail.nysed.gov](mailto:OSPRA@mail.nysed.gov).

## Information And Updates Regarding All New York State Teacher Certification Examinations Can Be Found At:

<http://www.highered.nysed.gov/resources.html>

## Career Services Office

The School of Education Career Services center offers a variety of services to all Syracuse University students who are seeking positions as teachers, school counselors, school speech and language pathologists, school library media specialists, and school administrators. This office does not place students in positions; rather, it facilitates researching employment opportunities and assists students in the job search. Services provided include setting up a credential file, resume assistance, Teacher Recruitment Days participation and New York State Teacher Certification information.

## 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 Linda DeFrees.
- All checks and money orders should be made payable to Syracuse University.
- Application forms are available at 111 Waverly Avenue, Suite 230 (above the Health Center).

This office reserves the right to refuse sending a credential file mailing for any account past 60 days overdue.

## 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 Linda DeFrees.

## 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 school districts visiting from a variety of schools.

## Job Search Handbook For Educators

- This handbook is available free of charge to facilitate the job search. It offers valuable tips for resumes, cover letters and interviewing techniques. It also contains information related to job hunt strategies and teacher 'supply and demand' per region.

## Teaching Opportunities:

Explore career opportunity websites.

Teaching Abroad Opportunities:  
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.

## Facilities

The quality of a student-centered research institution is measured in part by its success in integrating its students' learning experiences and its faculty members' scholarship. In a professional school, the key to that integration lies in sustained, critical, always-respectful engagement with the profession and those it serves. It relies upon creating a community of learners devoted to service. The efforts of our students and faculty members to create such a community are supported by an organizational infrastructure of coordinating councils, teacher centers, professional development schools, subject matter academies, specially-funded research and development projects, and skilled staff members. All are devoted to nurturing collaborative partnerships between preservice educators, University faculty, and practicing professionals in public education, higher education, and other educational and work environments.

The following facilities are part of our campus in Syracuse, New York:

- Huntington Hall houses the Dean's office and the majority of School of Education departments and offices.
- Hoople houses classroom space and is home to Disability Studies.
- Heroy is home to the Department of Science Teaching and houses classroom and laboratory space.
- Comstock Art Facility, 1055 Comstock Ave is the main building for Art Education.
- Crouse College houses an auditorium and practice space for Music Education .
- Carnegie is home to Math Education.
- Counseling and Human Services Clinic located at 716 James St., Suite 105.
- 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
  - Exercise Biochemistry Laboratory
  - Muscle Biology Laboratory
- Ernie Davis is home to the Teaching Laboratory and Classroom in addition to the Health and Exercise Science Learning Community.

## Research Centers & Institutes

The following centers, institutes, and projects are supported through the School of Education and focus on educational issues related to research, training, and/or social change:

- Center for Digital Literacy
- Center for Urban Education in Mathematics and Literacy
- Center on Human Policy
- Center on Human Policy, Law, and Disability Studies
- Continuous Education and Global Outreach
- Counseling and Human Services Training Clinic ERIC Clearinghouse on Information Resources
- Exercise Biochemistry Laboratory
- Exercise Science Teaching Laboratory and Classroom-Ernie Davis Jr. Hall
- Facilitated Communication Institute
- Fitness/Wellness Research Laboratory
- Human Performance Laboratory
- IDD&E Interactive Laboratory
- Inclusion Institutes
- Intergroup Dialogue
- Liberty Partnerships Program
- Musculoskeletal Research Laboratory

- Office of Institutional Research and Assessment
- Psychoeducational Teaching Laboratory The Study Council at Syracuse University Schools of Promise
- Regional Holocaust and Genocide Initiative: Resistance, Resilience, and Responsibility
- SUPAC
- Summer Literacy Clinic
- The Systems Change Project
- The Taishoff Center for Inclusive Higher Education
- Training Institute for Human Service Planning
- Training Systems Institute

## Academic Offerings

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### African American Studies Secondary Teacher Preparation Program

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](mailto: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 Social Studies (7-12). It is an alternative to the existing undergraduate Arts and Sciences/Education dual program in these areas, and an option that often takes less time and fewer credits than earning the entire master's degree in education after completion of a general Arts and Sciences degree.

The combined bachelor's/master's teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree allows.

Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met – typically at the end of 5 years. Students begin taking education courses as undergraduates, including some in the fourth year that are taken for graduate credit, and apply to become graduate students for their last two semesters. Some summer study (not necessarily at SU) may be required.

The combined program has a two-stage admission process. The first stage involves meeting with the School of Education contact as early as possible to develop a plan, and, if a decision to pursue the program is made, completing a form signed by Education and a new declaration of program of study form in Arts and Science to declare the Arts and Sciences program with “Teacher Preparation/5 year” appended to the title (e.g., “History (TchrPrep/5yr)” instead of “History”). The second admission stage involves an application to the Graduate School. Each admission stage requires a minimum 3.0 cumulative GPA and a minimum 3.0 GPA in the courses from the subject to be taught. The second stage also requires successful performance in the undergraduate education courses.

The choices of Arts and Sciences majors, and the course requirements for the Arts and Sciences major, the Liberal Arts Core, and other requirements related to the major are the same for these combined programs as those for students completing the dual enrollment undergraduate Arts and Sciences/Education program. These details about specific adjustments necessary to the Liberal Arts Core and to Arts and Sciences major may be found in the section describing Dual Arts and Sciences/ Education Programs.

Because of the specific course requirements and sequencing of courses, it is important that students interested in one of these programs meet with the School of Education contact as soon as possible to develop a plan. EDU 204, the first education course, must be taken no later than spring of the junior year.

### Anthropology Secondary Teacher Preparation Program

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](mailto: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 Social Studies (7-12). It is an alternative to the existing undergraduate Arts and Sciences/Education dual program in these areas, and an option that often takes less time and fewer credits than earning the entire master's degree in education after completion of a general Arts and Sciences degree.

The combined bachelor's/master's teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree

allows.

Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met – typically at the end of 5 years. Students begin taking education courses as undergraduates, including some in the fourth year that are taken for graduate credit, and apply to become graduate students for their last two semesters. Some summer study (not necessarily at SU) may be required.

The combined program has a two-stage admission process. The first stage involves meeting with the School of Education contact as early as possible to develop a plan, and, if a decision to pursue the program is made, completing a form signed by Education and a new declaration of program of study form in Arts and Science to declare the Arts and Sciences program with “Teacher Preparation/5 year” appended to the title (e.g., “History (TchrPrep/5yr)” instead of “History”). The second admission stage involves an application to the Graduate School. Each admission stage requires a minimum 3.0 cumulative GPA and a minimum 3.0 GPA in the courses from the subject to be taught. The second stage also requires successful performance in the undergraduate education courses.

The choices of Arts and Sciences majors, and the course requirements for the Arts and Sciences major, the Liberal Arts Core, and other requirements related to the major are the same for these combined programs as those for students completing the dual enrollment undergraduate Arts and Sciences/Education program. These details about specific adjustments necessary to the Liberal Arts Core and to Arts and Sciences major may be found in the section describing Dual Arts and Sciences/ Education Programs.

Because of the specific course requirements and sequencing of courses, it is important that students interested in one of these programs meet with the School of Education contact as soon as possible to develop a plan. EDU 204, the first education course, must be taken no later than spring of the junior year.

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## Art Education: Preparation M.S.

Contact: James H. Rolling Jr., Comstock Art Facility Rm 043, 315-443-2355, [jrolling@syr.edu](mailto: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.

There are two master's programs of study. The Art Education: Preparation M.S. program leads to initial teaching certification in visual arts for New York State. 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. 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 and already have an initial New York State teaching certification in visual arts.

Information is available on our college course prerequisites.

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.

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## Art Education: Professional Certification M.S.

Contact: James H. Rolling Jr., Comstock Art Facility Rm 043, 315-443-2355, [jrolling@syr.edu](mailto: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.

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.

## Chemistry Secondary Teacher Preparation Program

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](mailto: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 Chemistry (7-12). It is an alternative to the existing undergraduate Arts and Sciences/Education dual program in these areas, and an option that often takes less time and fewer credits than earning the entire master's degree in education after completion of a general Arts and Sciences degree.

The combined bachelor's/master's teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree allows.

Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met – typically at the end of 5 years. Students begin taking education courses as undergraduates, including some in the fourth year that are taken for graduate credit, and apply to become graduate students for their last two semesters. Some summer study (not necessarily at SU) may be required.

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Because of the specific course requirements and sequencing of courses, it is important that students interested in one of these programs meet with the School of Education contact as soon as possible to develop a plan. EDU 204, the first education course, must be taken no later than spring of the junior year.

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## Clinical Mental Health Counseling M.S.

Contact Jason Duffy Ph.D 259 Huntington Hall, 315-443-2266, [jtduffy@syr.edu](mailto:jtduffy@syr.edu)

Clinical Mental Health Counseling

The Master of Science in Clinical Mental Health Counseling prepares students for employment in a variety of human service settings, including:

- Community Mental Health Agencies
- Schools
- Colleges/Universities
- Hospitals
- Government Agencies
- Domestic Violence and other Social Service Organizations

Students develop skills in clinical mental health counseling, multicultural/social justice counseling, career counseling, substance abuse services, empowerment approaches for urban youth, 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. 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, skills, commitment, and service in a wide range of educational and community settings.

S.U. Re-Accredited through 2016:

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.

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## Counseling And Counselor Education Ph.D

Contact Janine Bernard, Ph.D., 259 Huntington Hall, 315-443-2266, [bernard@syr.edu](mailto:bernard@syr.edu)

### Counseling and Counselor Education

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 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. 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.

In addition to meeting national accreditation standards, our program claims special expertise in five distinct areas. Students can expect unique opportunities, including conducting research, in any or all of the following:

- Clinical Supervision  
Developing the knowledge and skills necessary to train and supervise counselors and counselors-in-training, and to teach supervision to others.
- College Mental Health Counseling  
Developing the knowledge and clinical skills necessary to work within a college counseling context with students who present with a wide range of developmental and mental health concerns.
- Counseling People with Disabilities  
Developing the knowledge and skills necessary to ensure full participation of people with disabilities in all aspects of living.
- The Future Professoriate  
Developing the knowledge and skills necessary to assume academic, administrative, and professional leadership roles related to the professoriate.
- Social Justice and Urban Youth  
Developing the knowledge, skills, and awareness necessary to identify and confront the institutionalized forms of discrimination which continue to perpetuate disparities in social, academic, and career opportunities for urban youth.

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.

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. 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.

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, skills, commitment, and service in a wide range of educational and community settings.

S.U. Re-Accredited through 2016:

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.

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## Cultural Foundations Of Education M.S., C.A.S, Ph.D.

Contact Barbara Applebaum, Chair, 363 Huntington Hall, 315-443-3343, [bappleba@syr.edu](mailto:bappleba@syr.edu)

### Cultural Foundations of Education

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.

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## Cultural Foundations Of Education M.S.

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.

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.

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## Cultural Foundations Of Education C.A.S.

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.

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## Cultural Foundations Of Education Ph.D.

The department supports interdisciplinary work and encourages the use of diverse research approaches including empirical and philosophical work, historical research, and policy analysis. The doctoral degree program is designed so that students both receive a broad education and develop disciplinary tools without being restricted to a narrowly specialized program of study. Students can choose a particular concentration—history of education, philosophy of education, or sociology of education—or they can work between these areas. Within these concentrations, students may want to focus on particular areas of research such as disability studies, popular culture, urban education, gender and education, popular culture and race, racism and education.

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## Disability Studies C.A.S.

Contact Steven Taylor, 363 Huntington Hall, 315-443-4484, staylo01@syr.edu

### Disability Studies

In addition to the M.S. and Ph.D. degrees, Cultural Foundations of Education offers a graduate Certificate of Advanced Study (C.A.S.) in Disabilities Studies. Disability Studies applies social, cultural, historical, and philosophical perspectives to disability in society. Building on the proud tradition of Syracuse University's School of Education in this important area, the program is designed to assist students in understanding disability and to prepare them to work to decrease barriers to full participation of all people in their community and society. This program stands at the forefront of change, exploring and facilitating new ways of thinking about and accommodating people with disabilities.

The C.A.S. is a 15-credit program, with an oral or written exam at the conclusion of coursework. This program is available to students enrolled in Syracuse University graduate programs as well as to individuals who are not otherwise matriculated into other Syracuse University programs. Cultural Foundations of Education also collaborates with the College of Law in a joint degree program focusing on disabilities studies. Students obtain the J.D. and M.S. degrees, with the C.A.S. in disabilities studies, in three years instead of the four otherwise necessary to obtain both degrees.

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## Early Childhood Special Education M.S.

Contact: Gail Ensher, 150 Huntington Hall, 315-443-9650, glensher@syr.edu

Syracuse University's Early Childhood Special Education (ECSE) Program is one of the top-ranked master's degree programs in the nation. The Early Childhood Special Education program leads to certification in both regular early childhood and early childhood special education, birth through grade 2. It includes a wealth of valuable field experience and clinical practice experience, in which students learn to work with infants, young children, and their families in home, school, and community-based educational settings. Students completing the program are prepared to assume such professional positions as home-based itinerant teacher, early childhood special educator, regular preschool teacher, teacher consultant, and public school teacher in kindergarten or the early primary grades.

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, and occupational therapy. The program has a long-standing history of providing training that infuses clinical practice with cutting-edge research. Students work closely with faculty members who have extensive clinical experience as they pursue studies in areas such as early assessment and intervention with infants, young children, and families in home, medical, and educational settings. Syracuse ECSE is known for its close ties to community educators and other professionals who serve high-needs populations of young children and families. ECSE is also known for its acceptance of graduate students from diverse backgrounds.

### WHAT CAN WE OFFER YOU?

The graduate program in ECSE admits students who have backgrounds or certification in Special Education as well as qualified students entering the field.

Each student's credentials are evaluated on an individual basis, but here are some general guidelines concerning the length of the course of study.

- Students who have previously completed the necessary prerequisite courses and have teaching experience and certification in Special Education or Early Childhood Education may require as few as 36 graduate credits, allowing them to complete the ECSE program in just two semesters bracketed by two summer sessions of full-time work.
- Students admitted with undergraduate training in Childhood Regular Education and Special Education have opportunities to earn two additional certifications from among the areas of Regular Education, Special Education, and Early Childhood Education during the course of two semesters bracketed by two summer sessions of full-time work.
- Students admitted without any certification or prior training in Education or Special Education typically require a total of 60 credits to complete the program.

Each applicant will have undergraduate transcripts reviewed for the following required prerequisites:

- A liberal arts major or concentration of at least 30 credits, of which at least 15 credits represent upper division courses;
- A college writing course completed with a grade of B- or higher, or an equivalent demonstration of writing competency, as judged by the program;
- Two appropriate college-level mathematics courses, with grades averaging at least B- and neither grade below C.
- Two appropriate natural science courses with laboratories, with grades averaging at least B- and neither grade below C; in some cases, appropriate non-laboratory science courses may be substituted, as judged by the program;
- 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 already have an active New York State initial certificate in Childhood 1-6 or Early Childhood B-2 are considered as having met the requirements listed above.

The Syracuse master's degree program in ECSE 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.

Sample Curriculum:

As noted above, each student's program is tailored to individual needs and varies according to interests, prior coursework, and professional experience. A program for a student without prior experience or certification in Education or Early Childhood might look like the following:

A student with prior background may have courses waived.

#### FIRST SUMMER SEMESTER

- EED 605 Understanding Teaching in a Diverse Society (3)
- EED 643 The Parent/Caregiver-Professional Partnership (3)
- EED 654 Math, Science, and Social Studies in Early Childhood (3)
- SPE 653 Positive Approaches to Guiding Challenging Behavior (3)

#### FIRST FALL SEMESTER

- RED 601 Literacy across the Lifespan (3)
- EDU 607 Principles of Teaching and Learning in Inclusive Classrooms (3)
- SPE 520 Methods and Curricula in Early Childhood Special Education (3) or
- SPE 609 Teaching Children and Adolescents with Autism (3)
- SPE 618 Augmentation of Communication in Inclusive Classrooms (3)
- SPE 706 Seminar in Early Childhood Special Education (3)

#### SPRING SEMESTER

- CFS 667 Cross Cultural Perspectives in Families (3)
- SPE 623 Families of Children with Disabilities (3)
- SPE 627 Early Intervention for Children's Reading Problems (3)

## SECOND SUMMER SEMESTER

EDU 508 Student Teaching in ECSE (6)

SPE 633 The High Risk Infant (3)

## SECOND FALL SEMESTER

EDU 508 Student Teaching in Regular Early Childhood (6) (Half-time, requiring eight weeks in regular kindergarten; or full-time, requiring five weeks in Grades 1 or 2)

SPE 613 Developmental Therapy for Children with Disabilities

Upon completion of the ECSE program, interested students may apply to the Literacy Program at Syracuse University, where they may earn a (second) master's degree, in Reading and Language Arts by completing an additional 24 credits of coursework. For information about this program, students should contact the Reading and Language Arts Department.

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## Earth Science Secondary Teacher Preparation Program

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](mailto: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 Earth Science (7-12). It is an alternative to the existing undergraduate Arts and Sciences/Education dual program in these areas, and an option that often takes less time and fewer credits than earning the entire master's degree in education after completion of a general Arts and Sciences degree.

The combined bachelor's/master's teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree allows.

Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met – typically at the end of 5 years. Students begin taking education courses as undergraduates, including some in the fourth year that are taken for graduate credit, and apply to become graduate students for their last two semesters. Some summer study (not necessarily at SU) may be required.

The combined program has a two-stage admission process. The first stage involves meeting with the School of Education contact as early as possible to develop a plan, and, if a decision to pursue the program is made, completing a form signed by Education and a new declaration of program of study form in Arts and Science to declare the Arts and Sciences program with “Teacher Preparation/5 year” appended to the title (e.g., “History (TchrPrep/5yr)” instead of “History”). The second admission stage involves an application to the Graduate School. Each admission stage requires a minimum 3.0 cumulative GPA and a minimum 3.0 GPA in the courses from the subject to be taught. The second stage also requires successful performance in the undergraduate education courses.

The choices of Arts and Sciences majors, and the course requirements for the Arts and Sciences major, the Liberal Arts Core, and other requirements related to the major are the same for these combined programs as those for students completing the dual enrollment undergraduate Arts and Sciences/Education program. These details about specific adjustments necessary to the Liberal Arts Core and to Arts and Sciences major may be found in the section describing Dual Arts and Sciences/ Education Programs.

Because of the specific course requirements and sequencing of courses, it is important that students interested in one of these programs meet with the School of Education contact as soon as possible to develop a plan. EDU 204, the first education course, must be taken no later than spring of the junior year.

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## Economics Secondary Teacher Preparation Program

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](mailto: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 Social Studies (7-12). It is an alternative to the existing undergraduate Arts and Sciences/Education dual program in these areas, and an option that often takes less time and fewer credits than earning the entire master's degree in education after completion of a general Arts and Sciences degree.

The combined bachelor's/master's teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree allows.

Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met – typically at the end of 5 years. Students begin taking education courses as undergraduates, including some in the fourth year that are taken for graduate credit, and apply to become graduate students for their last two semesters. Some summer study (not necessarily at SU) may be required.

The combined program has a two-stage admission process. The first stage involves meeting with the School of Education contact as early as possible to develop a plan, and, if a decision to pursue the program is made, completing a form signed by Education and a new declaration of program of study form in Arts and Science to declare the Arts and Sciences program with “Teacher Preparation/5 year” appended to the title (e.g., “History (TchrPrep/5yr)” instead of “History”). The second admission stage involves an application to the Graduate School. Each admission stage requires a minimum 3.0 cumulative GPA and a minimum 3.0 GPA in the courses from the subject to be taught. The second stage also requires successful performance in the undergraduate education courses.

The choices of Arts and Sciences majors, and the course requirements for the Arts and Sciences major, the Liberal Arts Core, and other requirements related to the major are the same for these combined programs as those for students completing the dual enrollment undergraduate Arts and Sciences/Education program. These details about specific adjustments necessary to the Liberal Arts Core and to Arts and Sciences major may be found in the section describing Dual Arts and Sciences/ Education Programs.

Because of the specific course requirements and sequencing of courses, it is important that students interested in one of these programs meet with the School of Education contact as soon as possible to develop a plan. EDU 204, the first education course, must be taken no later than spring of the junior year.

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## Educational Leadership M.S., C.A.S., & Ed.D.

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### Educational Leadership C.A.S.

Contact Diane Canino-Rispoli, 150 Huntington Hall, 315-443-2685, [deaninor@syr.edu](mailto:deaninor@syr.edu)

#### Educational Leadership

Our programs in educational leadership reflect the conviction that school leaders serve all students best when they practice student-centered leadership, placing students who have been historically marginalized at the center of the educational mission and practice.

The Certificate of Advanced Study program in educational leadership is registered with New York State to lead to dual certification of its graduates as School Building Leaders and School District Leaders, qualifying candidates to serve in any school leadership position in New York State (except school district business leader, see School District Business Leader C.A.S. for more information). The program prepares school leaders who have the deep knowledge, practical skills, and passionate commitment to ensure that every student has full and equal access to a high quality education and attains exemplary levels of learning and personal development. Our program has recently been redesigned and reregistered with New York State, based on these principles. We have retained our long-standing emphasis on preparing school principals and district administrators to be curriculum and instructional leaders, but our program now has a new, sharper focus on a single basic question:

How do school leaders ensure that every student in their school systems succeeds?

The C.A.S. program requires thirty graduate credits in educational leadership (nine courses and a rigorous administrative internship), thirty additional graduate credits (typically from a prior masters degree), and successful completion of a state-administered examination in School District Leadership. (Completion of a second examination, in School Building Leadership, is required for certification but not for program graduation.) The program's courses, field experiences, and other requirements are designed to prepare candidates to support the continuous learning of all students and adults, and the continuous improvement of systems that make their learning possible, emphasizing the relationships between curriculum and instructional development, supervision of instruction, professional development, and organizational development, and the ways in which information on student learning can be used to improve teaching and learning.

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## Educational Leadership Ed.D.

Contact Joseph Shedd, 150 Huntington Hall, 315-443-2685, [jbshedd@syr.edu](mailto:jbshedd@syr.edu)

## Educational Leadership

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.

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## Educational Leadership M.S.

(For International Applicants Only)

Contact Joseph Shedd, 150 Huntington Hall, 315-443-2685, [jbshedd@syr.edu](mailto:jbshedd@syr.edu)

### Educational Leadership

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.

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.

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## Certificate In Educational Technology

Contact Tiffany A.Koszalka, Chair, 330 Huntington Hall, 315-443-3703, [takoszal@syr.edu](mailto:takoszal@syr.edu)

### Educational Technology C.A.S.

#### Instructional Design, Development and Evaluation

The Graduate Certificate in Educational Technology (15 credits) provides interested teachers, trainers, and other professional practitioners 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.

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 as well as M.S., C.A.S., and Ph.D. degrees are offered.

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## English And Textual Studies Secondary Teacher Preparation

### 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](mailto: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 English Language Arts (7-12). It is an alternative to the existing undergraduate Arts and Sciences/Education dual program in these areas, and an option that often takes less time and fewer credits than earning the entire master's degree in education after completion of a general Arts and Sciences degree.

The combined bachelor's/master's teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree

allows.

Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met – typically at the end of 5 years. Students begin taking education courses as undergraduates, including some in the fourth year that are taken for graduate credit, and apply to become graduate students for their last two semesters. Some summer study (not necessarily at SU) may be required.

The combined program has a two-stage admission process. The first stage involves meeting with the School of Education contact as early as possible to develop a plan, and, if a decision to pursue the program is made, completing a form signed by Education and a new declaration of program of study form in Arts and Science to declare the Arts and Sciences program with “Teacher Preparation/5 year” appended to the title (e.g., “History(TchrPrep/5yr)” instead of “History”). The second admission stage involves an application to the Graduate School. Each admission stage requires a minimum 3.0 cumulative GPA and a minimum 3.0 GPA in the courses from the subject to be taught. The second stage also requires successful performance in the undergraduate education courses.

The choices of Arts and Sciences majors, and the course requirements for the Arts and Sciences major, the Liberal Arts Core, and other requirements related to the major are the same for these combined programs as those for students completing the dual enrollment undergraduate Arts and Sciences/Education program. These details about specific adjustments necessary to the Liberal Arts Core and to Arts and Sciences major may be found in the section describing Dual Arts and Sciences/ Education Programs.

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## English Education: Preparation (7-12) M.S.

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## English Education: Preparation (7-12) M.S.

Contact: Dr. Marcelle Haddix, 200 Huntington Hall, 315-443-4755, mhaddix@syr.edu

The program integrates the candidates' knowledge of subject matter with an understanding of the process involved in composition and responding to literature. At the master's level, coursework focuses on strategies designed to enhance pupil appreciation and performance.

The master's program in English Education prepares participants for teaching positions in middle, junior, and senior high schools. The program is intended for those with an English or related major seeking teaching certification (preparation program). Those with an initial English Education teaching certificate seeking professional certification are encouraged to investigate the Literacy Education: Grades 5-12 or the Teaching English Language Learners (PreK-12) programs.

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.

Students in this program have the unique opportunity to be concurrently enrolled in either Literacy Education (5-12) OR Teaching English Language Learners (all grades). For more information on this possibility, please contact Dr. Haddix.

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## Concurrent Master's Preparation Programs

Concurrent Master's Preparation Programs In English Education And Inclusive Special Education (7-12); English Education And Literacy Education (5-12); English Education And Teaching English Language Learners M.S. Programs

Contact: Dr. Kelly Chandler-Olcott, 230 Huntington Hall, 315-443-4755, kpchandl@syr.edu

Students may apply to the English Education master's preparation program and indicate on their application that they wish to concurrently complete the Inclusive Special Education (7-12), Literacy Education (5-12), or the Teaching English Language Learners master's program. An internal admission form must be completed in the first year of study to add the second master's program. Students wishing to apply for a concurrent degree may complete 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.

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## Exercise Science M.S.

## Exercise Science

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.

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\*

\*May be used to constitute a minimum of 24 credits of sciences

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.

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## Geography Secondary Teacher Preparation

### 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@sy.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 Social Studies (7-12). It is an alternative to the existing undergraduate Arts and Sciences/Education dual program in these areas, and an option that often takes less time and fewer credits than earning the entire master's degree in education after completion of a general Arts and Sciences degree.

The combined bachelor's/master's teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree allows.

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The combined program has a two-stage admission process. The first stage involves meeting with the School of Education contact as early as possible to develop a plan, and, if a decision to pursue the program is made, completing a form signed by Education and a new declaration of program of study form in Arts and Science to declare the Arts and Sciences program with "Teacher Preparation/5 year" appended to the title (e.g., "History (TchrPrep/5yr)" instead of "History"). The second admission stage involves an application to the Graduate School. Each admission stage requires a minimum 3.0 cumulative GPA and a minimum 3.0 GPA in the courses from the subject to be taught. The second stage also requires successful performance in the undergraduate education courses.

The choices of Arts and Sciences majors, and the course requirements for the Arts and Sciences major, the Liberal Arts Core, and other requirements related to the major are the same for these combined programs as those for students completing the dual enrollment undergraduate Arts and Sciences/Education program. These details about specific adjustments necessary to the Liberal Arts Core and to Arts and Sciences major may be found in the section describing Dual Arts and Sciences/ Education Programs.

Because of the specific course requirements and sequencing of courses, it is important that students interested in one of these programs meet with the School of Education contact as soon as possible to develop a plan. EDU 204, the first education course, must be taken no later than spring of the junior year.

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## Higher Education

### M.S. And Ph.D. Programs

Contact Cathy Engstrom, Chair, 350 Huntington Hall, 315-443-4763, [cmengstr@syr.edu](mailto: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.

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 the program and its 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.

Doctoral degree programs include coursework throughout the University so that 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.

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## History Secondary Teacher Preparation

### 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](mailto: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 Social Studies (7-12). It is an alternative to the existing undergraduate Arts and Sciences/Education dual program in these areas, and an option that often takes less time and fewer credits than earning the entire master's degree in education after completion of a general Arts and Sciences degree.

The combined bachelor's/master's teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree allows.

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Because of the specific course requirements and sequencing of courses, it is important that students interested in one of these programs meet with the School of Education contact as soon as possible to develop a plan. EDU 204, the first education course, must be taken no later than spring of the junior year.

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## Inclusive Special Education: 1-6 Preparation M.S.

Contact Corinne Smith, 150 Huntington Hall, 315-443-9659, crsmith@syr.edu

This master's degree program in inclusive special education is designed to prepare students to work with individuals with disabilities in inclusive classrooms at the 1-6 grade level. 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 or part-time or concurrently with another master's program. Applicants must first have met the requirements for the New York State initial childhood teaching certificate.

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 active and meaningful participation of all learners.

M.S. in Inclusive Special Education 1-6 course requirements:

DSP 614 Critical issues of Dis/ability and Inclusion 3  
EDU 664 Creating Safe and Peaceful Schools O R  
SPE 653 Positive Approaches to Teaching Children with Challenging Behaviors 3  
SPE 634 Collaboration/Cooperation in the Schools 3  
SPE 612 Adapting Instruction for Diverse Student Needs 3  
SPE 600 Practicum in special Education 1  
SPE 627 Early Intervention for Children's Reading Problems 3  
SPE 609 Teaching Children with Autism O R  
SPE 644 Significant Disabilities: Shifts in Paradigms and Practices 3  
SPE 705 Psychoeducational Evaluation and Planning Clinic 3  
SPE 724 Inclusive Professional Practices in Special Education 3  
SPE 618 Augmentative and Alternative Communication in Inclusive Classrooms O R  
SPE/IDE 652 Assistive Technologies for Integrating Students with Special Needs 3  
EDU 508 Student Teaching/Inclusive Special Education (1-6) 4

In addition, students create and present a professional teaching/learning portfolio

Total credits: 32

Also required: Child Health and Life Safety Seminar

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## Inclusive Special Education: Severe/Multiple Disabilities M.S.

Contact: Gail Ensher, 150 Huntington Hall, 315-443-9650, glensher@syr.edu

Inclusive Special Education: Severe/Multiple Disabilities

PROGRAM FEATURES:

- This 31-credit program is designed for master's degree candidates who already have a NYS Initial Certificate for teaching students with disabilities, and seek to enhance their professional credentials by satisfying requirements for NYS Annotation in Severe Disabilities as they earn their graduate degrees;
- Special emphases on working in inclusive classrooms, serving diverse student populations, using technology (including assistive technology), and achieving full professional practice as a teacher, researcher, and builder of practical theory;
- Flexible time options that allow full-time students to earn their degrees in 12-16 months and part-time students to proceed at a pace that satisfies their individual needs;
- Study at a world-class research university with a long-standing reputation as a leader in the field of special education.

## ADMISSION PREREQUISITES:

Applicants to the program are expected to have completed the following by the time of admission:

- A bachelor's degree (or its equivalent, as determined by the faculty) from an accredited institution;
- NYS initial certification in Students with Disabilities (Birth-2, 1-6, 5-9, or 7-12).

Admission to this program is competitive. Decisions are based on grade point average (GPA), recommendations, field experience, and the stated goals of candidates. An undergraduate GPA of at least 3.0 is required, with exceptions considered on a case-by-case basis at the discretion of the faculty. An interview is required of each candidate (a telephone interview option is available for applicants from outside the Central New York area). Standard tests, such as the Graduate Record Examinations (GRE) are not required.

## NEW YORK STATE TEACHER CERTIFICATION INFORMATION

Students who successfully complete this program qualify for an Annotation in Severe and Multiple Disabilities and may also use this master's degree as a credential to meet academic requirements for next level (professional) certificates after initial certification. Students apply for the Annotation in Severe and Multiple Disabilities through the NYS Approved Program pathway to certification, i.e., with Syracuse University's verification of completion of this approved program. Applications for other New York State professional certificates are made by the student directly to the NYS Education Department through the Certificate Progression Pathway. Some teaching experience is required before the professional certificate is awarded. No additional NYS teacher examinations are required for the Annotation in Severe and Multiple Disabilities.

## 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 Research Study (3 credits). Subject matter must concern individuals with severe disabilities, and focus on one of three age groups: early childhood, childhood, or adolescence. 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 fulfillment of final program requirements.

## PROGRAM REQUIREMENTS:

### CORE COURSES:

- SPE 609 Teaching Children and Adolescents with Autism 3
- SPE 618 Augmentation of Communication in the Inclusive Classroom 3
- SPE 623 Families of Students with Disabilities 3
- SPE 634 Collaboration/Cooperation in Schools 3
- SPE 644 Significant Disabilities/Shifts in Paradigms and Practices 3
- SPE 649 Practicum in Significant Disabilities (early childhood or school-aged section) 1
- SPE 653 Positive Approaches to Challenging Behaviors; OR
- EDU 664 Creating Safe and Peaceful Schools 3
- SPE 705 Practicum in Psychoeducational Eval and Planning for Exceptional Children 3

### RESEARCH RELATED COURSE 3

- SPE 690 Independent Research Study

### ELECTIVE COURSES (TWO REQUIRED) BY ADVISEMENT 6

Examples include:

- DSP 614 Critical Issues in Disability and Inclusion 3
- DSP 688 Social Policy and Disability 3
- COU 723 Psychological, Social, and Cultural Aspects of Disability 3
- EDU 655 Educational Tests and Measurements 3
- LAW 763 Disability Law 3
- RED 600 Literacy, Disability, and Inclusion 3
- RED 626/SPE 627 Early Intervention for Children's Reading Problems 3

SPE 613 Developmental Therapy for Children with Disabilities 3

SPE 633 The High Risk Infant: Medical Treatment & Educational Interventions 3

SPE 713 Facilitated Communication 3

TOTAL CREDITS: 31

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## Inclusive Special Education (Generalist) Grades 7-12

Contact Corinne Smith, 150 Huntington Hall, 315-443-9659, crsmith@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 30-42 credit program (depending on prior coursework) can accommodate either full-time or part-time students. 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 meets the academic requirements for the New York State Students with Disabilities 7-12 Generalist teacher certification. More information about teacher certification, admissions, financial aid, and specific courses for the 2013-2014 academic year may be found on the Syracuse University School of Education website.

### M.S. In Inclusive Special Education (7-12) Generalist Course Requirements:

EDU 605 Understanding Teaching in a Diverse Society 3  
RED 625 Literacy Across the Curriculum 3  
DSP/CFE 614 Critical issues of Dis/ability and Inclusion 3  
SPE 612 Adapting Instruction for Diverse Student Needs 3  
SPE 665 Positive Behavioral Supports in Secondary Schools OR  
EDU 664 Creating Safe and Peaceful Schools  
SPE 634 Collaboration/Cooperation in the Schools 3  
SPE 615 Seminar in Teaching (fall) 1  
EDU 508 Student Teaching (fall) 3  
SPE 724 Inclusive Professional Practices in Special Education 3  
SPE 644 Significant Disabilities: Shifts in Paradigms and Practices 3  
SPE 615 Seminar in Teaching (spring) 1  
EDU 508 Student Teaching (spring) 3  
SPE 705 Psychoeducational Evaluation and Planning Clinic 3  
SPE 618 Augmentative and Alternative Communication in Inclusive Classrooms OR  
SPE/IDE 652 Assistive Technologies for Integrating Students with Special Needs 3  
RED 621 Literacy Intervention for Special Educators K-12 3

In addition, students create and present a professional teaching/learning portfolio.

Total credits: 30-42 depending on background

Also required: Child Health and Life Safety Seminar

Liberal Arts Course requirements/Prerequisites:

The requirements of this program include several undergraduate liberal arts concentration and distribution courses, and 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..

A liberal arts concentration or major of at least 30 semester hours, with some upper division study 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 courses:

- 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 Level 3 or higher may be substituted.)

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## Certificate Of Advanced Study In Instructional Design Foundations

Contact:

Tiffany A. Koszalka, Professor and Chair Instructional Design, Development and Evaluation  
takoszal@syr.edu

Linda Tucker, Program Administrative Assistant  
Instructional Design, Development and Evaluation  
LLTucker@syr.edu 315-443-3703

Faculty:

Tiffany Koszalka, takoszal@syr.edu  
Nick L. Smith, nlsmith@syr.edu  
Gerald Edmonds, gedmonds@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. The 4 required courses include:

- IDE 621 Principles of Instruction and Learning (3 credits)
- IDE 631 Instructional Design and Development I (3 credits)
- IDE 632 Instructional Design and Development II (3 credits)
- IDE 641 Techniques in Educational Evaluation (3 credits)

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.

Students must maintain a 3.0 GPA

Part-time study is available.

Transfer credit is not permitted.

Degree: Certificate of Advanced Study in Instructional Design Foundations

Total Credits: 12

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## Instructional Design, Development, And Evaluation (IDD&E)

M.S., C.A.S., and Ph.D.

Contact Tiffany A. Koszalka, Chair, 330 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 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 and instructional design fundamentals; 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.

### Instructional Design, Development And Evaluation M.S.

Master's students in the Instructional Design, Development and Evaluation (IDD&E) program are required to take 10 core courses (30 credits) including the following 10 core courses:

IDE 552 Digital Media Production  
IDE 611 Technologies for Instructional Settings  
IDE 621 Principles of Instruction and Learning  
IDE 631 Instructional Design & Development I  
IDE 632 Instructional Design & Development II  
IDE 641 Techniques in Educational Evaluation  
IDE 712 Analysis for Human Performance Tech  
IDE 761 Strategies in Educational Project Mgt.  
IDE 737 Advanced Instructional Design  
IDE 772 Educational Technology in International settings

The program also requires students to complete a culminating master's degree portfolio for the degree.

### Instructional Design, Development And Evaluation C.A.S.

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.

### Instructional Design, Development And Evaluation Ph.D.

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 requiring 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.

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## Instructional Technology

Contact Tiffany A. Koszalka, Chair, 330 Huntington Hall, 315-443-3703, takoszal@syr.edu

### Instructional Technology M.S.

Instructional Design, Development and Evaluation

The M.S. program in Instructional Technology (IT) is intended for teachers 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 37 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.

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 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 as well as M.S., C.A.S., and Ph.D. degrees are offered.

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## International Relations Secondary Teacher Preparation Program

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](mailto: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 Social Studies (7-12). It is an alternative to the existing undergraduate Arts and Sciences/Education dual program in these areas, and an option that often takes less time and fewer credits than earning the entire master's degree in education after completion of a general Arts and Sciences degree.

The combined bachelor's/master's teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree allows.

Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met – typically at the end of 5 years. Students begin taking education courses as undergraduates, including some in the fourth year that are taken for graduate credit, and apply to become graduate students for their last two semesters. Some summer study (not necessarily at SU) may be required.

The combined program has a two-stage admission process. The first stage involves meeting with the School of Education contact as early as possible to develop a plan, and, if a decision to pursue the program is made, completing a form signed by Education and a new declaration of program of study form in Arts and Science to declare the Arts and Sciences program with “Teacher Preparation/5 year” appended to the title (e.g., “History (TchrPrep/5yr)” instead of “History”). The second admission stage involves an application to the Graduate School. Each admission stage requires a minimum 3.0 cumulative GPA and a minimum 3.0 GPA in the courses from the subject to be taught. The second stage also requires successful performance in the undergraduate education courses.

The choices of Arts and Sciences majors, and the course requirements for the Arts and Sciences major, the Liberal Arts Core, and other requirements related to the major are the same for these combined programs as those for students completing the dual enrollment undergraduate Arts and Sciences/Education program. These details about specific adjustments necessary to the Liberal Arts Core and to Arts and Sciences major may be found in the section describing Dual Arts and Sciences/ Education Programs.

Because of the specific course requirements and sequencing of courses, it is important that students interested in one of these programs meet with the School of Education contact as soon as possible to develop a plan. EDU 204, the first education course, must be taken no later than spring of the junior year.

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## J.D./Cultural Foundations Of Education M.S. Joint Degree Program

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.

Current College of Law Students: please contact the College of Law Office of Student Life, 315-443-1146, [studentlife@law.syr.edu](mailto:studentlife@law.syr.edu)

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## Literacy Education Ph.D

Contact Dr. Kathleen Hinchman, 200 Huntington Hall, 315-443-4755, [kahinchm@syr.edu](mailto:kahinchm@syr.edu)

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 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 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.

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## Literacy Education: Birth-Grade 6 M.S.

Contact Rachel Brown, 200 Huntington Hall, 315-443-4755, [rfbrown@syr.edu](mailto:rfbrown@syr.edu)

### Literacy Education

Programs in this area prepare graduate students to pursue careers in research, teaching, teacher education, curriculum and test development, and the administration of English language arts programs, as well as clinical and assessment services. Reading and literacy instruction for elementary, secondary, college, and adult audiences are covered in basic and advanced courses.

Master's programs in Literacy Education: Birth-Grade 6 and Literacy Education: Grades 5-12 are offered to those holding a teaching certificate in another area and are seeking initial literacy certification. The programs also fulfill the master's degree requirement for permanent or professional certification in the area of the first certificate.

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## Literacy Education: Grades 5-12 M.S.

Contact Rachel Brown, 200 Huntington Hall, 315-443-4755, [rfbrown@syr.edu](mailto:rfbrown@syr.edu)

### Literacy Education

Programs in this area prepare graduate students to pursue careers in research, teaching, teacher education, curriculum and test development, and the administration of English language arts programs, as well as clinical and assessment services. Reading and literacy instruction for elementary, secondary, college, and adult audiences are covered in basic and advanced courses.

Master's programs in Literacy Education: Birth-Grade 6 and Literacy Education: Grades 5-12 are offered to those holding a teaching certificate in another area and are seeking initial literacy certification. The programs also fulfill the master's degree requirement for permanent or professional certification in the area of the first certificate.

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## Mathematics Secondary Teacher Preparation Program

Combined Bachelor's/Master's Degrees in Mathematics and Secondary Education (Math) Teacher Preparation Program

School of Education contact: Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall. [mrsarno@syr.edu](mailto:mrsarno@syr.edu)

This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for a New York Teaching certification for grades 7-12 in mathematics. It is an alternative to the existing undergraduate Arts and Sciences/Education dual programs in these areas, and an option that often takes less time and fewer credits than earning the entire master's degree in education after completion of a general Arts and Sciences degree.

The combined bachelor's/master's teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree allows.

Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met – typically at the end of 5 years. Students begin taking education courses as undergraduates, including some in the fourth year that are taken for graduate credit, and apply to become graduate students for their last two semesters. Some summer study (not necessarily at SU) may be required.

The combined program has a two-stage admission process. The first stage involves meeting with the School of Education contact as early as possible to develop a plan, and, if a decision to pursue the program is made, completing a form signed by Education and a new declaration of program of study form in Arts and Science to declare the Arts and Sciences program with "Teacher Preparation/5 year" appended to the title Mathematics. The second admission stage involves an application to graduate school. Each admission stage requires a 3.0 cumulative GPA and a 3.0 GPA in the courses from the subject to be

taught. The second stage also requires successful performance in the undergraduate education courses.

The choices of Arts and Sciences majors, and the course requirements for the Arts and Sciences major, the Liberal Arts Core, and other requirements related to the major are the same for these combined programs as those for students completing the dual enrollment undergraduate Arts and Sciences/Education program. These details about specific adjustments necessary to the Liberal Arts Core and to Arts and Sciences major may be found in the section describing Dual Arts and Sciences/ Education Programs.

Because of the specific course requirements and sequencing of courses, it is important that students interested in one of these programs meet with the Education contact as soon as possible to develop a plan. EDU 204, the first education course, must be taken no later than spring of the junior year.

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## Mathematics Education Ph.D.

Contact Joanna Masingila, 203 Carnegie, 315-443-1483, [jomasing@syr.edu](mailto:jomasing@syr.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.

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.

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## Mathematics Education Preparation 7-12 M.S.

Contact Joanna Masingila, 203 Carnegie, 315-443-1483, [jomasing@syr.edu](mailto: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 who are proficient in five areas:

- Critical reflection and explanations of practice.
- Content knowledge.
- Inclusive and culturally responsive pedagogy.
- Assessment of student learning.
- Professional conduct and collaboration.

The preparation program is designed for students who have attained a bachelor's degree in mathematics (i.e., with a major field in mathematics) or its equivalent and seek certification to teach mathematics in secondary schools.

Information is available on our college course prerequisites.

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.

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## Music Education Professional Certification M.S. And M.Mus.

Contact Matthew Barlow, 301 Crouse College, 315-443-4309, [mbarlow@syr.edu](mailto:mbarlow@syr.edu)

Music Education Professional Certification M.S. and M.Mus

Syracuse University offers two music education graduate degree programs designed for students who already possess an undergraduate degree in music education. These one-year music education professional certification programs (Master of Music-M.Mus degree and Master of Science-M.S. degree) provide 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 programs provide students with opportunities to nurture and develop optimal teaching competencies, artistry and musicianship, and philosophical, theoretical, and historical perspectives of music and music education. The three-semester programs, offered in conjunction with Syracuse University's School of Education and the Setnor School of Music in the College of Visual and Performing Arts, are grounded in educational research and diverse music performance opportunities. The unique partnership between schools provides flexibility to pursue both music and education coursework while encouraging students to become teachers who develop innovative methods and solutions to instruction within the educational system.

A concentration in music education is also available for doctoral students in the Teaching and Curriculum program.

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## Music Education Preparation M.S.

Contact Matthew Barlow, 301 Crouse College, 315-443-4309, mbarlow@syr.edu

### Music Education Preparation M.S.

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 program prepares students to become music educators proficient in five areas:

Critical reflection and explanation of practice, content knowledge, inclusive and culturally responsive pedagogy, assessment of student learning, and professional conduct and collaboration.

The preparation program is designed for students who have earned a bachelor's degree in music (i.e., with a major field in music), and seek certification to teach music at the elementary or secondary school levels. 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 enter the field as music educators capable of creating 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;
- A 47-credit program exposing students to cutting-edge ideas in education in courses taught by faculty specialists, and offering students opportunities to expand content knowledge and develop artistic abilities through graduate music courses and performance events;
- Special emphases 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 common 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 top musicians from diverse fields of music.

### ADMISSION:

#### Program degree prerequisites:

A bachelor's degree in music from an institution accredited by the National Association of Schools of Music (NASM). General liberal arts course requirements constitute a prerequisite of the program, although some of these requirements may be completed concurrently, at the discretion of the faculty. Our goal in assessing students' educational backgrounds is to confirm exposure to areas of the NYS Regents Learning Standards outside their areas of teaching.

This course of study allows for the concentration of graduate studies to focus on education and music education coursework with the possibility of degree completion within a one and one-half to two-year period. Forty-seven credit hours of study are required for degree completion.

The M.S. Teacher Preparation Program of study includes the following:

- One Graduate Music History Course - 3 credits
- Graduate Education Courses - 9 credits
- Graduate Music Education Method Courses - 9 credits
- MUE 610 Field Experience in Music Education - 1 credit

MUE 615 Introduction to Research in Music - 3 credits  
MUE 616 Psychological and Sociological Aspects of Music - 3 credits  
OR  
MUE 618 Current Problems in Music Education - 3 credits  
MUE 735/737 Advanced Rehearsal Techniques in Music -3 credits  
MTC 646 Advanced Tonal Analysis -3 credits  
RED 625 Literacy Across the Curriculum - 4 credits  
EDU 508 Student Teaching in Music Education - 9 credits

Degree: Master of Science in Teacher Preparation

Total Credits: 47

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## Physics Secondary Teacher Preparation Program

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](mailto: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 Physics (7-12). It is an alternative to the existing undergraduate Arts and Sciences/Education dual program in these areas, and an option that often takes less time and fewer credits than earning the entire master's degree in education after completion of a general Arts and Sciences degree.

The combined bachelor's/master's teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree allows.

Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met – typically at the end of 5 years. Students begin taking education courses as undergraduates, including some in the fourth year that are taken for graduate credit, and apply to become graduate students for their last two semesters. Some summer study (not necessarily at SU) may be required.

The combined program has a two-stage admission process. The first stage involves meeting with the School of Education contact as early as possible to develop a plan, and, if a decision to pursue the program is made, completing a form signed by Education and a new declaration of program of study form in Arts and Science to declare the Arts and Sciences program with “Teacher Preparation/5 year” appended to the title (e.g., “History (TchrPrep/5yr)” instead of “History”). The second admission stage involves an application to the Graduate School. Each admission stage requires a minimum 3.0 cumulative GPA and a minimum 3.0 GPA in the courses from the subject to be taught. The second stage also requires successful performance in the undergraduate education courses.

The choices of Arts and Sciences majors, and the course requirements for the Arts and Sciences major, the Liberal Arts Core, and other requirements related to the major are the same for these combined programs as those for students completing the dual enrollment undergraduate Arts and Sciences/Education program. These details about specific adjustments necessary to the Liberal Arts Core and to Arts and Sciences major may be found in the section describing Dual Arts and Sciences/ Education Programs.

Because of the specific course requirements and sequencing of courses, it is important that students interested in one of these programs meet with the School of Education contact as soon as possible to develop a plan. EDU 204, the first education course, must be taken no later than spring of the junior year.

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## Policy Studies Secondary Teacher Preparation Program

Combined Bachelor's/Master's Degrees in Policy Studies and Secondary (Social Studies) Teacher Preparation Program

Contact Marie Sarno, Teaching and Leadership Programs, 138 Huntington Hall [mrsarno@syr.edu](mailto: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 Social Studies (7-12). It is an alternative to the existing undergraduate Arts and Sciences/Education dual program in these areas, and an option that often takes less time and fewer credits than earning the entire master's degree in education after completion of a general Arts and Sciences degree.

The combined bachelor's/master's teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree allows.

Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met – typically at the end of 5 years. Students begin taking education courses as undergraduates, including some in the fourth year that are taken for graduate credit, and apply to become graduate students for their last two semesters. Some summer study (not necessarily at SU) may be required.

The combined program has a two-stage admission process. The first stage involves meeting with the School of Education contact as early as possible to develop a plan, and, if a decision to pursue the program is made, completing a form signed by Education and a new declaration of program of study form in Arts and Science to declare the Arts and Sciences program with “Teacher Preparation/5 year” appended to the title (e.g., “History (TchrPrep/5yr)” instead of “History”). The second admission stage involves an application to the Graduate School. Each admission stage requires a minimum 3.0 cumulative GPA and a minimum 3.0 GPA in the courses from the subject to be taught. The second stage also requires successful performance in the undergraduate education courses.

The choices of Arts and Sciences majors, and the course requirements for the Arts and Sciences major, the Liberal Arts Core, and other requirements related to the major are the same for these combined programs as those for students completing the dual enrollment undergraduate Arts and Sciences/Education program. These details about specific adjustments necessary to the Liberal Arts Core and to Arts and Sciences major may be found in the section describing Dual Arts and Sciences/ Education Programs.

Because of the specific course requirements and sequencing of courses, it is important that students interested in one of these programs meet with the School of Education contact as soon as possible to develop a plan. EDU 204, the first education course, must be taken no later than spring of the junior year.

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## Political Science Secondary Teacher Preparation Program

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](mailto: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 Social Studies (7-12). It is an alternative to the existing undergraduate Arts and Sciences/Education dual program in these areas, and an option that often takes less time and fewer credits than earning the entire master's degree in education after completion of a general Arts and Sciences degree.

The combined bachelor's/master's teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree allows.

Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met – typically at the end of 5 years. Students begin taking education courses as undergraduates, including some in the fourth year that are taken for graduate credit, and apply to become graduate students for their last two semesters. Some summer study (not necessarily at SU) may be required.

The combined program has a two-stage admission process. The first stage involves meeting with the School of Education contact as early as possible to develop a plan, and, if a decision to pursue the program is made, completing a form signed by Education and a new declaration of program of study form in Arts and Science to declare the Arts and Sciences program with “Teacher Preparation/5 year” appended to the title (e.g., “History (TchrPrep/5yr)” instead of “History”). The second admission stage involves an application to the Graduate School. Each admission stage requires a minimum 3.0 cumulative GPA and a minimum 3.0 GPA in the courses from the subject to be taught. The second stage also requires successful performance in the undergraduate education courses.

The choices of Arts and Sciences majors, and the course requirements for the Arts and Sciences major, the Liberal Arts Core, and other requirements related to the major are the same for these combined programs as those for students completing the dual enrollment undergraduate Arts and Sciences/Education program. These details about specific adjustments necessary to the Liberal Arts Core and to Arts and Sciences major may be found in the section describing Dual Arts and Sciences/ Education Programs.

Because of the specific course requirements and sequencing of courses, it is important that students interested in one of these programs meet with the School of Education contact as soon as possible to develop a plan. EDU 204, the first education course, must be taken no later than spring of the junior year.

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## Certificate Of Professional Practice In Educational Technology

Contact Tiffany A. Koszalka, Chair, 330 Huntington Hall, 315-443-3703, [takoszal@syr.edu](mailto:takoszal@syr.edu)

Professional Practice In Educational Technology C.A.S.

Instructional Design, Development and Evaluation

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 technologists, 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 as well as M.S., C.A.S., and Ph.D. degrees are offered.

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## School Counseling M.S.

Contact Melissa Luke, Ph.D., 259 Huntington Hall, 315-443-2266, [mmluke@syr.edu](mailto:mmluke@syr.edu)

### School Counseling

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.

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, skills, commitment, and service in a wide range of educational and community settings.

S.U. Re-Accredited through 2016:

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.

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## School Counseling C.A.S.

Contact Melissa Luke, P.h.D. 259 Huntington Hall, 315-443-2266, [mmluke@syr.edu](mailto:mmluke@syr.edu)

## School Counseling

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.

### Requirements For The C.A.S. Are:

- A master's degree in counseling;
- A minimum of 60 credits beyond the baccalaureate, of which 30 credits must be taken at Syracuse University;
- Satisfactory completion of a special project (typically completed as part of COU 749).

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, skills, commitment, and service in a wide range of educational and community settings.

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\*\*There are no required courses for the C.A.S. program. Students are encouraged to take coursework coincident with their counseling interests.

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## School District Business Leadership (Professional Certification) C.A.S.

Contact: Joseph Shedd, 150 Huntington Hall, 315 443-2685, jbshedd@syr.edu

The School District Business Leadership C.A.S. program (SDBL) provides a comprehensive program in school business management provided jointly by the School of Education's Department of Teaching and Leadership and the Maxwell School of Public Affairs Department of Public Administration. The program leads to New York State certification as a School District Business Leader.

School district business leaders are typically the chief financial officers of school districts and often manage a broad range of non-instructional 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:

- 1) Financial management and management of ancillary services.
- 2) Education leadership and management.
- 3) Education law.
- 4) Human resource management.
- 5) Microeconomics.
- 6) Program evaluation.

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 (CAS) 3

EDA 762 Leadership for Inclusive Schooling (CAS) 3

EDA 735 Human Resource Management in Public Education 3

EDA 782 Issues and Practices in District Office Leadership (CAS) 3

EDA 792 Legal Basis of Education (CAS) 3

IDE 641 Techniques in Educational Evaluation 3

PAI 709 Public Organization and Management (MPA) 3

PAI 722 Quantitative Analysis (MPA) 3

PAI 723 Managerial Economics for Public Administrators -or equivalent-(MPA) 3

PAI 731 Financial Management of State and Local Governments (MPA) 3

PAI 735 State and Local Public Finance (MPA) 3

PAI 791 Education Financial Administration 3

PAI 792 Managing School District Non-Instructional Functions 3

EDA 899 Internship Seminar in School District Business Leadership (This

internship seminar is completed at the end of the program 4

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## Science Education Ph.D.

Contact John W. Tillotson, 101 Heroy Geology Lab, 315-443-2586, [jwtilot@syr.edu](mailto:jwtilot@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.

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.

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## Science/Biology Education: Preparation (7-12) M.S.

Contact: John Tillotson, 101 Heroy Geology Lab, 315-443-2586, [jwtilot@syr.edu](mailto:jwtilot@syr.edu)

Science Education

A master's degree program in science education (biology, chemistry, earth science, or physics) is available for those with no education background seeking New York State teacher certification for grades 7-12 (preparation program). 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 these guiding National Science Foundation standards:

- 1) Science is for all students.
- 2) Learning science is an active process.
- 3) Science education reflects the intellectual and cultural traditions that characterize contemporary science practice.
- 4) Improving science education is a significant task in any effort at systemic educational reform.

The M.S. in Science Education leads to New York State teacher certification for grades 7-12. Our certification programs combine multiple diverse field experiences with campus-based coursework, emphasizing theoretical and practical knowledge in research-based science teaching and learning.

Information is available on our college course prerequisites.

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## Science/Chemistry Education: Preparation (7-12) M.S.

Contact: John Tillotson, 101 Heroy Geology Lab, 315-443-2586, [jwtillo@syr.edu](mailto:jwtillo@syr.edu)

### Science Education

A master's degree program in science education (biology, chemistry, earth science, or physics) is available for those with no education background seeking New York State teacher certification for grades 7-12 (preparation program). 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 these guiding National Science Foundation standards:

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Information is available on our college course prerequisites.

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## Science/Earth Science Education: Preparation (7-12) M.S.

Contact: John W. Tillotson, 101 Heroy Geology Lab, 315-443-2586, [jwtillo@syr.edu](mailto:jwtillo@syr.edu)

### Science Education

A master's degree program in science education (biology, chemistry, earth science, or physics) is available for those with no education background seeking New York State teacher certification for grades 7-12 (preparation program). 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:

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The M.S. in Science Education leads to New York State teacher certification for grades 7-12. Our certification programs combine multiple diverse field experiences with campus-based coursework, emphasizing theoretical and practical knowledge in research-based science teaching and learning.

Information is available on our college course prerequisites.

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## Science/Physics Education: Preparation (7-12) M.S.

Contact: John Tillotson, 101 Heroy Geology Lab, 315-443-2586, [jwtillot@syr.edu](mailto:jwtillot@syr.edu)

### Science Education

A master's degree program in science education (biology, chemistry, earth science, or physics) is available for those with no education background seeking New York State teacher certification for grades 7-12 (preparation program). 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 these guiding National Science Foundation standards:

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Information is available on our college course prerequisites.

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## Social Studies Education: Preparation 7-12 M.S.

Contact Jeffery A. Mangram, 154 Huntington Hall, 315-443-9077, [jamangra@syr.edu](mailto:jamangra@syr.edu)

Social Studies Education offers a master's degree program for applicants with a social science and history background who wish to work toward New York State initial certification in social studies education grades 7-12. Master's students in social studies education take courses in the social sciences and interdisciplinary programs of the Maxwell School of Citizenship and Public Affairs in addition to studying learning, teaching, and curriculum development. This program offers teacher candidates:

- The opportunity for those holding a bachelor's degree with the appropriate social science and other liberal arts prerequisites, but no prior coursework in teaching, to prepare for New York State initial adolescent certification as social studies teachers (grades 7-12) while earning a master's degree.
- A 40-credit hour program that exposes students to cutting-edge ideas in education courses taught by faculty specialists, and an opportunity to take advantage of courses offered by other Syracuse University schools, such as the Maxwell School of Citizenship and Public Affairs.
- Special emphasis on working with struggling students, serving diverse student populations, using technology to promote active learning, and teachers as researchers of professional practice and builders of practical theory.
- 5 field placements allowing each candidate to learn from a variety of urban and suburban school settings, teachers, and youth with diverse backgrounds and abilities.
- A 16-month full-time program or the opportunity to begin part-time (if available at necessary times), culminating in a 9-credit spring semester followed by a 9-credit fall semester.
- Sharing professional development with a cohort of students in social studies education, and in other secondary programs, through several common core courses.

- Participation in the Academy of Social Studies Education 7-12 teachers. Syracuse University faculty and staff, and students meet a few times a year to share professional and program development ideas.

#### Master's degree course requirements and field experience requirements (\*)

EDU	605	Understanding Teaching in a Diverse Society*	3
EDU	607	Principles of Teaching and Learning in Inclusive Classrooms*	3
RED	625	Literacy Across the Curriculum*	4
SED	640	Participation in the Professional Development School (Social Studies Academy)	0
SED	522	Study of Social Studies	3
		Social science research methodology	course 3
		Social science content with a global focus	course 3
		Social science research methodology, theory or content	course 3
		Non-credit study on issues of child safety and protection	0

#### Candidacy Semester

SED	613	Methods and Curriculum in Teaching Social Studies	3
SPE	612	Adapting Instruction for Diverse Student Needs	3
EDU	508	Student Teaching*	3

#### Standard Student Teaching Semester

EDU	508	Student Teaching*	6
SED	615	Teacher Development/Social Studies	3

#### 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 prospective 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 12 of these completed as part of the master's degree, and at least 9 upper-division undergraduate credits completed before beginning the program.

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
- 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.)

A concentration in social studies education is also available for doctoral students in the teaching and curriculum program.

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## Sociology Secondary Teacher Preparation Program

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](mailto: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 Social Studies (7-12). It is an alternative to the existing undergraduate Arts and Sciences/Education dual program in these areas, and an option that often takes less time and fewer credits than earning the entire master's degree in education after completion of a general Arts and Sciences degree.

The combined bachelor's/master's teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree allows.

Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met – typically at the end of 5 years. Students begin taking education courses as undergraduates, including some in the fourth year that are taken for graduate credit, and apply to become graduate students for their last two semesters. Some summer study (not necessarily at SU) may be required.

The combined program has a two-stage admission process. The first stage involves meeting with the School of Education contact as early as possible to develop a plan, and, if a decision to pursue the program is made, completing a form signed by Education and a new declaration of program of study form in Arts and Science to declare the Arts and Sciences program with “Teacher Preparation/5 year” appended to the title (e.g., “History (TchrPrep/5yr)” instead of “History”). The second admission stage involves an application to the Graduate School. Each admission stage requires a minimum 3.0 cumulative GPA and a minimum 3.0 GPA in the courses from the subject to be taught. The second stage also requires successful performance in the undergraduate education courses.

The choices of Arts and Sciences majors, and the course requirements for the Arts and Sciences major, the Liberal Arts Core, and other requirements related to the major are the same for these combined programs as those for students completing the dual enrollment undergraduate Arts and Sciences/Education program. These details about specific adjustments necessary to the Liberal Arts Core and to Arts and Sciences major may be found in the section describing Dual Arts and Sciences/ Education Programs.

Because of the specific course requirements and sequencing of courses, it is important that students interested in one of these programs meet with the School of Education contact as soon as possible to develop a plan. EDU 204, the first education course, must be taken no later than spring of the junior year.

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## Special Education Ph.D.

Special Education Ph.D. Program

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, [bafferri@syr.edu](mailto:bafferri@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 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 contract with their sponsor for an independent study course carrying 3 to 6 hours. 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).

Applications are reviewed in December and January for the following fall. A writing sample must be submitted when applying to the program.

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## Student Affairs Counseling M.S.

Contact Janine Bernard, Ph.D., 259 Huntington Hall, 315-443-2266, [bernard@syr.edu](mailto:bernard@syr.edu)

### Student Affairs Counseling

The Master of Science in Student Affairs Counseling prepares students for college and university positions within student affairs for which counseling skills are valuable. Students and graduates of the program work in settings such as:

- 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 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, skills, commitment, and service in a wide range of educational and community settings.

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## Teaching And Curriculum M.S. And Ph.D.

Contact Gerald M. Mager, 230 Huntington Hall, 315-443-9659, [gmmager@syr.edu](mailto:gmmager@syr.edu)

### Teaching and Curriculum M.S.

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.

The rich diversity of Syracuse University courses guarantees that Teaching and Curriculum students with many varied backgrounds and interests will expand theoretical and pedagogical understandings while engaging in graduate study at Syracuse.

Teaching and Curriculum students work with their advisors to design their own programs. Each consists of ten courses that may include the following elements:

- Courses in the student's field of teaching certification or area of interest that form her/his "specialization."
- Courses in basic research methods (including action research), in analysis of research, or in tests and assessments.
- Courses from outside the area of the specialization area.

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 and Curriculum Ph.D.

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.

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## Teaching English Language Learners (PreK-12) M.S.

Contact Zaline Roy-Campbell, 200 Huntington Hall, 315-443-8194, zmroycam@syr.edu

### Teaching English Language Learners

The M.S. degree in Teaching English Language Learners offers students New York State Certification in English for Speakers of Other Language (ESOL). In this program they will become skilled in elementary and secondary instruction for English language learners. Students will gain knowledge of the theories, strategies, and methodologies regarding teaching English to speakers of other languages as well as the socio-cultural and socio-linguistic issues that impact English language learners' acquisition of English. Admission to this program requires initial New York State Certification in another teaching area along with 12 credits in a language other than English.

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## Women's And Gender Studies Secondary Teacher Preparation Program

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 Social Studies (7-12). It is an alternative to the existing undergraduate Arts and Sciences/Education dual program in these areas, and an option that often takes less time and fewer credits than earning the entire master's degree in education after completion of a general Arts and Sciences degree.

The combined bachelor's/master's teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree allows.

Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met – typically at the end of 5 years. Students begin taking education courses as undergraduates, including some in the fourth year that are taken for graduate credit, and apply to become graduate students for their last two semesters. Some summer study (not necessarily at SU) may be required.

The combined program has a two-stage admission process. The first stage involves meeting with the School of Education contact as early as possible to develop a plan, and, if a decision to pursue the program is made, completing a form signed by Education and a new declaration of program of study form in Arts and Science to declare the Arts and Sciences program with "Teacher Preparation/5 year" appended to the title (e.g., "History (TchrPrep/5yr)" instead of "History"). The second admission stage involves an application to the Graduate School. Each admission stage requires a minimum 3.0 cumulative GPA and a minimum 3.0 GPA in the courses from the subject to be taught. The second stage also requires successful performance in the undergraduate education courses.

The choices of Arts and Sciences majors, and the course requirements for the Arts and Sciences major, the Liberal Arts Core, and other requirements related to the major are the same for these combined programs as those for students completing the dual enrollment undergraduate Arts and Sciences/Education program. These details about specific adjustments necessary to the Liberal Arts Core and to Arts and Sciences major may be found in the section describing Dual Arts and Sciences/ Education Programs.

Because of the specific course requirements and sequencing of courses, it is important that students interested in one of these programs meet with the School of Education contact as soon as possible to develop a plan. EDU 204, the first education course, must be taken no later than spring of the junior year.

# Courses

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## Art Education

**AED 510 Special Problems in Art Ed 1-6 S**  
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 Curric'M 3 IR**  
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 3 IR**  
Effective personal communication through art. Choose and define a special population; expmine 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 3 IR**  
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 3 IR**  
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 612 Creativity & Its Cultivation 3 Y**  
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 3 SI**

Primarily for graduate students with teaching experience who are interested in the practice of supervision in public schools. Current art practices. States' certification requirements. Curriculum guides. In-service supervisory problems. Art workshops. Improvements of instruction. Selection, induction, supervision, and evaluation of teachers. Procedures for selecting and purchasing art materials and equipment.

**AED 617 Philosophy of Art Educatn 3 Y**  
Place of art in contemporary life and the opportunities and responsibilities of teachers at all levels of art instruction. Readings in literature of art criticism and art education.

**AED 618 Seminar in Art Education 3 Y**  
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 710 Problems/Teacher As Artist 2-18 SI**

Technical problems in art education. Limited to students working toward master's degree in art education. R

**AED 896 Final Presentation 3 SI**  
Final presentation accompanied by written statement, culminating in oral examination. Taken during final semester upon advisor's approval.

**AED 990 Independent Study 1-6 R**

## American Sign Language

**ASL 600 Selected Topics 1-3**  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

**ASL 601 American Sign Language I for Professional Practice 3 S**  
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 3 Y**  
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 3 Y**  
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 1-3**  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

**CFE 601 Intro Phil of Education 3 Y**  
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 3 IR**  
Questions around race, racism, and education are explored from the perspective of philosophers and philosophers 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 3 IR**  
Comparative methodology. Problems in education comparatively and from a cross-cultural point of view.

**CFE 614 Critical Issues in Dis/Ability and Inclusion 3 Y**  
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 3 Y

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 3 IR

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 3 Y

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 3 IR

Crosslisted with: DSP 662, 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.

CFE 688 Social Policy and Disability 3 Y

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 1-3

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

CFE 701 Education and Social Philosophy 3 IR

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 3 IR

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 3 IR

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 3 Y

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 3 IR

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 3 IR

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 3 Y

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 3 IR

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. Enrollment limited.

CFE 809 Problems of Educational Theory 3 SI

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 3 SI

Foundations of moral learning and elements of its pedagogy as rooted in major texts of Western moral reflection, including Plato's *The Republic*, Nichomechean Ethics, Durkheim's *Lecture on Moral Education*, and selections from Kant.

CFE 813 Multicultural Narratives and Educational Change 3 IR

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 3 IR

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 900 Seminar in Philosophy of Education 3 SI

Different topic selected each semester.

Enrollment limited to 10 students. R

CFE 910 Seminar in Problems of International and Comparative Education 3 IR

Substantive problems and topics, such as educational planning, education and development, international educational relations. R

CFE 920 Seminar in History of Education 3 Y

Different educational topic each semester.

Enrollment limited to 10 students. R

CFE 930 Sociology and Anthropology of Education: Seminar in Special Topics 3 Y

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. R

## Counseling

### COU 585 General Counseling Methods 3 Y

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.

### COU 600 Selected Topics in Counseling 1-3

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

### COU 612 Introduction to Professional Counseling 3 Y

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 3 S

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 3 Y

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 3 Y

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 3 Y

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 3 Y

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 3 S

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 3 S

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 AND 626.

### COU 646 Assessment in Counseling 3 SS

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 3 SS

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 3 SS

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 3 SS

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 700 Selected Topics in Counseling 1-3

### COU 723 Psychological, Social, and Cultural Aspects of Disability 3 O

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 3 Y

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 3 Y

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 3 Y

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 AND COREQ: COU 750 OR 790.

### COU 750 Practicum in Counseling 3 S

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 644. R1, 6 credits maximum

### COU 758 Research Methods 3 Y

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 3-6 S  
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. R1, 6 credits maximum

COU 800 Selected Topics 1-3 SI  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

COU 860 Advanced Practicum in Counseling 3 S  
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. R1, 6 credits maximum

COU 872 Advanced Theory and Practice in Group Work 3 O  
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 3 Y  
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. R1, 6 credits maximum

COU 876 Seminar in Ecological Counseling 3 O  
Client issues as embedded within multiple and interrelated systems, including political and economic structures. Facilitates pedagogic technological competence; Permission of instructor.

COU 878 Seminar in Counseling Theory 3 E  
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 3 E  
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 3 O  
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 0-3 S  
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. R2, 9 credits maximum

COU 950 Doctoral Internship 0-6 S  
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. R3, 12 credits maximum

## Disability Studies

DSP 500 Selected Topics 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

DSP 600 Selected Topics: Disability Studies Program 1-3 R

DSP 614 Critical Issues in Dis/Ability and Inclusion 3  
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 3 IR  
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 644 Significant Disabilities: Shifts in Paradigms and Practices 3 IR  
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 662 Youth, Schooling and Popular Culture 3 IR  
Crosslisted with: CFE 662, WGS 662; Double Numbered with: DSP 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.

DSP 688 Social Policy and Disability 3 Y  
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 3 O  
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 3 IR  
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 3 IR  
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 3 IR  
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 1-3 SI  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

DSP 930 Sociology and Anthropology of Education: Seminar in Special Topics 3 Y  
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. R

### Education Leadership

EDA 600 Selected Topics 1-3  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

EDA 634 Collaboration/Cooperation in Schools 3 Y  
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 3 Y  
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 1-6  
R

EDA 700 Selected Topics 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

EDA 712 Leadership for Diverse Learners and Communities 3 Y  
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 3 Y  
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 3 IR  
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 3 IR  
Crosslisted with: EDU 727  
Curriculum decision making as a function of the school's role in society. Theory and research in human growth and learning. Models of organization and instruction.

EDA 732 Ldrshp for Adult Develop 3 Y  
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 3 IR  
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 3 Y  
Crosslisted with: IDE 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.

EDA 742 Leadership for Literacy Development 3 O  
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 743 Cost-Effectiveness in Instruction and Training 3 O  
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 3 IR  
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 3 Y  
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.  
PREREQ: EDA 712.

EDA 761 Strategies in Educational Project Management 3 Y  
Crosslisted with: IDE 761  
Management tactics, skills, procedures, and tools for planning and administering educational projects.

**EDA 762 Leadership for Inclusive Schooling 3 Y**

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  
PREREQ: EDA 712.

**EDA 764 Planned Change and Innovation 3 E**

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 3 Y**

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.  
PREREQ: EDA 712.

**EDA 780 Workshop in Educational Administration 1-3 IR**

R

**EDA 782 Issues and Practices in District Leadership 3 Y**

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.  
PREREQ: EDA 712.

**EDA 792 Legal Basis of Education 3 Y**

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 1-3**

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

**EDA 822 Assessment of Teaching 3 IR**  
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 3 IR**

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. R1, 6 credits maximum

**EDA 898 Internship in School District Business Leader 1-4 Y**

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. R1, 4 credits maximum

**EDA 899 Internship in Educational Administration and Supervision 3-4 S**

Practical administrative experience in an actual school situation under direction of an administrator and a professor of educational administration. R1, 4 credits maximum

**EDA 970 Experience Credit 1-6 R**

**Education (General)**

**EDU 500 Selected Topics 1-3 IR**

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

**EDU 508 Student Teaching 2-15 S**

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. R

**EDU 535 Quality Infant Care Giving 2-3 SS**

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 1-3**

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

**EDU 601 Methods and Practice in Teaching Art 3 Y**

Double Numbered with: EDU 301

Learning and teaching styles, instructional techniques, classroom and behavior management; development of independent thinking, making relevant judgments, effective communication through visual language. Includes teaching art workshops for young people.

**EDU 602 Methods and Curriculum in Teaching Art 3 Y**

Double Numbered with: EDU 302

Teaching strategies; planning lessons, units, and curricula for various age levels, special populations. Multicultural and interdisciplinary perspectives; assessment techniques; values and ethics; educational policy. Includes teaching art workshops for young people.

**EDU 603 Introduction to Qualitative Research 3 S**

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 3 SS**

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 605 Understanding Teaching in a Diverse Society 3 Y**

Changing roles and responsibilities of teachers in U.S. public schools. Assumptions teachers bring to the classroom, teacher work life, professional voice, organizational structure, collaborative relationships. Twenty-five hours' field experience minimum. No more than one of EDU 203, 207, 605 or EED 606 may be taken for credit.

**EDU 607 Principles of Learning in Inclusive Classrooms 3 Y**

Understanding learning, learner similarities and differences in diverse populations; schools and classrooms as complex learning settings; teacher decision-making based on classroom observations, student assessment, theory, and situation analysis. No more than one of EDU 607 and EED 604 may be taken for credit.

**EDU 610 The American School 3 S**  
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 1 Y**

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 3 Y**

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 3 Y**

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 647 Statistical Thinking and Applications 3 Y**

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 3 Y**

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 3-6 SI**

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. R

**EDU 664 Creating Safe and Peaceful Schools 3 SS**

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 1-6 IR**

Special topics of current interest in the field of professional education for depth study by graduate students. R

**EDU 725 Current Research on Teaching 3 IR**

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 3 IR**

Crosslisted with: EDA 727

Curriculum decision making as a function of the school's role in society. Theory and research in human growth and learning. Models of organization and instruction.

**EDU 737 Quantitative Research Design 3 E**

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 3 IR**

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 1-6 SI**

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. R

**EDU 781 The Institutions and Processes of Education I 3 Y**

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 3 Y**

Reviews, integrates and extends concepts and techniques from introductory statistics and research design. Focuses on intermediate-level statistical techniques including AVOVA, 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 1-3**

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

**EDU 810 Advanced Seminar in Qualitative Research I 3 Y**

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 3 Y**

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 3 IR**

Theoretical models, experimental programs. Historical perspective on recent innovative movements. Development in local pre-service/in-service program.

EDU 822 Assessment of Teaching 3 IR  
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 3 IR  
Continuum of practices: recruitment preparation, induction, continuing professional development. Developing a frame of reference regarding teacher education.

EDU 833 Critical Curriculum Theory 3 SI  
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 3 E  
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 3 O  
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 3 O  
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 3 E  
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. R1, 6 credits maximum

EDU 970 Experience Credit 1-6 S  
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing. R

EDU 990 Independent Study 1-6 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. R

EDU 991 Problems in Educational Research 1-6 SI  
For qualified students who wish to pursue individual problems under faculty direction, particularly problems in those fields not served by a special research course.

EDU 997 Thesis 1-6 S  
R

EDU 999 Dissertation 1-15 S  
R

### Elementary Education

EED 601 Strategies for Inclusive Education I 2 IR  
Developing a classroom community, responding to diversity issues, and strategies for promoting cooperative, interactive education. Admission to the M.S./childhood education (1-6) preparation program.

EED 621 Elementary Mathematics methods and Curriculum I 2 IR  
Integration of theory, research, and practice in teaching and learning of mathematics. Examination of programs' scope, sequence, and materials. Design and evaluate inclusive lessons and units including differentiated instruction and adaptations. For Childhood Preparation program students only.

EED 622 Elementary Mathematics Methods and Curriculum II 1 IR  
A continuation of EED 621. Integration of theory, research, and practice in teaching and learning of mathematics. Examination of programs' scope, sequence, and materials. Design and evaluate inclusive lessons and units including differentiated instruction and adaptations.

EED 624 Elementary Language Arts Methods and Curriculum 3 IR  
Design, implementation, and evaluation of programs for learners with and without handicaps. Relationships among the language arts and the role of oral and written language in personal, educational, social, and vocational development. Field experience. Student must be admitted to first professional block.

EED 625 Elementary Reading Methods and Curriculum 3 Y  
Decision making processes related to methods and materials used during reading instruction. Formulation of lesson plans, teaching, evaluation for children with and without handicaps. Understanding of comprehension processes. Field experience teaching. Students must be admitted to first professional block.

EED 626 Elementary Social Studies Methods and Curriculum 3 IR  
Double Numbered with: EED 336  
Formulation and teaching of thematic unit plans to children with and without disabilities. Incorporates children's multicultural literature, inquiry-based curriculum materials, primary source documents, and activity-based instruction. Decisions based on concepts and values.

EED 627 Elementary Science Methods and Curriculum 3 IR  
Double Numbered with: EED 337  
Formulation and teaching of unit plans to children with and without handicaps. Decisions based on concepts and thinking skills. Reviews of curriculum materials and student-centered activities. Fostering inquiry.

EED 632 Teaching Number Ideas, K-6 3 SI  
Crosslisted with: MTD 632; Double Numbered with: EED 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.

### EED 633 Teaching Geometry and Measurement, K-6 3 SI

Crosslisted with: MTD 633; Double Numbered with: EED 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.

### EED 636 Assessing Mathematical Understanding 3 IR

Crosslisted with: MTD 636, SED 636  
Background and perspectives on assessment and mathematical understanding. Methods of assessment and issues of implementation. Development of assessment plan.

### EED 640 Participation in the Professional Development School 0-1 S

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. R5, 2 credits maximum

### EED 643 The Parent/Caregiver-Professional Partnership 3 SS

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.

### EED 654 Teaching Mathematics, Science and Social Studies in Early Childhood Special Education 3 SS

Basic concepts and strategies for teaching mathematics, science, and social studies to preschool and primary age (K-2) children.

### EED 655 Methods and Materials in Early Childhood Education 3 SI

Curriculum and instruction based on knowledge of child growth and development in ages 3 through 8. Teaching children with and without handicaps. Resources and techniques.

## English Language Learners

ELL 615 Linguistics for Teachers of English Language Learners 3 Y  
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 3 Y  
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.  
PREREQ: ELL 615.

ELL 635 Methods of Literacy Across the Curriculum for English Language Learners 3 Y

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 3 Y

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 6 SS

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 3 IR  
Double Numbered with: HEA 485

Principles and applications of health promotion in the workplace.

## Higher Education

HED 600 Selected Topics 1-3

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

HED 601 Graduate Interest Group Seminar 0 Y

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 3 Y

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 3 Y

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 3 Y

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 3 Y

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 3 Y

Theories of leadership; models of personnel selection, motivation, and evaluation; staff problems, job stress, and burnout.

HED 700 Selected Topics 1-3

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

HED 712 Research on the College Student 3 Y

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 3 E

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 3 Y

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 3 Y

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 1-6 S

Supervised field experiences and related seminar. For matriculated graduate students who are considering an administrative position in a higher education setting. Permission of instructor. R2, 9 credits maximum

HED 741 The Academic Program 3 IR

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 3 Y

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 3 O

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 3 IR

Specific topic in the theory and/or practice of higher education. Course topics will vary. R1, 6 credits maximum

HED 831 Advanced College Student Development 3 IR

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 3-6 IR

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 3 S

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 1-3 IR

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

IDE 611 Technologies for Instructional Settings 3 Y

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 3 Y

Factors affecting human learning, youth through adult, with implications for the design and management of instruction.

IDE 631 Instructional Design and Development I 3 Y

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 3 Y

A continuation of IDE 631. 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 3 Y

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 3 Y

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 3 Y

Crosslisted with: 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 3 Y

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 631.

IDE 660 Topics in Program Management and Human Performance Technology 3 SI  
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 1-9 SI  
Designed to provide students with practical experience in the application of technology to education in school and business settings. Cooperative work coordinated by the instructor with a site supervisor is required. R

IDE 681 Instructional Technology K-12 Practicum and Seminar 4 Y  
Design, development, implementation and evaluation of technology enhanced instruction, in K-12 district, building, and classroom setting. Minimum of 50 hours, spanning two semesters. Approved proposal required before enrolling. Must have completed 21 program credits.

IDE 690 Independent Study 1-6 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. R

IDE 700 Selected Topics 1-3  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

IDE 712 Analysis for Human Performance Technology Decisions 3 Y  
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 716 Capstone Practicum in Instructional Design, Development and Evaluation 3 Y  
Application of skills in problem analysis and definition, learner and situation analysis, specification of objectives and assessment criteria, instructional strategies selection, prototyping and implementation, and evaluation planning. Implementation of solution to student-selected problem required. PREREQ: IDE 632 AND 761 AND 712 AND 641.

IDE 735 Modeling and Simulations in Education 3 SS  
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 3 SS  
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.  
PREREQ: IDE 631 AND 632.

IDE 737 Advanced Instructional Design 3 Y  
This course provides a capstone and 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.  
PREREQ: IDE 621, 631, 632, 641, AND 712.

IDE 741 Concepts and Issues in Educational Evaluation 3 Y  
Crosslisted 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 3 Y  
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 3 IR  
Crosslisted 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 755 Design and Development of Computer-based Instruction 3 O  
Cross-sectional view of instructional uses of computers in education, business, military, and health-related contexts. Focus on development of computer-based instruction, drawing upon the instructional development process and learning theory.

IDE 756 Design and Management of Distance Education 3 SS  
Organization, development, and delivery of distance education programs with emphasis on adult and higher education. Separate consideration is given to the student, course, logistic, and management subsystems.  
PREREQ: IDE 621 AND 631.

IDE 761 Strategies in Educational Project Management 3 Y  
Crosslisted with: EDA 761  
Management tactics, skills, procedures, and tools for planning and administering educational projects.

IDE 762 Performance Improvement: Promise and Practice 3 SS  
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.  
PREREQ: IDE 712.

IDE 764 Planned Change and Innovation 3 E  
Crosslisted 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 3 Y  
Philosophy, research, and practice in teaching/training adults. Workshop provides opportunities to improve up-front delivery style and to try out different instructional methods, techniques, and strategies.

IDE 772 Educational Technology in International Settings 3 Y  
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 1-3  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

IDE 830 Doctoral Seminar in Design and Development 3 E  
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 631 AND 632 AND 641 AND 712.

IDE 831 Knowledge Management in Instructional Design 3 E  
Knowledge management systems. Design, development, and implications of learning and performance solutions that integrate knowledge management systems technology. Demonstration of knowledge management technologies. Project-centered.  
PREREQ: IDE 712 AND 651 AND 632.

IDE 841 The Nature and Design of Inquiry 3 O  
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 3 E  
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 3 O  
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 631 AND 632. R1, 6 credits maximum

IDE 853 Educational Media Theory and Research 3 E  
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 1-9 S  
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. R

IDE 990 Independent Study 1-6 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. R

### Mathematics Education

MTD 600 Selected Topics 1-3  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester R

MTD 630 Internship in Mathematics Education 1-3 S  
Graduate students work with mathematics education faculty in teaching courses, developing curricula, assessing student understanding, understanding student beliefs. R

MTD 632 Teaching Number Ideas, K-6 3 SI  
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, K-6 3 SI  
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 3 E  
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. Applications throughout algebra with applications to geometry and probability. Use of software and data collection equipment. Additional work required of graduate students.

MTD 636 Assessing Mathematical Understanding 3 SI  
Crosslisted with: EED 636, SED 636  
Background and perspectives on assessment and mathematical understanding. Methods of assessment and issues of implementation. Development of assessment plan.

MTD 637 Teaching and Learning Geometry 3 O  
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 3 O  
Double Numbered with: MTD 438  
Statistical thinking across the curriculum, 5-14. Theoretical development on student learning of variation, sampling and inference. Research-based strategies for teaching. Use of statistical software and related technologies. Additional work required of graduate students.

MTD 736 Mathematical Communication 3 IR  
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 1-3  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

MTD 830 Research Seminar in Mathematics Education 0-3 S  
Philosophical and theoretical readings and discussions about research issues in mathematics education. R5, 6 credits maximum

MTD 835 Learning Theories in Education 3 O  
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.

## Music Education

MUE 510 Practicum in Children's Choir 1-3  
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 3  
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 2 Y  
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 1-2  
Laboratory in guitar, emphasizing performance techniques, care of instrument, acoustical considerations, elementary ensemble performance, and practical demonstration of methods and materials for individual/group instruction. Upper division status or permission of instructor. Music majors only.

MUE 604 World Music and the Interdisciplinary Curriculum 3 SS  
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 1-2 S  
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. R1, 2 credits maximum

MUE 611 Assessment in Music Education 1 Y  
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 3

MUE 615 Introduction to Research in Music 3 Y  
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 3 IR  
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 2  
Double Numbered with: MUE 415

MUE 618 Current Problems in Music Education 3 Y  
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 1-2 Y  
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 1-2 Y  
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 1-2 Y  
Double Numbered with: MUE 325  
Laboratory in string instruments, emphasizing performance techniques, care of instruments, acoustical considerations, elementary ensemble performance, and practical demonstrations of methods and materials for individual/group instruction. Upper-division status or permission of instructor.

MUE 626 Teaching of Brass Instruments 1-2 Y  
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. R1, 4 credits maximum

MUE 627 Teaching of Woodwind Instruments I 1-2 Y  
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 1-2 Y

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 1-2 Y

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 1-2 Y

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 1-6 SI

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 1-6 SI

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 700 Selected Topics 1-3 SI

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 3 SI

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 instructor.

MUE 712 Advanced Instrumental Teaching 3 SI

Problems of instrumental training and organization relevant to bands and orchestras in schools. Instrumental music literature in terms of teaching. Musical content and how to teach it. Open to all music majors; nonmusic majors may elect with permission of instructor.

MUE 715 Administration and Supervision in Music Education 3 IR

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 3 IR

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; non-music majors may elect with permission of instructor.

MUE 731 Mngmt in Music Teaching 1-2 Y  
Double Numbered with: MUE 431

MUE 735 Choral Rehearsal Techniques 2-3 Y

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 2-3 Y

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 1-6 SI

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 1-6 SI

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 1-6 SI

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 1-6 S

### Professional Physical Education

PPE 514 Exercise and Aging 3 Y

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 4 IR

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 3 IR

Exercise prescription for health and fitness in the apparently healthy and a variety of clinical populations.  
PREREQ: PPE 497.

PPE 517 Pathophysiology 3 Y

Physiology of disease processes emphasizing metabolic, cardiovascular, and neuromuscular pathophysiology. Suggested for students pursuing careers in clinical exercise physiology.  
PREREQ: BIO 216 AND 217 AND PPE 497.

PPE 518 Cardiac Rehabilitation 3 Y

Exercise training and prescription for individuals with cardiovascular disease.  
PREREQ: PPE 497.

PPE 519 Metabolic Aspects of Physical Activity 3 Y

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 1-3

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

PPE 606 Current Literature in Exercise and Sport Science 1-3 Y  
Current books, periodicals, and peer-reviewed articles. Literature review, library research, and research proposal preparation.

PPE 683 Scientific Principles of Conditioning 3-6 IR  
Double Numbered with: PPE 483  
Development of physical conditioning programs based on scientific principles.

PPE 685 Systemic Physiology and Exercise 3 Y  
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 3 Y  
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 3 IR  
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 3-6 S  
Full-time experience in exercise science under the guidance of a professional and a faculty member. R2, 6 credits maximum

PPE 773 Exercise Endocrinology 3 Y  
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 3 Y  
Probable causes for differences in muscle-fiber types in relationship to exercise. Total body metabolism during exercise.

PPE 795 Skeletal Muscle Physiology 3 Y  
Emphasizing basic muscle microanatomy and physiology and advanced applied muscle physiology topics.  
PREREQ: PPE 685.

## Reading And Language Arts

RED 511 Adolescent Literature 3 Y  
Fiction, poetry, drama, and nonfiction that meet the emotional, intellectual and social needs and interests of young people in middle, junior high, and high schools. Personal reading as well as curriculum-related literature.

RED 547 Childrens Literature 3 Y  
History of literature for children; selection of books for children of different age groups. Methods of stimulating interest in literature. Use of literature as part of reading program.

RED 600 Selected Topics 1-3  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

RED 601 Literacy Across the Life Span 3 Y  
Methods, materials, and application of research to the teaching of literacy for diverse learners. Instructional and assessment approaches to support the acquisition and development oral and written literacy proficiency, preschool to adult. Graduate standing.

RED 602 Comprehending and Composing I 3 Y  
Research-based concepts, instruction, materials, assessment, and programs for developing comprehension and composing in kindergarten through grade four. For literacy specialists and other educators interested in helping students develop English language arts skills in early elementary levels.

RED 603 Comprehending and Composing II 3 Y  
Research-based concepts, instruction and materials, assessment, and programs for developing comprehension and composing in grades five through twelve. For subject-area teachers, literacy specialists, and other educators interested in adolescent literacy.

RED 607 Issues in Multicultural Literacy 3 Y  
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 614 Developing Writing Competence: the Composing Process 3 Y  
For elementary and secondary teachers. Prewriting and postwriting elements of the composing process. Modes of discourse, developmental indices, and the relationship between written and oral language.

RED 621 Literacy Intervention for Special Educators, Grades K-12 3 SS  
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 625) OR RED 625.

RED 625 Literacy Across the Curriculum 3-4 S  
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 3 S  
Crosslisted with: SPE 627  
Researchbased 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 Advanced Literacy Intervention 3 Y  
Advanced research-based diagnostic assessment and intervention for learners with severe reading and writing disabilities. Includes 20-30 hours of practice in diagnosis and treatment.  
PREREQ: RED 626/SPE 627.

RED 700 Selected Topics 1-3  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

RED 715 Language, Learning, and Literacy 3 IR  
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 3 O

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 746 Perspectives on Literacy and Technology 3 Y

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 3-6 SS

Supervised practice and seminar in diagnosing and tutoring students who struggle with reading and writing. Includes a 30-hour practicum. PREREQ: RED 629. R1, 6 credits maximum

### Science Education

SCE 600 Selected Topics 1-3

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

SCE 613 Methods and Curriculum in Teaching Science 3 Y

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 3 SS

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 718 Curriculum Problems in Science 3 Y

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 3 IR

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 3 IR

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 1-3 IR

Recent advances in astronomy, chemistry, geology, plant sciences, physics, and zoology and their implications for teaching of science in elementary and secondary schools. R

SCE 757 Methods and Materials in Teaching the Earth Sciences 3 IR

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 4 IR

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 3-6 SI

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. R

SCE 789 Seminar in Science Education Research 3 IR

Scholarly literature in science education. Major problems in science education and their relevance to practice.

### Secondary Education

SED 522 Study of Social Studies 3 Y

Culmination of the social studies sequence. Development of the field, persistent issues involved in content, organization, teaching methods, and teacher preparation. Nature of content as it influences instructional decisions.

SED 613 Methods and Curriculum in Teaching 3 Y

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 615 Teacher Development 3 Y

Double Numbered with: SED 415  
Analysis of teaching behavior and decision making, teaching alternatives and effectiveness. Classroom management, professional issues, personal teaching strengths. Issues related to student teaching, methods and curriculum. COREQ: EDU 508.

SED 634 Teaching and Learning Functions 3 E

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 3 SI

Crosslisted with: EED 636, MTD 636  
Background and perspectives on assessment and mathematical understanding. Methods of assessment and issues of implementation. Development of assessment plan.

SED 637 Teaching and Learning Geometry 3 O

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 0-1 S  
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. R5, 2 credits maximum

## Special Education

SPE 500 Selected Topics 1-3  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

SPE 520 Methods and Curricula in Early Childhood Special Education 3 Y  
Curricula, program design, and teaching methods for educating infants and young children with disabilities.

SPE 600 Selected Topics 1-3  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

SPE 609 Teaching Children and Adolescents with Autism 3 Y  
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 3 S  
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 3 Y  
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 1-2 S  
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. R1, 3 credits maximum

SPE 618 Augmentation of Communication in the Inclusive Classroom 3 Y  
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 3 IR  
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 3 Y  
Critical, contemporary issues affecting children and youth with special needs and their families.

SPE 627 Early Intervention for Children's Reading Problems 3 S  
Crosslisted with: RED 626  
Researchbased 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 3 SS  
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 3 Y  
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 3 Y  
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 1 Y  
Field-based practicum with students with significant disabilities in inclusive settings. COREQ: SPE 644.

SPE 652 Assistive Technologies for Integrating Students with Special Needs 3 Y  
Crosslisted with: 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 3 SS  
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 3 SS  
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 3 Y  
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 705 Practicum in Psychoeducational Evaluation and Planning for Exceptional Children 3-6 Y**

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 3 Y**

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 3 Y**

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 3 SI**

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 3 IR**

Research approaches. Methods, conceptual processes for research design, and practice. How scholars frame research questions, incorporate values in research development, and interpret research findings. R1, 6 credits maximum

**SPE 900 Selected Topics 1-3**

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

# Faculty

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Kal Alston, Professor

Ph.D., University of Chicago, 1989  
Philosophy in education, gender and race;  
popular culture

Barbara Applebaum, Professor, Chair  
Ph.D., Ontario Institute for Studies in  
Education of the University of Toronto, 1994  
Feminist ethics, feminist philosophy, and  
critical race theory

Christine Ashby, Assistant Professor  
Ph.D. Syracuse University 2008  
Inclusive education, disability studies, autism  
and communication.

James Bellini, Professor  
Ph.D., University of Arkansas, 1995  
Rehabilitation research, disability policy,  
rehabilitation evaluation

Janine Bernard, Professor  
Ph.D., Purdue University, 1975  
Counselor education

Sharif Bey, Assistant Professor  
Ph.D. Pennsylvania State University 2007  
Community based arts programing, African-  
American art education history, unofficial  
Slovak art, post soviet art education reforms,  
conceptual art and its implications to art  
education.

Douglas Biklen, Dean, Professor  
Ph.D., Syracuse University, 1973  
Child advocacy, public policy, facilitated  
communication, inclusive education

Sari Knopp Biklen, A.A.U.W. Meredith  
Professor  
Ed.D., University of Massachusetts, 1973  
Qualitative research methodology, gender,  
race, and education, sociology of popular  
culture, cultural studies

Benita Ann Blachman, Trustee Professor  
of Education and Psychology  
Ph.D. University of Connecticut 1981  
Learning and reading disabilities; prevention of  
reading difficulties; early reading intervention;  
early language factors that predict reading  
achievement.

Marlene Blumin, Professor  
Ph.D., Cornell University, 1988  
College readiness, cognitive strategies,  
technology and curriculum in undergraduate  
education, learning models in post-secondary  
settings

Rachel Brown, Associate Professor  
Ph.D., University of Maryland, 1994  
Reading, strategy, instruction, cognition,  
instructional technology

Tom Brutsaert, Associate Professor, Chair  
Ph.D. 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-Theoharis, Associate  
Professor  
Ph.D., University of Wisconsin-Madison,  
2003  
Special education, differentiation, universal  
design for instruction, professional  
collaboration, paraprofessional support

Kelly Chandler-Olcott, Professor, Chair  
Ed.D., University of Maine, 1998  
Adolescent literacy, Content literacy, and  
English education

John Coggiola, Associate Professor  
Ph.D., Florida State University, 1997  
Music education

Luis Columna, Associate Professor  
Ph.D., Texas Woman's University 2007  
Adapted physical education, physical activity  
among families of children with disabilities,  
inclusive teacher preparation, diversity,  
multicultural education

Alanna Rochelle Dail, Assistant Professor  
Ph.D., Vanderbilt University 2004  
Reading and Language Arts

Elisa DeKaney, Associate Professor  
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 Professor  
Ph.D., Cornell University, 1994  
Secondary mathematics education, teacher and  
student learning, mathematical modeling, and  
mathematical communication.

Benjamin H. Dotger, Associate Professor  
Ph.D., North Carolina State University, 2006  
Teacher professional development,  
educational administration

Sharon Dotger, Associate Professor  
Ph.D. North Carolina State University 2006  
Science teaching and learning, lesson study,  
writing in science.

Jodi Dowthwaite, Research Assistant  
Professor  
Ph.D., Cambridge University, (Churchill  
College Cambridge, U.K.) 1997  
Development of musculoskeletal strength and  
body composition across the lifespan, effect  
of exercise on skeletal growth and relative  
bone strength in girls, osteoporosis and  
fracture prevention

Jason Duffy, Assistant Professor  
Ph.D. University of Rochester, 2013  
Counselor Education and development, clinical  
mental health counseling.

Timothy K. Eatman, Assistant Professor  
Ph.D., University of Illinois-Champaign, 2001  
Educational equity; higher education; publicly  
engaged scholarship, faculty rewards;  
institutional planning and leadership; P-16;  
institutional collaboration; diversity, STEM  
success

Catherine M. Engstrom, Associate  
Professor, Chair  
Ph.D., University of Maryland, 1991  
Student personnel administration, counseling,  
and personnel services

Gail Ensher, Professor  
Ed.D., Boston University, 1971  
Early childhood education of special-needs  
students

Beth Ferri, Associate 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  
Ph.D., University of Wisconsin, 2001  
Curriculum and instruction, educational communications and technology
- Marcelle Haddix, Assistant Professor  
Ph.D., Boston College, 2008  
English education, critical literacy, racial and linguistic diversity in teacher education
- Wendy S. Harbour, Lawrence B. Taishoff  
Assistant Professor  
Ed.D. Harvard University 2008  
Disability in k-12 and higher education, disability studies, deaf studies, universal design.
- Kevin Heffernan, Assistant Professor  
Ph.D., University of Illinois at Urbana-Champaign 2008  
Effect of acute exercise and exercise training on vascular and autonomic function in health and disease
- Kathleen A. Hinchman, Professor  
Ph.D., Syracuse University, 1985  
Adolescent literacy and literacy teacher education
- Dawn Johnson, Assistant Professor  
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
- Stefan Keslacy, Assistant Professor  
Ph.D., University of Montpellier I School of Medicine (France), 2005  
Cellular effects of exercise, inflammation and obesity, NF-kBand insulin resistance
- Tiffany Koszalka, Professor  
Ph.D., Pennsylvania State University, 1999  
Technology integration in K-12 science, math, geography; technology learning environments
- Jing Lei, Associate Professor  
Ph.D., Michigan State University, 2005  
Learning, technology, culture
- Gretchen Lopez, Assistant Professor  
Ph.D., University of Michigan, 1993  
Intergroup relations, multicultural education, social identities
- Melissa Luke, Associate Professor, Interim Chair  
Ph.D. Syracuse University 2007  
School Counseling program implementation and supervision, school-family-community partnerships to support college access for historically marginalized students.
- Gerald M. Mager, Meredith Professor, Associate Dean  
Ph.D., Ohio State University, 1978  
Teacher education, career development, supervision and curriculum
- Jeffery Mangram, Associate Professor  
Ph.D., Syracuse University, 2006  
Urban education and media literacy
- Joanna O. Masingila, Meredith Professor, Chair  
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
- 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
- Elizabeth C Payne, Associate Professor, Part-time  
Ph.D. University of Houston 2002  
Sociology of education, qualitative research methodology, critical theory, youth culture, LGBTQ youth.
- Mario Rios Perez, Assistant Professor  
Ph.D., University of Illinois, Champaign-Urbana, 2012  
History of education, Latina/Latino history, urban education, race and immigration
- Emily E. Robertson, Associate Professor  
Ph.D., Syracuse University 1981  
Philosophy of education, moral and social philosophy, philosophy of the social sciences
- Dalia Rodriguez, Associate Professor  
Ph.D., University of Illinois, Champaign-Urbana, 2005  
Racial inequality, qualitative research methods, policy studies
- James Haywood Rolling Jr., Associate 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 literate effective instruction for disenfranchised students, dimensions of content literacy for English language learners.
- Mara Sapon-Shevin, Professor  
Ed.D., University of Rochester, 1976  
Teaching for social justice, anti-racism, inclusive education, cooperative learning, and teacher education
- Derek X. Seward, Assistant Professor  
Ph.D., University of Rochester, 2009  
Counselor education, the experiences of graduate students of color in diversity courses, multicultural training methods
- Scott L. Shablak, Research Professor  
Ph.D. Syracuse University 1971  
Program and training assessment and evaluation; organizational and professional development; grant design and development; leadership effectiveness; successful study and student motivational strategies
- Joseph Shedd, Associate Professor  
Ph.D., New York State School of Industrial and Labor Relations, Cornell University, 1989  
Collective bargaining, organizational behavior
- Corinne Roth Smith, Professor  
Ph.D., Syracuse University, 1973  
School psychological assessment and intervention practices, learning disabilities
- Nick L. Smith, Professor, Chair  
Ph.D., University of Illinois, 1975  
Evaluation and applied field research methodology
- Steven J. Taylor, Centennial Professor; Director, Center on Human Policy  
Ph.D., Syracuse University, 1977  
Public policy, sociology of disability, advocacy, qualitative research
- George Theoharis, Associate Dean, Associate Professor  
Ph.D., University of Wisconsin-Madison, 2004  
School leadership, inclusive education, elementary social studies

John W Tillotson, Associate Professor  
Ph.D., University of Iowa, 1996  
Science teaching preparation, teacher beliefs

Vincent Tinto, Distinguished Professor  
Ph.D., University of Chicago, 1971  
Sociology of education, research methods,  
study of learning communities in higher  
education

Kathleen Utter-King, Research Assistant  
Professor  
Ph.D., University of Rochester 2007  
Genetic epidemiology, evidence based practice  
in exercise and sports science

Qiu Wang, Assistant Professor  
Ph.D., Michigan State University 2010  
Research methodology; educational  
measurement; statistical modeling

Louise C. Wilkinson, Distinguished  
Professor of Education, Psychology and  
Communication Sciences  
Ed.D., Harvard University, 1974  
Language and literacy learning, teacher  
education, education policy, qualitative  
assessment

Marion Wilson, Associate  
Professor, Distinguished Professor of Arts and  
entrepreneurship  
M.A. Columbia University 1990 & M.F.A.  
University of Cincinnati 1993  
Public Art, Social Sculpture, Community and  
new genre art practices; Urban Education

# L.C. Smith College Of Engineering And Computer Science

Laura J. Steinberg, Dean  
227 Link Hall  
lcs.syr.edu/



## About The College

These are exciting times in engineering and computer science. Revolutionary changes in multiple areas continue to transform the operations of most traditional employers of engineers and computer scientists. The demand for individuals with degrees in engineering and computer science is greater than ever. In addition, new nontraditional opportunities for engineering and computer science graduates are opening in law, medicine, public policy, finance, management, and communications. Traditional tools and technical know-how are often no longer enough. Today's engineers and computer scientists must possess a broader set of perspectives, experiences, and skills to contribute successfully in a dynamic, rapidly changing world.

Syracuse University's L.C. Smith College of Engineering and Computer Science (LCS) offers courses and programs that are designed to prepare leaders for a high-technology, knowledge-based global community. Through courses in the college and across the University, LCS offers students a breadth of opportunities and experiences that is unmatched by programs at most other universities.

The college offers nine undergraduate programs: bachelor of science programs in aerospace engineering, bioengineering, chemical engineering, civil engineering, computer engineering, electrical engineering, environmental engineering, and mechanical engineering are accredited by the Engineering Accreditation Commission of ABET, and bachelor science program in computer is accredited by the Computing Accreditation Commission of ABET, <http://www.abet.org>.

New engineering and computer science students enroll in ECS 101 Introduction to Engineering and Computer Science. ECS 101 provides a broad introduction to each of our degree programs, allowing students an opportunity to explore each area before they choose a major. ECS 101 is also open to students of other SU colleges who are interested in exploring the areas of engineering or computer science as a potential field of academic study.

LCS students may choose from a variety of study options, including technical and non-technical minors, combined B.S./M.S. degree programs, and a combined undergraduate degree program between LCS and the College of Arts and Sciences. The college also offers its students opportunities for co-op, study abroad, and undergraduate research.

Founded in 1901, LCS enjoys a long-standing reputation for excellence and innovation. The college community is composed of outstanding students, faculty, and staff who are dedicated to personal excellence and success.

## Educational Mission And Vision

### THE COLLEGE MISSION

The mission of the college is to promote learning in engineering and computer science through integrated activities in teaching, research, scholarship, creative accomplishments, and service.

### THE COLLEGE VISION

The vision of the college is to earn recognition among universities for engineering and computer science programs that prepare leaders for a high-technology, knowledge-based, global community. The vision for LCS is a distinct student-centered research university model for engineering and computer science education. Features of this model include the following:

- the commitment that all programs relate directly to students and their learning experiences;
- the commitment that research is an integral element of the learning environment;
- the flexibility for students to pursue the diversity of learning opportunities available in a broad university setting; and
- the commitment to world-class quality in courses and programs.

## Accreditation

The college offers nine undergraduate programs: bachelor of science programs in aerospace engineering, bioengineering, chemical engineering, civil engineering, computer engineering, electrical engineering, environmental engineering, and mechanical engineering are accredited by the Engineering Accreditation Commission of ABET, and bachelor science program in computer is accredited by the Computing Accreditation Commission of ABET, <http://www.abet.org>.

### STUDENT OUTCOMES

Student outcomes in all B.S. in engineering programs:

- (a) an ability to apply knowledge of mathematics, science, and engineering
- (b) an ability to design and conduct experiments, as well as to analyze and interpret data

- (c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- (d) an ability to function on multidisciplinary teams
- (e) an ability to identify, formulate, and solve engineering problems
- (f) an understanding of professional and ethical responsibility
- (g) an ability to communicate effectively
- (h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- (i) a recognition of the need for, and an ability to engage in life-long learning
- (j) a knowledge of contemporary issues
- (k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Student outcomes in the B.S. in computer science program:

- (a) An ability to apply knowledge of computing and mathematics appropriate to the discipline
- (b) An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution
- (c) An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs
- (d) An ability to function effectively on teams to accomplish a common goal
- (e) An understanding of professional, ethical, legal, security and social issues and responsibilities
- (f) An ability to communicate effectively with a range of audiences
- (g) An ability to analyze the local and global impact of computing on individuals, organizations, and society
- (h) Recognition of the need for and an ability to engage in continuing professional development
- (i) An ability to use current techniques, skills, and tools necessary for computing practice.

## Undergraduate Program Overview

The college offers ten undergraduate programs: bachelor of science programs in aerospace engineering, bioengineering, chemical engineering, civil engineering, computer engineering, electrical engineering, environmental engineering, and mechanical engineering are accredited by the Engineering Accreditation Commission of ABET, and bachelor science program in computer is accredited by the Computing Accreditation Commission of ABET, <http://www.abet.org>.

Aerospace Engineering

Bioengineering  
 Chemical Engineering  
 Civil Engineering  
 Computer Engineering  
 Computer Science  
 Electrical Engineering  
 Environmental Engineering  
 Mechanical Engineering  
 Systems and Information Science

### General Regulations

For academic rules and regulations that apply to all University students, see the Academic Rules and Regulations section of this catalog, which also contains special regulations that apply only to students matriculated in the L.C. Smith College of Engineering and Computer Science.

Engineering and computer science students enrolling at Syracuse University must maintain at least a 2.0 grade point average in all engineering, mathematics, and science courses taken at SU. Furthermore, all students must satisfactorily complete at least 24 credits, including summer courses taken here or transferred to Syracuse University from another institution, within any 12-month period to maintain satisfactory progress, with a 2.0 semester and overall average.

For graduation, students must have a minimum cumulative GPA of 2.00 and at least a 2.00 GPA in all LCS, mathematics, and science courses taken at Syracuse University. In addition, students must meet all degree requirements specific to their chosen major.

## Arts And Sciences/ Engineering & Computer Science (Combined Degrees)

Arts and Sciences contact the Advising and Academic Support Office, 329 Hall of Languages, 315-443-3150.

Engineering and Computer Science contact Maria Marceau, Director of Student Records, 130 Link Hall, 315-443-5191.  
 Engineering Faculty, See individual departments listed in the “L.C. Smith College of Engineering and Computer Science.”

The College of Arts and Sciences, in cooperation with the L.C. Smith College of Engineering and Computer Science, offers a five-year combined curriculum. Students complete the requirements for and receive two degrees—one degree in a major of their choice in engineering or computer science and one degree in a major in the College of Arts and Sciences. Students who enter this program are urged to talk with advisors in both departments in which they plan to major as soon as possible. It is important that they learn the curricular requirements of each department in order to understand how best to merge the two

sets of requirements.

Students register with the College of Arts and Sciences as the home college for the first three years. They receive a basic education in mathematics and science along with a liberal education in the social sciences and humanities. While most of the coursework taken during that time is in the liberal arts, approximately one quarter of the program consists of first- and second-year courses in the engineering field chosen by the students.

After completing the third year, students transfer the home college designation to the L.C. Smith College of Engineering and Computer Science while maintaining a connection with the College of Arts and Sciences. The fourth and fifth years of the program focus on engineering subjects. The B.A. or B.S. degree in the Arts and Sciences major may be awarded upon completion of the fourth year, but increased scheduling options are possible by completing both degrees at the end of the fifth year.

While some flexibility is possible in the program, it is a formalized curriculum. Students usually major in mathematics, biology, physics, or chemistry in the College of Arts and Sciences, although other majors are allowed upon approval by both colleges. The completion of the combined degree program requires a minimum of 150 total credits earned.

Admission requirements are the same as those for students entering the L.C. Smith College of Engineering and Computer Science. Students who are already enrolled in the College of Engineering and Computer Science or the College of Arts and Sciences may transfer into the combined program provided requirements can be met. Such transfers must be approved by both colleges.

## Intra-University Transfer

Students who wish to transfer into any program within the L.C. Smith College of Engineering and Computer Science from another school or college within the University should have a strong record of achievement and demonstrated success in key technical courses. Specifically, it is critical for the applicant to have proven their ability to excel in college-level calculus (by completing at least one of MAT 295, 296, or 397 with a grade of B- or better) and science (by completing at least one set of PHY 211/221 or CHE 106/107 with a grade of B- or better). Students who wish to major in computer science must also complete CIS 252 with a grade of at least a B.

## LCS PRIDE OFFICE

PRIDE Office (Programs Rooted In Developing Excellence) provides programming that meets the needs of and fosters excellence in the educational, professional, and personal development of all students with particular emphasis on African American, Latino/a, Native American, and women students in the L.C. Smith College of Engineering and Computer Science.

PRIDE Office offers programs that focus on student development and their academic success including the SummerStart Program, the LCS Pathfinders (peer advisors), and academic advising for newly admitted students. In addition, first-year students are invited to participate in the LC Smith Learning Community in the STEM Residential College located in Shaw Hall which allows for formed social connections and peer collaboration on similar academic pursuits.

Additional programs include Academic Excellence Workshops (AEW), which focus on the mastery of calculus and other fundamental engineering courses and the STAR (Students Taking Academic Responsibility) Program, which provides support in the nonacademic skills that are necessary to ensure student success; and the PRIDE Incentive Program, which celebrates the students' academic achievement.

PRIDE is also committed to helping students develop leadership skills through involvement in recognized student organizations. The activities, leadership opportunities, and community service projects sponsored by the organizations are important to the students, the college, the University, and the local Syracuse community, as they prepare to be future societal leaders.

PRIDE evolved from the Minority Engineering Program (MEP) Office established in 1976.

Students interested in the PRIDE Office programs should contact the director's office, 123 Link Hall, 315-443-2582, [pride@lcs.syr.edu](mailto:pride@lcs.syr.edu).

## Co-Op

The LCS Cooperative Education program (Co-op) empowers undergraduate students to take advantage of experiential learning opportunities that have proven to aid them in successfully reaching their post-graduate goals. The Co-op program consists of full-time professional work primarily during the summer. This design allows students the opportunity to gain more than six months of paid work experience in their field of study and still graduate in four years. Working during the academic year is an option that students may choose, with the understanding that their ability to graduate on time may be affected. To be eligible, students must be enrolled full time in the L.C. Smith College of Engineering and Computer Science.

Contact Cooperative Education Program, L.C. Smith College of Engineering and Computer Science, 123 Link Hall, 315-443-2582.

## Graduate Program Overview

The L.C. Smith 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, engineering science, 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 70 full-time members, most of whom are research scholars of national and international renown. Full-time graduate enrollment in the college totals approximately 400 students, with approximately 400 part-time students.

The college offers the following graduate degrees:

Bioengineering—M.E., M.S., Ph.D.  
Chemical engineering—M.S., Ph.D.  
Civil engineering—M.S., Ph.D.  
Computer engineer—C.E.  
Computer engineering—M.S.  
Computer science—M.S.  
Computer and information science and engineering—Ph.D.  
Electrical engineer—E.E.  
Electrical engineering—M.S.  
Electrical and computer engineering—Ph.D.  
Engineering management—M.S.  
Environmental engineering—M.S., (See civil engineering for Ph.D.)  
Environmental engineering science—M.S.  
Law and engineering and computer science joint degrees  
Mechanical and aerospace engineering—M.S., Ph.D.

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.embarc.com/grad/syracuse](http://apply.embarc.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 of \$20,755 (2009-10) for 9 months of full-time study, plus a tuition scholarship for up to 15 credits per semester for a total of up to 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 assistantships 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. Summer support is available for selected students on various research projects.

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.

#### Electrical Engineering & Computer Science

Contact Chair, Chilukuri K. Mohan, 4-177 Center for Science and Technology, 315-443-2322; fax: 315-443-2583, [mohan@syr.edu](mailto:mohan@syr.edu).

Faculty Ercument Arvas, Howard A. Blair, Steven J. Chapin, Biao Chen, C.Y. Roger Chen, Hao Chen, Shiu-Kai Chin, Wenliang (Kevin) Du, Mahmoud El Sabbagh, Ehat Ercanli, Makan Fardad, James W. Fawcett, Prasanta Ghosh, Amrit L. Goel, Carlos R.P. Hartmann, Can Isik, Kaveh Jokar Deris, Philipp Kornreich, Andrew Lee, Jay Kyoony Lee, Yingbin Liang, Duane L. Marcy, Kishan G. Mehrotra, James Michels, Chilukuri K. Mohan, Ruixin Niu, Jae C. Oh, Susan Older, Lisa Osadciw, Daniel J. Pease, Leonard J. Popyack Jr., James S. Royer, Tapan K. Sarkar, Ernest Sibert, Q. Wang Song, Pramod K. Varshney, Hong Wang, Heng Yin

The Department of Electrical Engineering and Computer Science (EECS) offers master's programs in:

- computer science,
- computer engineering, and
- electrical engineering;

and doctoral programs in:

- computer and information science and engineering and
- electrical and computer engineering

EECS embraces a wide range of programs and research areas. Its programs are connected by the technologies that they develop and the mathematical methods that they use to explore the spectrum of computing and electrical systems. The computer is not only an area of study, but also a design tool permitting visual representation of mathematical models. Moreover, communication and control are now of major importance in computing systems, while digital devices and components have become a dominant factor in the design of electrical systems.

The department has well-equipped laboratories for experimental work. Extensive computing facilities are available in the department, the CASE Center, Information Technology and Services, and the Academic Computing Center.

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## Academic Offerings

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### Aerospace Engineering/Business Administration (3-2 Program)

Contact - Danielle Goodroe, Assistant Director, Graduate Recruitment, Whitman School of Management, Suite 315, 315-443-3006, [degoodro@syr.edu](mailto:degoodro@syr.edu)

Can Isik, Associate Dean, LC Smith College of Engineering & Computer Science, 223 E Link Hall, 315-443-3604, [cisik@syr.edu](mailto:cisik@syr.edu)

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 L.C. Smith College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

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

Admission - Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

Degree Requirements - Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

3+2 program requirements:

Students will complete 128 credits for the Aerospace Engineering degree and an additional 54 credits for the MBA degree.

Year 1 & 2: Enrollment in required undergraduate coursework

Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework

Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework

Year 5: Completion of BS and MBA coursework

Transfer Credit - Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

Satisfactory Progress - Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

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## Bioengineering

Department Chair: Radhakrishna Sureshkumar, 121 Link Hall, 315-443-1931; fax: 443-9175

Faculty Rebecca Bader, Jesse Q. Bond, Katie D. Cadwell, Andrew L. Darling, Jeremy L. Gilbert, Julie M. Hasenwinkel, James H. Henderson, George C. Martin, Patrick T. Mather, Shikha Nangia, Dacheng Ren, Ashok Sangani, Radhakrishna Sureshkumar, Lawrence L. Tavlarides,

Adjunct Faculty: Gino Duca, Bart Farrell, Shelley Kummer, Kent Ogden, David Quinn, Suresh Santanam, Joseph Spadaro, Douglas Stone,

Affiliate Faculty: Joseph Chaiken, Andria Costello Staniec, Martin Forstner, Yan-Yeung Luk, Juntao Luo, Cristina Marchetti,

Emeritus Faculty: Gustav Engbretson, 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; jhhender@syr.edu

[http://www.lcs.syr.edu/academic/biochem\\_engineering/index.aspx](http://www.lcs.syr.edu/academic/biochem_engineering/index.aspx)

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.

## M.S. IN BIO ENGINEERING

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 about 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 engineering, mathematics or science 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 the Program of Study for the degree;
- minimumGPA 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);
- 3 credits of Independent Study (BEN 690);
- remaining 9 credits selected from engineering, mathematics or science courses;
- student must complete an oral comprehensive examination based on the Capstone Project completed during 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 the Program of Study for the degree;
- minimumGPA 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 engineering, mathematics or science 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;
- a capstone project (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 or four semesters to complete.

Graduate Seminar: Attendance at the BMCE Graduate Seminars is expected of students in all graduate programs.

Capstone Project Requirements (Bioengineering only): The capstone project is based on an independent study project done under the guidance of a faculty member, typically over the course of one semester, or a report from a Cognate Field option. A report describing the project must be submitted to, and approved by, the project supervisor and one other BMCE faculty member in order to fulfill the requirements of the degree. A copy of the final approved report must be submitted to the Department.

Oral Comprehensive Examination (Bioengineering and Chemical Engineering): After completion of the coursework, the student must pass an oral comprehensive examination based on the independent study and the coursework.

For all students entering the MS program in or after Fall 2012, the Oral Comprehensive Examination will be in poster format. All eligible students will prepare posters for display and discussion during a poster session. One poster session will be held toward the end of each semester (Fall, Spring, and Summer) at a specific date and time determined by the Department. An examination committee composed of program faculty, as determined by the student's advisor and the Graduate Program Director, will be assigned. Students will be expected to present information about their projects and coursework to the examination committee and answer related questions during the poster session, but all program faculty can participate. The examination committee will meet separately to determine if the student has passed the examination and the students will be informed of the decision. Students are required to submit an electronic copy and a printed copy on standard-size paper of each poster to the Department prior to the poster presentation.

Students in the MS program prior to Fall 2012 will have the option of the poster format or the previous format for the Oral Comprehensive Examination. The previous Oral Comprehensive Examination format consists of the following: An Oral Comprehensive Examination Committee, consisting of at least three program faculty, including the student's advisor, must be assigned by the Graduate Program Director at least two weeks before the examination. Materials for the examination, such as a report, must be circulated to the Committee at least two weeks before the Examination. If a report is prepared, a copy of the final approved report must be submitted to the Department.

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 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 ([http://coursecatalog.syr.edu/2012/rules/2657\\_degreeandcertificateprograms](http://coursecatalog.syr.edu/2012/rules/2657_degreeandcertificateprograms)). 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 or program.

All students must submit a copy 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/currentwhatyouneed.html>.

## Ph.D. IN BIOENGINEERING

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.
- up to 6 credits of thesis (transferable from the MS);
- 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 that will be used toward the degree and a 2.8 overall GPA;
- student must complete a dissertation and defend it in an oral examination, but no dissertation credits are required.

Required coursework can include Independent Study (BEN 690) 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 topic is selected by the student from a list provided by the faculty in consultation with the student's advisor. The student is expected to prepare a 15-20 page written report and defend it in an oral examination. The written report must be provided to all tenured or tenure-track BMCE faculty at least two weeks prior to the oral examination. The oral presentation must be scheduled at a time when a majority of the BMCE faculty members indicate that they can attend.

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:** A written proposal must be circulated to the committee no later than two weeks prior to the examination. The proposal is limited to 10 pages, single-spaced, Times Roman 12 pt. font. Page limit does not include figures, tables, and references. No appendices may be included. 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 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 ([http://coursecatalog.syr.edu/2012/rules/2657\\_degree\\_and\\_certificate\\_programs](http://coursecatalog.syr.edu/2012/rules/2657_degree_and_certificate_programs)). 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 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
- Complex Fluids, Soft Condensed Matter, Rheology
- Corrosion and Electrochemistry
- Drug Delivery
- Green Chemistry
- Indoor Air Quality/Environmental Engineering
- Molecular Biotechnology
- Multiple Phase Systems
- Nanotechnology
- Sustainable Energy Production
- Systems Biology/Metabolic Engineering
- Mathematical and Numerical Analysis

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## Bioengineering/Business Administration

Contact - Danielle Goodroe, Assistant Director, Graduate Recruitment, Whitman School of Management, Suite 315, 315-443-3006, [degoodro@syr.edu](mailto:degoodro@syr.edu)

Can Isik, Associate Dean, LC Smith College of Engineering & Computer Science, 223 E Link Hall, 315-443-3604, [cisik@syr.edu](mailto:cisik@syr.edu)

**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 L.C. Smith College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

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

**Admission** - Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

**Degree Requirements** - Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

3+2 program requirements:

Students will complete 130 credits for the Bioengineering degree and an additional 54 credits for the MBA degree.

Year 1 & 2: Enrollment in required undergraduate coursework

Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework

Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework

Year 5: Completion of BS and MBA coursework

**Transfer Credit** - Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

**Satisfactory Progress** - Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

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## Chemical Engineering

Department Chair: Radhakrishna Sureshkumar, 121 Link Hall, 315-443-1931; fax: 443-9175

Faculty Rebecca Bader, Jesse Q. Bond, Katie D. Cadwell, Andrew L. Darling, Jeremy L. Gilbert, Julie M. Hasenwinkel, James H. Henderson, George C. Martin, Patrick T. Mather, Shikha Nangia, Dacheng Ren, Ashok Sangani, Radhakrishna Sureshkumar, Lawrence L. Tavlarides,

Adjunct Faculty: Gino Duca, Bart Farrell, Shelley Kummer, Kent Ogden, David Quinn, Dana Radcliffe, Suresh Santanam, Joseph Spadaro, Douglas Stone, Frederick Werner

Affiliate Faculty: Joseph Chaiken, Andria Costello Staniec, Martin Forstner, Juntao Luo, Yan-Yeung Luk, Cristina Marchetti

Emeritus Faculty: Gustav Engbretson, 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](mailto:dren@syr.edu)

[http://www.lcs.syr.edu/academic/biochem\\_engineering/](http://www.lcs.syr.edu/academic/biochem_engineering/)

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. Both require a minimum overall grade point average of 3.0 for coursework included on the Program of Study for the degree and a 2.8 average for all credits earned. 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. After completion of coursework, the student must pass an oral examination based on the independent study and the coursework. 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);
- at least 3 credit hours of an independent study 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.

Graduate Seminar: Attendance at the BMCE Graduate Seminars is expected of students in all graduate programs.

Capstone Project Requirements (Bioengineering only): The capstone project is based on an independent study project done under the guidance of a faculty member, typically over the course of one semester, or a report from a Cognate Field option. A report describing the project must be submitted to, and approved by, the project supervisor/faculty sponsor and one other BMCE faculty member in order to fulfill the requirements of the degree. A copy of the final approved report must be submitted to the Department.

Oral Comprehensive Examination (Bioengineering and Chemical Engineering): After completion of all coursework, the student must pass an oral comprehensive examination based on the independent study and the coursework.

For all students entering the MS program in or after Fall 2012, the Oral Comprehensive Examination will be in poster format. All eligible students will prepare posters for display and discussion during a poster session. One poster session will be held toward the end of each semester (Fall, Spring, and Summer) at a specific date and time determined by the Department. An examination committee composed of program faculty, as determined by the student's advisor and the Graduate Program Director, will be assigned. Students will be expected to present information about their projects and coursework to the examination committee and answer related questions during the poster session, but all program faculty can participate. The examination committee will meet separately to determine if the student has passed the examination and the students will be informed of the decision. Students are required to submit an electronic copy and a printed copy on standard-size paper of each poster to the Department prior to the poster presentation.

Students in the MS program prior to Fall 2012 will have the option of the poster format or the previous format for the Oral Comprehensive Examination. The previous Oral Comprehensive Examination format consists of the following: An Oral Comprehensive Examination Committee, consisting of at least three program faculty, including the student's advisor, must be assigned by the Graduate Program Director at least two weeks before the examination. Materials for the examination, such as a report, must be circulated to the Committee at least two weeks before the Examination. If a report is prepared, a copy of the final approved report must be submitted to the Department.

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 or program.

All students must submit a copy 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/currentwhatyouneed.html>.

## Ph.D. 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 that will be used toward the degree and a 2.8 overall GPA;
- 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 topic is selected by the student from a list provided by the faculty in consultation with the student's advisor. The student is expected to prepare a 15-20 page written report and defend it in an oral examination. The written report must be provided to all tenured or tenure-track BMCE faculty at least two weeks prior to the oral examination. The oral presentation must be scheduled at a time when a majority of the BMCE faculty members indicate that they can attend.

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 student's 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:** A written proposal must be circulated to the committee no later than two weeks prior to the examination. The proposal is limited to 10 pages, single-spaced, Times Roman 12 pt. font. Page limit does not include figures, tables, and references. No appendices may be included. 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 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 ([http://coursecatalog.syr.edu/2013/rules2657\\_degree\\_and\\_certificate\\_programs](http://coursecatalog.syr.edu/2013/rules2657_degree_and_certificate_programs)). 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 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
- Complex Fluids, Soft Condensed Matter, Rheology
- Catalysis
- Corrosion and Electrochemistry
- Drug Delivery
- Green Chemistry
- Indoor Air Quality/Environmental Engineering
- Molecular Biotechnology
- Multiple Phase Systems
- Nanotechnology
- Sustainable Energy Production
- Systems Biology/Metabolic Engineering
- Mathematical and Numerical Analysis

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## Chemical Engineering/Business Administration (3-2 Program)

Contact - Danielle Goodroe, Assistant Director, Graduate Recruitment, Whitman School of Management, Suite 315, 315-443-3006, [degoodro@syr.edu](mailto:degoodro@syr.edu)

Can Isik, Associate Dean, LC Smith College of Engineering & Computer Science, 223 E Link Hall, 315-443-3604, [cisik@syr.edu](mailto:cisik@syr.edu)

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 L.C. Smith College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

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

Admission - Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

Degree Requirements - Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

3+2 program requirements:

Students will complete 128 credits for the Chemical Engineering degree and an additional 54 credits for the MBA degree.

Year 1 & 2: Enrollment in required undergraduate coursework

Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework

Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework

Year 5: Completion of BS and MBA coursework

Transfer Credit - Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

Satisfactory Progress - Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

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## Civil Engineering

Department Chair: Chris E. Johnson, 151 Link Hall, 315-443-2311

Program Director: Dawit Negussey, 151 Link Hall, 315-443-2311

Civil Engineering Faculty Riyad S. Aboutaha, Shobha K. Bhatia, Samuel P. Clemence, Eric Mun Lui, Dawit Negussey, Ossama M. Salem

#### Program Description

The graduate programs in civil and environmental engineering at Syracuse have earned a reputation for superior quality. Degree recipients working in government, industry, and education have made important contributions to the profession. The department provides coursework and research opportunities in structural engineering, geotechnical engineering, environmental engineering, and construction and infrastructure management.

In addition to these core areas, the department participates 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 SUNY-ESF.

#### M.S. in Civil Engineering Requirements

All candidates for the M.S. in civil engineering must have a 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.

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 9 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.
2. Elective coursework satisfying distributional requirements, as specified in the Graduate Program Profile.
3. CIE 997 (Master's Thesis) for 6 credits.
4. Defense of thesis.
5. Participation in the faculty/student seminar program (CIE 660).

#### Requirements without Thesis (30 credits)

1. Completion of 9 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.
2. Elective coursework satisfying distributional requirements, as specified in the Graduate Program Profile.
3. CIE 996 (Master's Project) for 3 credits or CIE 995 (Master's Exit Paper) for 0 credits and an additional course. The project involves a topic in civil engineering approved by the advisor and at least one other faculty member in the CIE department. The exit paper must address issues related to their speciality approved by the advisor and have a minimum length of 2000 words.
4. Participation in the faculty/student seminar program (CIE 660).

#### Ph.D. in Civil Engineering

The Department offers the Ph.D. degree to students interested in research and teaching. The primary focus is on the development of skills to pursue original research in careers in academia, government, or research institutions. Students usually complete the degree within three to five years.

#### Admission Requirements

1. B.S. in civil engineering or other acceptable field from an accredited institution.
2. M.S. degree from an accredited institution.
3. B+ average in M.S. program coursework.
4. Satisfactory grades on all required graduate entrance examinations.
5. Departmental approval.
6. 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

1. 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.
2. 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).
3. Ph.D. students are required to maintain an average GPA of B+ (3.333) 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, he/she will be asked to terminate his/her Ph.D. study.

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 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

- Aquatic chemistry
- Biogeochemistry
- Soil chemistry
- Water quality modeling
- Natural organic matter
- Environmental geostatistics
- Solid-liquid separation processes
- Potable water supply
- Applied surface chemistry
- Applied environmental microbiology
- Bioremediation
- Global biogeochemical cycles
- Changes in microbial communities in response to anthropogenic disturbance
- Applications of molecular biology to environmental engineering
- Application of geosynthetics in dewatering and containment
- Natural and polymeric fibers in soil erosion mitigation

- Microstructure of soil and geosynthetics
- Women in science and engineering
- Anchor foundations
- In situ testing
- Slurry wall containment systems and movement of organics in soil/rock systems
- Properties and applications of geofoms
- Fiber optic sensors
- Geotechnical engineering
- Structural rehabilitation of civil infrastructure
- Bridge retrofit with CFRP composites
- Experimental investigation of structural concrete and steel systems
- Composite and hybrid systems
- FRP reinforced concrete structural systems
- Investigation of structural failures
- Nonlinear structural theories
- Numerical modeling
- Steel structures
- Structural stability
- Structural dynamics
- Earthquake engineering
- Rehabilitation of civil infrastructure

## Civil Engineering/Business Administration (3-2 Program)

Contact: Danielle Goodroe, Assistant Director, Graduate Recruitment, Whitman School of Management, Suite 315, 315-443-3006, [degoodro@syr.edu](mailto:degoodro@syr.edu)

Can Isik, Associate Dean, LC Smith College of Engineering & Computer Science, 223 E Link Hall, 315-443-3604, [cisik@syr.edu](mailto:cisik@syr.edu)

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 L.C. Smith College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

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

Admission: Students in the engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

Degree Requirements: Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

3+2 program requirements:

- Students will complete 128 credits for the civil engineering degree and an additional 54 credits for the MBA degree.
- Year 1 & 2: Enrollment in required undergraduate coursework
- Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework
- Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework
- Year 5: Completion of BS and MBA coursework

Transfer Credit: Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

Satisfactory Progress: Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

## Computer & Information Science & Engineering

Faculty Amit Agrawal, Ercument Arvas, Howard A. Blair, Tomislav Bujanovic, Stephen J. Chapin, Biao Chen, C.Y. Roger Chen, Shiu-Kai Chin, Wenliang (Kevin) Du, Ehat Ercanli, Makan Fardad, James W. Fawcett, Prasanta Ghosh, Amrit L. Goel, Albert Goldfain, Mustafa Cenk Gursoy, Carlos R.P. Hartmann, Robert Irwin, Can Isik, Philipp Kornreich, Andrew Chung-Yeung Lee, Jay Kyoony Lee, Yingbin Liang, Duane L. Marcy, Kishan G. Mehrotra, Chilukuri K. Mohan, Jae C. Oh, Susan Older, Qinru Qiu, Laleh Rabieirad, James S. Royer, Tapan K. Sarkar, Fred Schlereth, Q. Wang Song, Jian Tang, William C. Tetley, Pramod K. Varshney, Senem Velipasalar, Hong Wang, Volker Weiss, Min Xu, Heng Yin, Edmund Yu

## 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:

1. 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.

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:

1. The list of topics in which students must demonstrate competencies by completing coursework.
2. The topics covered in the written Qualifying Examination Part I.

## 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.embarc.com/grad/syracuse/37/](http://apply.embarc.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/currentrr.pdf](http://syracuse.edu/policies/currentrr.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.

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

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 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 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.

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 queuing constraints; multi-user 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.

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.

Neural Networks New learning algorithms, adaptive connection systems, self-organizing networks, pattern recognizers, spatio-temporal networks, modular networks, hierarchical networks, evolutionary algorithms, fault-tolerant neural networks, models of biological systems, classification and clustering algorithms.

Optics and Wave Phenomena Wave propagation and applications, linear and nonlinear, dispersive and nondispersive; acousto-optic interactions; optical information processing and optical bistability; 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.

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/](http://sai.syr.edu/). Information about the NSF Scholarship for Service may also be found at this web site.

#### 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.

**DOPL Laboratory** is the home for doctoral students working on management and restructuring of large software systems, high performance computing using GPUs and computer clusters, and tools for visualizing and understanding complex software systems.

**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.

**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. 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.

**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 50 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 operations, 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.

**RF, Wireless, and Signal Processing Laboratory** Fabrication facilities exist here to make printed circuits with accuracy up to 70 microns, both for VLSI and microwave CAD. Equipment for charactering devices directly in both time and frequency domains is also available. The laboratory is equipped with a Waveform Processing System capable of analyzing devices up to 18 gigahertz. In addition, a Vector Network analyzer operating from 45 megahertz to 26.5 gigahertz can not only characterize noise figures of devices, but can also measure various network parameters of printed circuits, devices, and antennas. This equipment is computer controlled for higher accuracy and ease of measurement. In addition, a high-power Quantronix laser system provides the capability of performing research in impulse radar technology. With the help of laser-activated photo-conductive switches it is possible to generate kilovolt amplitude electrical pulses of 300 picoseconds duration. Several high-end workstations provide the capability of solving challenging problems in electromagnetics and signal processing. By adding DSP boards to Pentium processors it is also possible to carry out real-time adaptive signal processing.

**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.

**LSI 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.

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## Computer Engineering

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### 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.

### M.S. IN COMPUTER ENGINEERING

Program Director C.Y. Roger Chen, 4-133 Center for Science and Technology, 315-443- 4179, Fax 315-443-2583; crchen@syr.edu.

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#### Course Requirements

1. A minimum of 30 credits of graduate work beyond the B.S. degree is required.
2. 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 taken at another 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 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. 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 EECSS Department, students must register for 9 credits per semester. 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 CIS 675\* and CSE 661. Moreover, each student in the Hardware Systems Track must include CSE 664 and CSE 687 in their program, each student in the Software Systems Track must include CSE 681 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. Elective courses in the Hardware Systems Track include CSE 671, CSE 731, CSE 764, CSE 765, CSE 771, CSE 772, CSE 773, CSE 788, CSE 789, CSE 864, and ELE 643. Elective courses in the Software Systems Track include CIS 623, CIS 625, CIS 631, CIS 632, CIS 657, CSE 643, CSE 644, CSE 682, CSE 686, CSE 775, CSE 776, CSE 778, CSE 781, CSE 782, CSE 784, and CSE 787. Elective courses in the Security and Assurance Systems Track include CIS 628, CIS 657, CIS 632, CSE 607, CSE 765, CSE 774, CSE 681, and CSE 687. Special Topics courses 600-level and above and master's thesis may be included in a specific track if approved by the Computer Engineering Program Committee. Students who lack undergraduate data structures background may opt to take CSE 691 (Special Topics in Advanced Data Structures) as a substitute for CIS 675 through petition.
- \*Students who lack undergraduate data structure background may opt to take CSE 691 (Special Topics in Advanced Data Structure) as a substitute for CIS 675 through petition.
8. Programs must include a minimum of 18 credits of CSE courses.
  9. Students may select a thesis option. Thesis students must include in their programs at least one 700-level (or higher) course which must all be a CSE course. CIS and ELE courses may be considered, subject to the approval of the Computer Engineering Program Committee. Independent study courses may not be used to satisfy this requirement.
  10. No more than 6 credits of 500-level courses may be included in the M.S. program.
  11. 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. Candidates are required to complete the final examinations in all core courses with an average grade of 3.0 (B) or better.
  13. 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.
  14. Students electing the thesis option must include CSE 997 Master's Thesis (normally 6 credits) in their programs of study.
  15. Students who do not hold a B.S. degree in computer engineering or a related field may be admitted to a 60-credit program. This program includes the following 30 credits of remedial undergraduate courses that may be completed in one year:

ELE 231, Electrical Engineering Fundamentals I  
CSE 261 Digital Logic Design  
CSE 281 Computer Organization and Assembly Language  
CSE 381 Computer Architecture  
CSE 382 Algorithms and Data Structure  
CSE 397,398 Computer Lab I, II  
  
CSE 400 Special Topics in Systems Programming  
  
CSE 458 Data Networks: Basic Principles  
CSE 486 Design of Operating Systems

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 before registering for graduate courses. The remaining 30 credits must satisfy the requirements for the MSCE stated earlier.

#### 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

1. 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
2. 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** The Electrical 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.

#### 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.

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## Computer Engineering/Business Administration (3-2 Program)

**Contact** - Danielle Goodroe, Assistant Director, Graduate Recruitment, Whitman School of Management, Suite 315, 315-443-3006, [degoodro@syr.edu](mailto:degoodro@syr.edu)

Can Isik, Associate Dean, LC Smith College of Engineering & Computer Science, 223 E Link Hall, 315-443-3604, [cisik@syr.edu](mailto:cisik@syr.edu)

**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 L.C. Smith College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

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

**Admission** - Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience,

professional references, and personal statements.

Degree Requirements - Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

3+2 program requirements:

Students will complete 129 credits for the Computer Engineering degree and an additional 54 credits for the MBA degree.

Year 1 & 2: Enrollment in required undergraduate coursework

Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework

Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework

Year 5: Completion of BS and MBA coursework

Transfer Credit - Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

Satisfactory Progress - Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

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## Electrical Engineering & Computer Science

Faculty Amit Agrawal, Ercument Arvas, Howard A. Blair, Tomislav Bujanovic, Stephen J. Chapin, Biao Chen, C.Y. Roger Chen, Shiu-Kai Chin, Wenliang (Kevin) Du, Ehat Ercanli, Makan Fardad, James W. Fawcett, Prasanta Ghosh, Amrit L. Goel, Albert Goldfain, Mustafa Cenk Gursoy, Carlos R.P. Hartmann, Robert Irwin, Can Isik, Philipp Kornreich, Andrew Chung-Yeung Lee, Jay Kyoony Lee, Yingbin Liang, Duane L. Marcy, Kishan G. Mehrotra, Chilukuri K. Mohan, Jae C. Oh, Susan Older, Qinru Qiu, Laleh Rabieirad, James S. Royer, Tapan K. Sarkar, Fred Schlereth, Q. Wang Song, Jian Tang, William C. Tetley, Pramod K. Varshney, Senem Velipasalar, Hong Wang, Volker Weiss, Min Xu, Heng Yin, Edmund Yu

### 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 nonthesis 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.

Furthermore, students have the opportunity to have an industrial experience as part of their programs of study by working in an industrial setting for a block period of three to four months. Students may work up to a maximum three blocks during their master's program of study under the curriculum practical training (CPT) option.

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.

### M.S. IN COMPUTER SCIENCE

Program Director Jae C. Oh, 4-206I Center for Science and Technology, 315-443- 4740, Fax 315-443-2583; jcoh@syr.edu.

Faculty Amit Agrawal, Ercument Arvas, Howard A. Blair, Tomislav Bujanovic, Stephen J. Chapin, Biao Chen, C.Y. Roger Chen, Shiu-Kai Chin, Wenliang (Kevin) Du, Ehat Ercanli, Makan Fardad, James W. Fawcett, Prasanta Ghosh, Amrit L. Goel, Albert Goldfain, Mustafa Cenk Gursoy, Carlos R.P. Hartmann, Robert Irwin, Can Isik, Philipp Kornreich, Andrew Chung-Yeung Lee, Jay Kyoony Lee, Yingbin Liang, Duane L. Marcy, Kishan G. Mehrotra, Chilukuri K. Mohan, Jae C. Oh, Susan Older, Qinru Qiu, Laleh Rabieirad, James S. Royer, Tapan K. Sarkar, Fred Schlereth, Q. Wang Song, Jian Tang, William C. Tetley, Pramod K. Varshney, Senem Velipasalar, Hong Wang, Volker Weiss, Min Xu, Heng Yin, Edmund Yu

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. However, CIS 521, CIS541, CIS 542, CIS 551, CIS 555, or CIS 556 cannot be included in any M.S. in computer science program of study. 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.

All candidates for the M.S. in computer science must complete the computer science core:

CIS 623 Structured Programming and Formal Methods  
CIS 655 Computer Architecture  
CIS 657 Principles of Operating Systems  
CIS 675 Design and Analysis of Algorithms

Candidates are required to complete the final examinations in all core courses with an average grade of 2.8 (B-) or better.

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 in discrete mathematics and data structures 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 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 CPS 335 JAVA Programming for the Internet. (See Syracuse University Undergraduate Catalog for descriptions of MAT 295, MAT 296, CPS 196, CPS296, CPS 335.) 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 275 Introduction to Abstract Mathematics  
ECS 102 Introduction to Computing  
CIS 351 Data Structures

##### Second Semester (Spring)

CIS 252 Introduction to Computer Science  
CIS 352 Programming Languages: Theory and Practice  
CIS 341 Computer Organization and Programming Systems

##### Third Semester (Fall)

One graduate elective  
CIS 486 Design of Operating Systems\*  
CIS 675 Design and Analysis of Algorithms

##### Fourth Semester (Spring)

CIS 623 Structured Programming and Formal Methods  
CIS 655 Computer Architecture  
CSE 486 Design of Operating Systems\*  
One elective graduate course

\*Those who cannot take CIS 486 in the Fall semester may take CSE 486 in the Spring semester

#### Fifth Semester (Fall)

CIS 657 Principles of Operating Systems

Two elective graduate courses

#### Sixth Semester (Spring)

Two elective graduate courses

Exemption examinations are given in certain of these courses so that the student may determine whether he/she already has equivalent knowledge of the subject material.

#### 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.

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/CSE 486 Design of Operating Systems

#### (3) Mathematics

CIS 275 Discrete Mathematics

#### (4) Theoretical Computer Science

CIS 473 Computability Theory

#### (5) Algorithms and Computational Techniques

CIS 575 Introduction to Analysis of Algorithms

MAT 581 Numerical Methods with Programming I

#### Combined B.S./M.S. Degree in Computer Science

This combined degree program is designed for students who want to consecutively complete the bachelor's and the master's degree in computer science. The program may be completed in five years with students taking two master's degree courses in their senior year. Up to 6 credits may be shared between the two programs of study, so that the M.S. requires only 24 additional credits.

Admission to this program, usually requested in the junior year, will be based on academic progress.

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 requirement. The graduate courses are included in the undergraduate tuition and appear only on the undergraduate record, and grades calculate only toward the undergraduate GPA. A block of transfer credits labeled as "transferred from SU undergraduate record" appears on the graduate record, if needed, and applies credit hours toward the graduate degree.

#### 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, 315-443-4492, [grad@syr.edu](mailto:grad@syr.edu)

Current EECS students: please contact the EECS Graduate Records Office, 315-443-2655, [cvsalang@syr.edu](mailto:cvsalang@syr.edu)

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## Computer Science/Business Administration (3-2 Program)

Contact - Josh LaFave, Director of Recruiting and Graduate Distance Education, Whitman School of Management Suite 315, 315-443-3497, [jjlafave@syr.edu](mailto:jjlafave@syr.edu)

Can Isik, Associate Dean, LC Smith College of Engineering & Computer Science, 223 E Link Hall, 315-443-3604, [cisik@syr.edu](mailto:cisik@syr.edu)

**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 L.C. Smith College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

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

**Admission** - Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

**Degree Requirements** - Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

3+2 program requirements:

Students will complete 124 credits for the Computer Science degree and an additional 54 credits for the MBA degree.

Year 1 & 2: Enrollment in required undergraduate coursework

Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework

Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework

Year 5: Completion of BS and MBA coursework

**Transfer Credit** - Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

**Satisfactory Progress** - Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

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## Combined B.S.And M.S. In Computer Science

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### Combined Degree Program

Contact Jae C. Oh, Program Director, 4-206I Center for Science and Technology, 315-443- 4740, Fax 315-443-2583; [jcoh@syr.edu](mailto:jcoh@syr.edu).

Faculty Amit Agrawal, Ercument Arvas, Howard A. Blair, Tomislav Bujanovic, Stephen J. Chapin, Biao Chen, C.Y. Roger Chen, Shiu-Kai Chin, Wenliang (Kevin) Du, Ehat Ercanli, Makan Fardad, James W. Fawcett, Prasanta Ghosh, Amrit L. Goel, Albert Goldfain, Mustafa Cenk Gursoy, Carlos R.P. Hartmann, Robert Irwin, Can Isik, Philipp Kornreich, Andrew Chung-Yeung Lee, Jay Kyoony Lee, Yingbin Liang, Duane L. Marcy, Kishan G. Mehrotra, Chilukuri K. Mohan, Jae C. Oh, Susan Older, Qinru Qiu, Laleh Rabieirad, James S. Royer, Tapan K. Sarkar, Fred Schlereth, Q. Wang Song, Jian Tang, William C. Tetley, Pramod K. Varshney, Senem Velipasalar, Hong Wang, Volker Weiss, Min Xu, Heng Yin, Edmund Yu

#### B.S. AND M.S. IN COMPUTER SCIENCE

This combined degree program is offered for the student who wants to complete consecutively the bachelor's and master's degrees in computer science. The combined degree program is designed to be completed in five years, with the student taking two master's degree courses in the senior year. Up to 6 credit hours may be counted towards both the bachelor's and the master's degrees, so that the two degrees together require at least 147 credits. The student is normally certified for the bachelor's degree at the end of the fourth year and for the master's degree at the end of the fifth year.

Admission to the combined degree program, normally requested during the second semester of the junior year, is based on academic performance.

\*Students are accepted for graduate study after completion of the third year of study but are not fully matriculated as graduate students until bachelor's degree requirements have been met. The undergraduate degree is awarded before completion of the graduate degree. Graduate courses taken in the fourth year of study count toward fulfillment of both undergraduate and graduate degree requirement. The graduate courses are included in the undergraduate tuition and appear only on the undergraduate record, and grades calculate only toward the undergraduate GPA. A block of transfer credits labeled as "transferred

from SU undergraduate record" appears on the graduate record, if needed, and applies credit hours toward the graduate degree.

\*See Online Course Catalog, Academic Rules, Degrees, TABLE H Combined Undergraduate/Graduate Degree Programs.

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## Certificate Of Advanced Study In Cybersecurity

### Contact:

Dr. Susan Older, Associate Professor, [sueo@ecs.syr.edu](mailto:sueo@ecs.syr.edu)  
4-181 Center for Science and Technology  
315-443-4679

### Faculty:

Drs. Susan Older, [sueo@ecs.syr.edu](mailto:sueo@ecs.syr.edu), Shiu-Kai Chin, [skchin@syr.edu](mailto:skchin@syr.edu), Stephen Chapin, [chapin@syr.edu](mailto:chapin@syr.edu), Howard Blair, [blair@syr.edu](mailto:blair@syr.edu), James Royer, [jsroyer@syr.edu](mailto:jsroyer@syr.edu), Wenliang Du, [wedu@syr.edu](mailto:wedu@syr.edu), Heng Yin, [heyin@syr.edu](mailto:heyin@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:

- (1) The ability to identify and analyze vulnerabilities in systems, to assess the risks faced by systems, and to develop countermeasures to remedy risks;
- (2) The ability to develop systems that are secure;
- (3) 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/CSE 643: Computer Security - 3 credits  
CIS/CSE 644: Internet Security - 3 credits  
CIS/CSE 634: Foundations for Assurance - 3 credits  
CIS/CSE 652: Building Assured Components - 3 credits

Students must maintain a GPA of at least 3.0

Degree: Certificate of Advanced Study

Total Credits: 12

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## Electrical & Computer Engineering

Faculty Amit Agrawal, Ercument Arvas, Howard A. Blair, Tomislav Bujanovic, Stephen J. Chapin, Biao Chen, C.Y. Roger Chen, Shiu-Kai Chin, Wenliang (Kevin) Du, Ehat Ercanli, Makan Fardad, James W. Fawcett, Prasanta Ghosh, Amrit L. Goel, Albert Goldfain, Mustafa Cenk Gursoy, Carlos R.P. Hartmann, Robert Irwin, Can Isik, Philipp Kornreich, Andrew Chung-Yeung Lee, Jay Kyoong Lee, Yingbin Liang, Duane L. Marcy, Kishan G. Mehrotra, Chilukuri K. Mohan, Jae C. Oh, Susan Older, Qinru Qiu, Laleh Rabieirad, James S. Royer, Tapan K. Sarkar, Fred Schlereth, Q. Wang Song, Jian Tang, William C. Tetley, Pramod K. Varshney, Senem Velipasalar, Hong Wang, Volker Weiss, Min Xu, Heng Yin, Edmund Yu

### 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:

1. 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.

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:

1. The list of topics in which students must demonstrate competencies by completing coursework.
2. The topics covered in the written Qualifying Examination Part I.

#### 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/](http://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/currentrr.pdf](http://syracuse.edu/policies/currentrr.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.

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

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 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 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.

**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 queuing constraints; multi-user 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.

**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.

Neural Networks New learning algorithms, adaptive connection systems, self-organizing networks, pattern recognizers, spatio-temporal networks, modular networks, hierarchical networks, evolutionary algorithms, fault-tolerant neural networks, models of biological systems, classification and clustering algorithms.

Optics and Wave Phenomena Wave propagation and applications, linear and nonlinear, dispersive and nondispersive; acousto-optic interactions; optical information processing and optical bistability; 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.

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/](http://sai.syr.edu/). Information about the NSF Scholarship for Service may also be found at this web site.

## 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.

**DOPL Laboratory** is the home for doctoral students working on management and restructuring of large software systems, high performance computing using GPUs and computer clusters, and tools for visualizing and understanding complex software systems.

**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.

**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. 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.

**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 50 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 operations, 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.

**RF, Wireless, and Signal Processing Laboratory** Fabrication facilities exist here to make printed circuits with accuracy up to 70 microns, both for VLSI and microwave CAD. Equipment for characterizing devices directly in both time and frequency domains is also available. The laboratory is equipped with a Waveform Processing System capable of analyzing devices up to 18 gigahertz. In addition, a Vector Network analyzer operating from 45 megahertz to 26.5 gigahertz can not only characterize noise figures of devices, but can also measure various network parameters of printed circuits, devices, and antennas. This equipment is computer controlled for higher accuracy and ease of measurement. In addition, a high-power Quantronix laser system provides the capability of performing research in impulse radar technology. With the help of laser-activated photo-conductive switches it is possible to generate kilovolt amplitude electrical pulses of 300 picoseconds duration. Several high-end workstations provide the capability of solving challenging problems in electromagnetics and signal processing. By adding DSP boards to Pentium processors it is also possible to carry out real-time adaptive signal processing.

**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.

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## Electrical Engineering

Faculty Amit Agrawal, Ercument Arvas, Howard A. Blair, Tomislav Bujanovic, Stephen J. Chapin, Biao Chen, C.Y. Roger Chen, Shiu-Kai Chin, Wenliang (Kevin) Du, Ehat Ercanli, Makan Fardad, James W. Fawcett, Prasanta Ghosh, Amrit L. Goel, Albert Goldfain, Mustafa Cenk Gursoy, Carlos R.P. Hartmann, Robert Irwin, Can Isik, Philipp Kornreich, Andrew Chung-Yeung Lee, Jay Kyoony Lee, Yingbin Liang, Duane L. Marcy, Kishan G. Mehrotra, Chilukuri K. Mohan, Jae C. Oh, Susan Older, Qinru Qiu, Laleh Rabieirad, James S. Royer, Tapan K. Sarkar, Fred Schlereth, Q. Wang Song, Jian Tang, William C. Tetley, Pramod K. Varshney, Senem Velipasalar, Hong Wang, Volker Weiss, Min Xu, Heng Yin, Edmund Yu

### 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.

### M.S. IN ELECTRICAL ENGINEERING

Program Director Prasanta K. Ghosh, 4-131 Center for Science and Technology, 315-443-4440, Fax: 315-443-2583; pkghosh@syr.edu.

Faculty Amit Agrawal, Ercument Arvas, Howard A. Blair, Tomislav Bujanovic, Stephen J. Chapin, Biao Chen, C.Y. Roger Chen, Shiu-Kai Chin, Wenliang (Kevin) Du, Ehat Ercanli, Makan Fardad, James W. Fawcett, Prasanta Ghosh, Amrit L. Goel, Albert Goldfain, Mustafa Cenk Gursoy, Carlos R.P. Hartmann, Robert Irwin, Can Isik, Philipp Kornreich, Andrew Chung-Yeung Lee, Jay Kyoony Lee, Yingbin Liang, Duane L. Marcy, Kishan G. Mehrotra, Chilukuri K. Mohan, Jae C. Oh, Susan Older, Qinru Qiu, Laleh Rabieirad, James S. Royer, Tapan K. Sarkar, Fred Schlereth, Q. Wang Song, Jian Tang, William C. Tetley, Pramod K. Varshney, Senem Velipasalar, Hong Wang, Volker Weiss, Min Xu, Heng Yin, Edmund Yu

### Course Requirements

1. A minimum of 30 credits of graduate work beyond the B.S. degree is required.
2. 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 taken at another 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 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. 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, 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 core courses which are composed of:

- One of the two engineering math courses: ELE 603 (Linear Algebra) and ELE 606 (Probability and Random Processes)
- One course in electromagnetics: ELE 621.
- ELE 651 (Digital Communications).
- One of the three courses: ELE 633 (Discrete and Integrated Analog Circuits), ELE 635 (Digital Electronic Circuits), and ELE 643 (Theory of Semiconductor Devices). ELE 633 and ELE 643 are offered in alternate years.

8. Programs must include a minimum of 18 credits of ELE courses.

9. Students may select a thesis option. Thesis students must include in their programs at least one 700-level or higher ELE or CSE course, while non-thesis students must include at least three. Independent study courses may not be used to satisfy this requirement.

10. No more than 6 credits of 500-level courses may be included in the M.S. program.

11. 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. 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 of this or other departments, provided these courses have technical content appropriate to their M.S. program. In such cases students must submit department approval.

14. Students electing the thesis option must include ELE 997 Master's Thesis (normally 6 credits) in their programs of study.

15. 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:

ELE 231, 232 Electrical Engineering Fundamentals I and II

ELE 291, 292 Electrical Engineering Laboratory I and 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 Fundamentals of RF and Microwave

ELE 425 Microwave Engineering

ELE 431 Analog Circuits and Systems

ELE 458 Data Networks: Basic Principles

ELE 512 Linear Control Systems

ELE 524 Introduction to Applied Optics

ELE 541 Integrated Circuits

ELE 551 Communication Systems

ELE 514 Electric Power Systems

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.

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## Electrical Engineering/Business Administration (3-2 Program)

Contact - Danielle Goodroe, Assistant Director, Graduate Recruitment, Whitman School of Management, Suite 315, 315-443-3006, [degoodro@syr.edu](mailto:degoodro@syr.edu)

**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 L.C. Smith College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

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

**Admission** - Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

**Degree Requirements** - Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

3+2 program requirements:

Students will complete 132 credits for the Electrical Engineering degree and an additional 54 credits for the MBA degree.

Year 1 & 2: Enrollment in required undergraduate coursework

Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework

Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework

Year 5: Completion of BS and MBA coursework

**Transfer Credit** - Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

**Satisfactory Progress** - Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

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## Engineering Management

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 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.

The degree requires a total of 36 semester course credits consisting of 24 core course credits and 12 technical elective credits. At least one half of the courses for the M.S. degree program must be at 600 level or above. The student's program is planned with a faculty advisor. Each program will be designed to meet the needs of the student, taking into consideration background and experience.

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, carranti@syr.edu.

### CORE REQUIREMENTS

#### Engineering Core

- 1) ECS 526 (Statistics for Engineers).
- 2) MAE 548 (Engineering Economics and Technology Valuation)
- 3) CSE 581 (Introduction to Database Management)
- 4) MFE 634 (Productivity and Quality Control)

#### Management Core

- 1) SCM 702 (Principles of Management Science), OR  
SCM 655 (Customer Relationship Management)
- 2) SCM 701 (Supply Chain & Logistics Management), OR  
SCM 721 (Supply Chain Systems)
- 3) Mar 757 (Managing Innovative Products & New Ventures), OR  
SCM 721 (Supply Chain Systems), OR SCM 656 (Project Management)

#### 4) Management Elective

#### Technical Specialization Cluster

Four courses that form an integrated sequence will be selected by students, with advisors' approval, to enhance their area of technical specialization within the College of Engineering and Computer Science. Courses must be graduate-level from selections within the College of Engineering and Computer Science.

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## Environmental Engineering

Department Chair and Program Director: Chris E. Johnson, 151 Link Hall, 315-443-2311

Environmental Engineering Faculty Douglas F. Call, David G. Chandler, Andria Costello Staniec, Cliff I Davidson, Charles T. Driscoll Jr., Chris E. Johnson, Lashun K. Thomas

#### Program Description

The graduate programs in civil and environmental engineering at Syracuse have earned a reputation for superior quality. Degree recipients working in government, industry, and education have made important contributions to the profession. The department provides coursework and research opportunities in structural engineering, geotechnical engineering, environmental engineering, and construction and infrastructure management.

In addition to these core areas, the department participates 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 SUNY-ESF.

#### M.S. in Environmental Engineering

##### 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. Demonstration of competence in the fundamental environmental engineering areas through completion of CIE 642, CIE 671, and CIE 672. Students who have completed comparable courses at the undergraduate level will be expected to take higher-level courses within those fundamental environmental engineering areas.
2. Elective coursework satisfying distributional requirements, as specified in the Graduate Program Profile, available in the department office.
3. CIE 997 (Master's Thesis) for 6 credits.
4. Defense of thesis.
5. Participation in the faculty/student seminar program (CIE 660).

##### Requirements without Thesis (30 credits)

1. Demonstration of competence in the fundamental environmental engineering areas through completion of CIE 642, CIE 671, and CIE 672. Students who have completed comparable courses at the undergraduate level will be expected to take higher-level courses within those fundamental environmental engineering areas.
2. Elective coursework satisfying distributional requirements, as specified in the Graduate Program Profile, available in the department office.
3. CIE 996 (Master's Project) for 3 credits. The project involves a topic in environmental engineering approved by the advisor.
4. Participation in the faculty/student seminar program (CIE 660).

#### Ph.D. in Civil Engineering

The Department offers the Ph.D. degree to students interested in research and teaching. The primary focus is on the development of skills to pursue original research in careers in academia, government, or research institutions. Students usually complete the degree within three to five years.

#### Admission Requirements

1. B.S. in civil or environmental engineering or other acceptable field from an accredited institution.
2. M.S. degree from an accredited institution.

3. B+ average in M.S. program coursework.
4. Satisfactory grades on all required graduate entrance examinations.
5. Departmental approval.
6. 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 exam 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

1. 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.
2. 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).
3. Ph.D. students are required to maintain an average GPA of B+ (3.333) 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, he/she will be asked to terminate his/her Ph.D. study.

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 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.

#### CURRENT RESEARCH AREAS IN ENVIRONMENTAL ENGINEERING

- Aquatic chemistry
- Biogeochemistry
- Soil chemistry
- Water quality modeling
- Natural organic matter
- Environmental geostatistics
- Solid-liquid separation processes
- Potable water supply
- Applied surface chemistry
- Applied environmental microbiology
- Bioremediation
- Global biogeochemical cycles
- Changes in microbial communities in response to anthropogenic disturbance
- Applications of molecular biology to environmental engineering
- Application of geosynthetics in dewatering and containment
- Natural and polymeric fibers in soil erosion mitigation
- Microstructure of soil and geosynthetics
- Slurry wall containment systems and movement of organics in soil/rock systems
- Resource recovery from wastewater
- Decentralized treatment processes
- Microbial fuel cell technologies
- Renewable hydrogen production

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## Environmental Engineering Science

Department Chair and Program Director: Chris E. Johnson, 151 Link Hall, 315-443-2311.

Environmental Engineering Faculty Douglas F. Call, David G. Chandler, Andria Costello Staniec, Cliff I Davidson, Charles T. Driscoll Jr., Chris E. Johnson, Lashun K. Thomas

### Program Description

The graduate programs in civil and environmental engineering at Syracuse have earned a reputation for superior quality. Degree recipients working in government, industry, and education have made important contributions to the profession. The department provides coursework and research opportunities in structural engineering, geotechnical engineering, environmental engineering, and construction and infrastructure management.

In addition to these core areas, the department participates 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 SUNY-ESF.

### M.S. in Environmental Engineering Science

#### Requirements

The M.S. in environmental engineering science is intended for students with undergraduate degrees in fields other than engineering. 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 671 and CIE 672.
2. Elective coursework satisfying distributional requirements, as specified in the Graduate Program Profile, available in the department office.
3. CIE 997 (Master's Thesis) for 6 credits.
4. Defense of thesis.
5. Participation in the faculty/student seminar program (CIE 660).

#### Requirements without Thesis (30 credits)

1. Completion of CIE 671 and 672.
2. Elective coursework satisfying distributional requirements, as specified in the Graduate Program Profile, available in the department office.
3. CIE 996 (Master's Project) for 3 credits. The project involves a topic in environmental engineering or environmental science approved by the advisor.
4. Participation in the faculty/student seminar program (CIE 660).

#### Ph.D. in Civil Engineering

The Department offers the Ph.D. degree to students interested in research and teaching. The primary focus is on the development of skills to pursue original research in careers in academia, government, or research institutions. Students usually complete the degree within three to five years.

#### Admission Requirements

1. B.S. in civil or environmental engineering or other acceptable field from an accredited institution.
2. M.S. degree from an accredited institution.
3. B+ average in M.S. program coursework.
4. Satisfactory grades on all required graduate entrance examinations.
5. Departmental approval.
6. 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 exam 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

1. 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.
2. 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).
3. Ph.D. students are required to maintain an average GPA of B+ (3.333) 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, he/she will be asked to terminate his/her Ph.D. study.

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 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.

#### CURRENT RESEARCH AREAS IN ENVIRONMENTAL ENGINEERING SCIENCE

- Aquatic chemistry
- Biogeochemistry
- Soil chemistry
- Water quality modeling
- Natural organic matter
- Environmental geostatistics
- Solid-liquid separation processes
- Potable water supply
- Applied surface chemistry
- Applied environmental microbiology
- Bioremediation
- Global biogeochemical cycles
- Changes in microbial communities in response to anthropogenic disturbance
- Applications of molecular biology to environmental engineering
- Application of geosynthetics in dewatering and containment
- Natural and polymeric fibers in soil erosion mitigation
- Microstructure of soil and geosynthetics
- Slurry wall containment systems and movement of organics in soil/rock systems
- Resource recovery from wastewater
- Decentralized treatment processes
- Microbial fuel cell technologies
- Renewable hydrogen production

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## Environmental Engineering/Business Administration (3-2 Program)

Contact: Danielle Goodroe, Assistant Director, Graduate Recruitment, Whitman School of Management, Suite 315, 315-443-3006, [degoodro@syr.edu](mailto:degoodro@syr.edu)

Can Isik, Associate Dean, LC Smith College of Engineering & Computer Science, 223 E Link Hall, 315-443-3604, [cisik@syr.edu](mailto:cisik@syr.edu)

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 L.C. Smith College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

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

Admission: Students in the engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

Degree Requirements: Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

3+2 program requirements:

- Students will complete 129 credits for the environmental engineering degree and an additional 54 credits for the MBA degree.
- Year 1 & 2: Enrollment in required undergraduate coursework
- Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework
- Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework
- Year 5: Completion of BS and MBA coursework

Transfer Credit: Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

Satisfactory Progress: Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

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## Law/Computer Science

The Juris Doctor and Master's 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.

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## Mechanical & Aerospace Engineering

Chair: Achille Messac, 263 Link Hall, 315-443-2341; fax: 315-443-9099, [gradinfo@syr.edu](mailto:gradinfo@syr.edu).

Faculty: Jeongmin Ahn; Benjamin Akih-Kumgeh; Michelle Blum, Edward A. Bogucz Jr., Frederick Carranti, Thong Dang, John F. Dannenhoffer III, Barry D. Davidson, Mark N. Glauser, Melissa Green, H. Ezzat Khalifa, Benjamin Akih-Kumgeh, Alan J. Levy, Jacques Lewalle, Shalabh Maroo, Young Bai Moon, Vádreu R. Murthy, Utpal Roy, Eric F. Spina, Jianshun S. Zhang

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 participates in a college-wide master program leading to the degree:

- Master of Science (M.S.) in Engineering Management

### Admission Requirements

#### Master Of Science

Admission to an 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 of 3.0/4.0 or equivalent, and a GRE-Quantitative score of 700 (155 on the new scale) are normally expected. If a student's background is not particularly strong in mechanical or aerospace engineering, he/she may be required to take undergraduate courses (not counted towards the M.S. degree) as specified in the letter of admission.

#### Ph.D.

Admission to the Ph.D. program will be considered if three conditions are met. First, a sufficient level of academic and professional achievement must be documented by transcripts of the student's prior academic performance (a GPA of 3.33/4.0 or better is expected), GRE Quantitative score of 700+ (155+ on the new scale) and an acceptable GRE verbal score, and letters of recommendation and other supporting information. Second, the focusing of the student's efforts in one area of specialization should be clear from the student's transcript and statement of purpose. Third, a faculty adviser must be willing to supervise research in the student's area of specialization. Prior completion of a M.S. degree and/or an M.S. thesis may be required by individual faculty advisers.

### 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.

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## Master Of Science In Mechanical And Aerospace Engineering

### Course Requirements

Graduate courses can be found in the Course Catalog, using the search engine.

M.S. students must complete 30 credits, including a capstone project (MAE 994: 0 credits; graded P/F), and must attend at least 3 semesters of the MAE graduate seminars (MAE 995: 0 credits; graded A/B/C/F, based on attendance)[1].

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 a required 30-credit M.S. degree, students should not take more than 9-credits 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 includes MAE 994 Capstone Project. The student will review technical papers or reports in the technical 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 adviser, must be submitted to the MAE Graduate Office before the oral presentation. The committee will decide whether the student has passed or failed. The student should register for MAE 994 in his/her last semester for 0 credit hours.

## Ph.D. In Mechanical And Aerospace Engineering

### Program

A program of study is individually designed by each student in consultation with his or her adviser. 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. As a pre-requisite to the qualifying examination, a Ph.D. student must complete a minimum of 39 credits after B.S. or 9 credits after M.S. and must have a cumulative 3.33 GPA or better at the time of taking the qualifying exam. Full-time 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 sixth semester of their graduate study. Full-time students who transfer into 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 three semesters of first registration in the program. Part-time students should take the qualifying examination after they have taken 39 credits after B.S. or 9 credits after M.S. and within 1 year of completion of these credits. The oral component of the qualifying examination must be taken no later than one year after passing the written examination.

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 members 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 once more. No one will be permitted to go beyond the above mentioned time limits as stipulated in the first paragraph under Qualifying Examination. Failure to pass the examination in a timely fashion will result in dismissal from the Ph.D. program.

## 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.

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[1]Of the 48-credit course work, 30 credits should be equivalent to our M.S. degree requirements.

[2]Part-time M.S. students may petition the Graduate Affairs Committee for partial exemption from seminar attendance.

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## Mechanical Engineering/Business Administration (3-2 Program)

Contact - Danielle Goodroe, Assistant Director, Graduate Recruitment, Whitman School of Management, Suite 315, 315-443-3006, [degoodro@syr.edu](mailto:degoodro@syr.edu)

Can Isik, Associate Dean, LC Smith College of Engineering & Computer Science, 223 E Link Hall, 315-443-3604, [cisik@syr.edu](mailto:cisik@syr.edu)

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 L.C. Smith College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

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

Admission - Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

Degree Requirements - Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

3+2 program requirements:

Students will complete 128 credits for the Mechanical Engineering degree and an additional 54 credits for the MBA degree.

Year 1 & 2: Enrollment in required undergraduate coursework

Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework

Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework

Year 5: Completion of BS and MBA coursework

Transfer Credit - Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

Satisfactory Progress - Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

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## Certificate Of Advanced Study In Microwave Engineering

Faculty Amit Agrawal, Ercument Arvas, Howard A. Blair, Tomislav Bujanovic, Stephen J. Chapin, Biao Chen, C.Y. Roger Chen, Shiu-Kai Chin, Wenliang (Kevin) Du, Ehat Ercanli, Makan Fardad, James W. Fawcett, Prasanta Ghosh, Amrit L. Goel, Albert Goldfain, Mustafa Cenk Gursoy, Carlos R.P. Hartmann, Robert Irwin, Can Isik, Philipp Kornreich, Andrew Chung-Yeung Lee, Jay Kyoong Lee, Yingbin Liang, Duane L. Marcy, Kishan G. Mehrotra, Chilukuri K. Mohan, Jae C. Oh, Susan Older, Qinru Qiu, Laleh Rabieirad, James S. Royer, Tapan K. Sarkar, Fred Schlereth, Q. Wang Song, Jian Tang, William C. Tetley, Pramod K. Varshney, Senem Velipasalar, Hong Wang, Volker Weiss, Min Xu, Heng Yin, Edmund Yu

### Certificate of Advanced Study in Microwave Engineering (CASME)

The Department of EECS 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.

The comprehensive set of courses in this certificate program provides a strong theoretical basis for microwave engineering. Moreover, participants of the program gain hands-on experience in practice of microwave engineering. The project-based courses of the certificate teach the student how to design, simulate, build and test a microwave device such as an amplifier, filter, oscillator or antenna. The simulation tools used in these courses are identical to some of the commercial software used by the microwave industry. The test equipment used is state-of-the-art microwave measurement devices commonly used by industry.

The certificate is composed of a comprehensive and coherent collection of courses to ensure that students acquire the following educational outcomes:

1. mastery of the underlying principles of microwave theory;
2. use of microwave theory concepts to design microwave devices satisfying a given set of specifications and to predict their behavior;
3. use of the latest software tools to simulate microwave circuit behavior;
4. use of microwave theory concepts and CAD software to optimize microwave circuits to meet given specifications;
5. mastery of the use of microwave equipment such as network and spectrum analyzers.

Successful completion of the CASME does not ensure admission to the Master of Science in Electrical Engineering (MSEE). However, the credits earned by completing the courses specified above can be accepted towards the MSEE program.

Admission to the CASME is based on academic record of a BS in electrical engineering, professional experience, and letters of recommendation.

### Requirements

ELE 621: Electromagnetic Fields

ELE 623: Microwave Measurements

Four courses from the following list:

ELE 721: Antennas & Antenna Systems

ELE 722: Microwave Filters

ELE 723: Microwave Transistor Amplifiers

ELE 724: Microwave Oscillators

ELE 725: Electromagnetic Engineering I

ELE 726: Computational Methods of Field Theory

ELE 728: Planar Microwave Antennas

ELE 751: Wireless Communications

RESTRICTION: A selection of four courses must include at least two of the following:

ELE 722: Microwave Filters

ELE 723: Microwave Transistor Amplifiers

ELE 724: Microwave Oscillators

ELE 728: Planar Microwave Antennas

Must maintain a cumulative total GPA of at least a 3.0 in those courses to be credited towards the CASME

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## Master Of Public Health (CNYMPH) Program Overview

Contact: Thomas H. Dennison, Ph.D., Associate Director

426 Eggers Hall; 315-443-9060; thdennis@maxwell.syr.edu

[www.upstate.edu/cnymph](http://www.upstate.edu/cnymph)

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, L.C. Smith 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.

A certificate of Advanced Study in Public Health (CASPH) a 5 course (15-credit hour) program of study, is also offered. 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.

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](http://www.upstate.edu/cnymph/academic/mph_degree/how_to_apply.php)

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## Certificate Of Advanced Studies In Public Infrastructure Management And Leadership

Department Chair: Chris E. Johnson, 151 Link Hall, 315-443-2311.

#### Program Description

The L.C. Smith College of Engineering and Computer Science (LCS), in collaboration with the Department of Public Administration (PA) 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 course work that is relevant to their knowledge, interests, and needs.

#### Certificate of Advanced Study in Public Infrastructure Management and Leadership (CAS-PIML)

The CAS-PIML will deliver a certificate to students in both LCS 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 Requirements

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 LCS, combined with the Public Administration 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 Managerial Leadership
- PAI 734 Public Budgeting, OR
- PAI 731 Financial Management in State and Local Governments
- MAE 548 Engineering Economics and Technology Valuation
- ECS 636 Infrastructure Engineering and Management

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
- CIE 600 Construction Engineering and Project Management
- CIE 643 Transportation Engineering
- CIE 678 Rehabilitation of Civil Infrastructure
- PAI 601 Fundamentals of Conflict Studies
- PAI 709 Public Organizations and Management
- PAI 730 Managing Individual, Group, and Systemic Conflicts
- PAI 730 Environmental Conflicts and Collaboration

- PAI 757 Economics of Development
- PAI 777 Economics of Environmental Policy

Total 15 credits leading to a Certificate of Advanced Study in Public Infrastructure Management and Leadership

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## Certificate Of Advance Study In Sustainable Enterprise (CASSE)

Contact - Tom Lumpkin, The Chris J. Witting Chair for Entrepreneurship, 536 Whitman School of Management, 315-443-3164, lumpkin@syr.edu

Program Description - The Certificate of Advanced Study in Sustainable Enterprise (CASSE) is offered collaboratively by the Whitman School of Management, the L.C. Smith 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, 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.

Certificate Requirements - Students must complete 15 credits for the certificate.

BUA 650 Managing Sustainability  
 BUA 651 Strategic Management & the Natural Environment  
 BUA 759 Sustainability Driven Enterprise  
 6 credits of electives

Admission - Students must be matriculated into a graduate program at Syracuse University or SUNY ESF to be considered for admission to the program.

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## Certificate Of Advanced Study In Systems Assurance

Faculty Amit Agrawal, Ercument Arvas, Howard A. Blair, Tomislav Bujanovic, Stephen J. Chapin, Biao Chen, C.Y. Roger Chen, Shiu-Kai Chin, Wenliang (Kevin) Du, Ehat Ercanli, Makan Fardad, James W. Fawcett, Prasanta Ghosh, Amrit L. Goel, Albert Goldfain, Mustafa Cenk Gursoy, Carlos R.P. Hartmann, Robert Irwin, Can Isik, Philipp Kornreich, Andrew Chung-Yeung Lee, Jay Kyoony Lee, Yingbin Liang, Duane L. Marcy, Kishan G. Mehrotra, Chilukuri K. Mohan, Jae C. Oh, Susan Older, Qinru Qiu, Laleh Rabieirad, James S. Royer, Tapan K. Sarkar, Fred Schlereth, Q. Wang Song, Jian Tang, William C. Tetley, Pramod K. Varshney, Senem Velipasalar, Hong Wang, Volker Weiss, Min Xu, Heng Yin, Edmund Yu

Certificate of Advanced Study in Systems Assurance (CASSA)

The Department of EECS offers a Certificate of Advanced Study in Systems Assurance (CASSA), established in concert with the Systems Assurance Institute. The courses cover the wide spectrum of system assurance, including the theoretical foundations, the synthesis of assured software and hardware, and the deployment of large-scale systems.

This CASSA fits within the scope of the computer engineering (CE) and computer science (CS) master's programs. To receive this certificate, students must be enrolled in either the CE or the CS program and be accepted into the certificate program.

Students who receive this certificate will have developed a broad background in security and information assurance, distinguishing themselves by their ability to:

- analyze, synthesize, and make judgments based on engineering and computer science principles; and
- use analytical techniques to evaluate the implications of policies, standards, and procedures; the ramifications of changes; and the potential dangers of refinements.

The curriculum for the CASSA ensures that students who successfully complete this certificate achieve the following three educational outcomes:

1. Students comprehend the concepts underlying security and system assurance.
2. Students can apply those concepts to construct assured systems.
3. Students can critically analyze and evaluate systems' conformance to their requirements.

For more information, refer to the following web site: [www.sai.syr.edu/education/cassa](http://www.sai.syr.edu/education/cassa).

Requirements:

- CIS/CSE 583: Systems Assurance Seminar
- Five courses from the following two tracks (with at least two courses from each track):

Foundations for Assurance Track

CIS 628: Introduction to Cryptography  
CIS 632: Modeling Concurrent Systems  
CIS/CSE 774: Principles of Distributed Access Control  
CIS/CSE 690: IA Foundations Independent Project

Assurance Applications Track

CIS/CSE 643: Computer Security  
CIS/CSE 644: Internet Security  
CIS 752: Wireless Network Security  
CIS/CSE 690: IA Applications Independent Project

Note: Other courses may be added to this collection.

- One course from the following list:

Non-Technical Assurance Electives

IST 618: Survey of Telecomm & Information Policy  
IST 625: Risk Management  
IST 629: Organizational Information Security  
IST 642: Electronic Commerce  
IST 728: Information Security Policy  
PSC 655: Global Information Technology Policy  
PSC 755: Politics & Governance in the Information Age

Note: Other courses may be added to this collection.

# Courses

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## Aerospace Engineering

AEE 527 Helicopter Dynamics 3 SI  
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 Temp Gas Dynamics 3 SI  
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 3 Y  
Two-body orbital mechanics, orbits and trajectories, interplanetary transfers, vehicle and booster performance.  
PREREQ: ECS 222.

AEE 628 Adv Spacecraft Dynamics 3 IR  
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 Structural Dynamics/Vehicle 3 IR  
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/Aerospace/Structural 3 IR  
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 3 SI  
Crosslisted with: MAE 585, MEE 685  
Fluid dynamics and thermodynamics of turbomachines. Performance characteristics and analysis of axial and radial turbomachines. Cascade theory. Radial equilibrium equation. Meridional flow analysis. Three dimensional flow characteristics of turbomachines.

AEE 727 Adv Helicopter Dynamics II 3 IR  
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 Dynamics 3 IR  
Classification, physical properties of hypersonic flows. Thickness and structure of shock fronts. Real gas effects, relaxation phenomena. Compressible viscous boundary layer flows. Shock layer flows. Two-layer Newtonian flow models. Aerodynamic applications. Hypersonic flow generation, simulation.  
PREREQ: MAE 647.

AEE 995 Graduate Seminar 0  
Crosslisted with: MAE 995

AEE 996 Special Project 0-6  
R

AEE 997 Masters Thesis 0-9  
R

AEE 999 Dissertation 0-15  
R

## Bioengineering

BEN 500 Selected Topics 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

BEN 541 Principles of Tissue Engineering 3 Y  
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.  
PREREQ: BEN 301.

BEN 575 Process Control 3 Y  
Crosslisted with: CEN 575  
Modeling and linearization of process dynamics. Transfer functions. Performance and stability of feedback control loops. Introduction to multivariable and digital controls.

BEN 580 International Course 1-12 IR  
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. R

BEN 600 Selected Topics 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

BEN 601 Graduate Bioengineering Seminar 0-1 S  
Selected topics in bioengineering. Presentations by internal and external speakers, discussions with students. R, 1 credit maximum

BEN 633 Drug Delivery 3 Y  
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 635 Physical Cell Biology 3 Y  
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 648 Biofluid Dynamics 3 SI  
Crosslisted with: MAE 648  
Principles of momentum transfer in bioengineering systems. Flight and swimming in nature including flagellar propulsion. Newtonian and non-Newtonian fluid phenomena, including low-Reynolds-number flow, pulsatile and separated flows. Flow past bifurcations. Respiratory and blood circulatory flows.

BEN 658 Biomedical Imaging 3 Y  
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 664 Quantitative Physiology 4 Y  
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 3 Y  
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 3-4 Y  
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 3 Y  
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 1-6 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. R

BEN 690 Independent Study 1-6 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. R

BEN 741 Biopolymers 3 IR  
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 3 IR  
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 1-6 S  
Independent investigation on a topic of interest under supervision of a member of the faculty. R1 1, 12 credits maximum

### Chemical Engineering

CEN 500 Selected Topics 1-3  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

CEN 520 Radiochemistry, Nuclear Fuel Reprocessing and Nonproliferation 3 SI  
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 201.

CEN 540 Experiential Studies in Nuclear Technology 3 SI  
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 201 AND (NUC 510 OR NUC 520).

CEN 542 Heat and Mass Transfer Operations 3 Y  
Selected topics in mass and heat and heat transfer. Application of principles of units operations.  
PREREQ: CEN 341.

CEN 551 Biochemical Engineering 3 Y  
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 3 Y  
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 3  
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 3  
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/ CIE 472.

CEN 573 Principles and Design in Air Pollution Control 3 IR  
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 4 Y  
Chemical engineering principles for plant design and optimal process operation. Cost estimation and profitability analysis. Shortcut and computer-aided process design techniques. Environmental impact and health and safety concerns.  
PREREQ: CEN 353 AND 587.

CEN 575 Process Control 3 Y

Crosslisted with: BEN 575

Modeling and linearization of process dynamics. Transfer functions. Performance and stability of feedback control loops. Introduction to multivariable and digital controls.

PREREQ: MAT 485.

CEN 576 Green Engineering 3 IR

Review of environmental regulations. Evaluating the environmental fate of chemicals. Techniques for improving environmental performance of processes. Methods for evaluating environmental performance, design of unit Operations, and flowsheets for pollution prevention. Environmental cost accounting.

PREREQ: CEN 341 AND 353.

CEN 587 Chemical Reaction Engineering 3 Y

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 3 IR

Selected topics in research and new areas of competence in chemical engineering. R

CEN 600 Selected Topics 1-3 IR

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

CEN 633 Drug Delivery 3 Y

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 635 Physical Cell Biology 3 Y

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 643 Fluid Dynamics 3 Y

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.

PREREQ: MAE 341 OR CEN 333.

CEN 651 Chemical Engineering Thermodynamics 3 SI

Classical thermodynamics of phase equilibria. Thermodynamic properties from volumetric data. Intermolecular forces. Fugacities of gas mixtures. Fugacities in liquid mixtures. Excess functions. Theories of solutions. Polymer solutions. Solubilities of gases and solids in liquids. High-pressure vapor-liquid equilibria.

CEN 661 Environmental Chemistry and Analysis 3 Y

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 671 Chemical Engineering Methods I 3 Y

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. Duhammel's theorem and other techniques.

CEN 672 Applied Env Microbiology 3 Y

Crosslisted with: CIE 672; Double Numbered with: CEN 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.

CEN 676 Optimization Techniques in Chemical Engineering 3 SI

Optimization methods applied to engineering systems. Linear and quadratic programming. Direct and gradient search procedures. Kuhn-Tucker conditions. Techniques for variational problems.

CEN 741 Transport Phenomena I 3 IR

Tensor analysis. Reynold's transport theorem. Constitutive equations for stress. Momentum transport equations. Creeping flow, nonviscous flow, boundary layer flow. Flow through porous media. Turbulence. Energy transport equation. Conduction, natural and forced convection solutions. Boundary layer heat transfer.

PREREQ: CEN 542, 671.

CEN 761 Rheology & Polymer Process 3 SI

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 772 Chemical Engineering Methods II 3 SI

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 3 Y

Homogenous reactions: tubular and stirred reactors, axial and radial transport. Residence time distribution. Heterogenous reactions-catalytic: rates, pores, transport, in fixed and fluid beds, non-catalytic reaction and growth of new phases.

PREREQ: CEN 587, 651, 671.

CEN 789 Advanced Topics in Colloidal and Interfacial Phenomena 3 SI

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 1-3 SI

Recent advances in chemical engineering science. R

CEN 890 Advanced Topics In Chemical Engineering 3 SI

Recent advances in chemical engineering research, including experimental techniques. R

CEN 997 Masters Thesis 0-6 S

R

## Civil Engineering

**CIE 529 Risk Anlys in Civ Engin 3 IR**  
Probability, statistics, and decision theory applied to a variety of civil-engineering disciplines, such as structural design and analysis, geotechnical, water quality, water resources, and transportation.  
PREREQ: MAT 397.

**CIE 535 Strctrl Steel Design 3 O**  
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 Prestrssd Concrete Design 3 O**  
Analysis and design of prestressed concrete members for flexure, shear, torsion, and compression. Basic concept of prestressing. Stress computation and prestress loss estimation. Deflection and crack control.  
PREREQ: CIE 331.

**CIE 538 Dynamics of Structures 3 SI**  
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 3 E**  
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 3 Y**  
Crosslisted with: MAE 548  
Value-based assessment and management of engineering/technology projects: equivalence; discounted cash flow; taxes/depreciation; financial statements. Risk-adjusted valuation: risk/uncertainty in staged projects; Monte Carlo simulations; decision trees; real options; project portfolio management.  
PREREQ: MAT 296.

**CIE 549 Designing with Geofam 3 SI**  
Introduction to geofam 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 3 SI**  
Crosslisted with: MAE 551  
Energy demand and resources. Fundamentals of combustion. Power plants, refrigeration systems. Turbines and engines. Advanced systems. Direct energy conversion. Alternate energy sources. Energy storage. Costs and environmental impact.

**CIE 552 Building Environmental Measurements and Controls 3 SI**  
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 3 SI**  
Crosslisted with: MAE 553  
Fundamentals of moist air properties, basic air conditioning processes, heat transfer in building structures, heating and cooling load calculations, and air distribution systems.  
PREREQ: MAE 251.

**CIE 554 Prin Envrn Toxicology 3 SI**  
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 Mgmt 3 Y**  
Regulations that address management of hazardous wastes. Practices and technologies commonly used in meeting regulations. Investigative and diagnostic techniques.

**CIE 558 Solid Wastes: Collection and Disposal 3 O**  
Composition of refuse. Quantities produced by individuals and industries. Collection equipment, methods, and associated costs. Disposal problems and solutions, such as landfills, incineration, and composting.

**CIE 561 Air Resources I 3 O**  
Occurrence, nature and properties, major sources and quantities of contaminants. Ambient air concentration levels, community distribution patterns, and control of air pollution.

**CIE 565 Bioremediation 3 IR**  
Crosslisted with: CEN 565  
Uses of bioremediation in engineering applications. Role of microorganisms in degradation of pollutants and contaminants. Regulatory, societal, and legal issues of bioremediation.  
PREREQ: CIE 472/CEN 472.

**CIE 567 Biotechnology 3 IR**  
Crosslisted with: CEN 567  
Engineering applications of biotechnology in agriculture, industry, and the environment. Principles of molecular genetics as applied in the biotechnology industry. Hands-on exposure to laboratory recombinant DNA technology.  
PREREQ: CIE 472.

**CIE 570 Water&Wastewtr Trtmnt Des 3 IR**  
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. R

**CIE 571 Water Quality Modeling 3 O**  
Conceptual and mathematical models of water quality in surface waters. Application of mass and energy balances to aquatic systems. Numerical methods for solution of governing equations. Students will build simple models and use existing water quality modeling software.  
PREREQ: MAT 296 AND CIE 341.

**CIE 584 Design W/Geosynthetics 3 SI**  
Engineering properties of geosynthetics (geotextiles, geogrids, geonets, geomembranes, and geocomposites). Design of filters using geotextiles, retaining structures using geosynthetics, design of liquid impoundment, and solid waste containment facilities.  
PREREQ: CIE 337.

**CIE 588 Principles of Wind Turbines 3 SI**  
Crosslisted with: ECS 588, MAE 588  
Aerodynamics, performance, control, and electrical aspects wind turbines.  
PREREQ: MAE 341.

CIE 631 Structural Analysis I 3 SI  
Classical theories of analysis and the application of theories of elasticity, plasticity, and elastic stability to structures.

CIE 632 Structural Analysis II 3 SI  
Matrix methods in the analysis of complex structural systems. Structural dynamic analysis of single- and multi-degree-of-freedom systems.  
PREREQ: CIE 631.

CIE 633 Finite Element Analysis 3 Y  
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 3 SI  
Stability analysis of bars, arches, plates and shells. Stability criteria. Analytical and numerical solutions to stability problems. Effects of geometrical imperfections and material nonlinearity. Design considerations for stability.

CIE 635 Adv Reinforced Concr Des 3 IR  
Relation of straight line and ultimate theories to the analysis and design of reinforced and prestressed concrete structures.

CIE 636 Plstc Des/Steel Structures 3 SI  
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 3 Y  
Physiochemical studies of soils and soil behavior. Stress distribution in soil masses. Immediate and time-dependent compression of soils. Settlement analysis. Seepage through foundations and earth structures.

CIE 638 Adv Soil Mech & Foundtns II 3 O  
Shear strength of soils. Bearing capacity and slope stability analyses. Earth pressures and analysis of retaining structures. Soil dynamics.

CIE 641 Seepage & Earth Dam Desgn 3 IR  
Types of earth dams. Method of construction. Case histories. Stability of dams. Seepage-flow nets. Effective stress analysis. Darcy's law. Estimation of flow. Design of filters. Instrumentation. Design of dams for earthquake forces.  
PREREQ: CIE 337.

CIE 642 Treatment Processes in Environmental Engineering 3-4 Y  
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.

CIE 643 Transportation Engineering 3 Y  
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 648 Building Environmental Modeling and Simulations 3 SI  
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 3 SI  
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 3 E  
Principles used in the analysis and design of physical-chemical water/waste-treatment processes.

CIE 652 Biological Waste Treatment 3 SI  
Theories and Advanced design concepts for aerobic, anoxic and anaerobic system applications.

CIE 653 Applied Aquatic Chemistry 3 O  
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 671.

CIE 657 Biogeochemistry 3  
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 0 S  
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. R

CIE 662 Chem/Soil & Natural Srfcs 3 E  
General principles. Chemical properties of soils, nature of surfaces, soil formation, soil minerals, and mechanisms regulating solute chemistry in soil solutions.

CIE 666 Design of Concrete Bridges 3 IR  
Analysis and design of highway concrete bridges. Bridge economics, aesthetics, construction, load distribution, and design using load resistance factor design (LRFD). Analysis of stresses and deformations, and the relation to AASHTO-LRFD Design Specifications.

CIE 671 Environmental Chemistry and Analysis 3 Y  
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 3 Y  
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 3 E  
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 3 Y  
Double Numbered with: CIE 474  
An introduction to the relationship between human health and environmental processes. Toxicological effects of air, water and soil pollution. Approaches to risk assessment. Engineering approaches to minimize environmental health risks.

CIE 678 Rehabilitation of Civil Infrastructure 3 Y  
Double Numbered with: CIE 478  
Deterioration of construction materials. Evaluation, non-destructive testing, and rehabilitation of existing structures. Properties and applications of repair materials. Seismic retrofit of bridges. Analysis and design of structural members retrofitted with carbon fiber reinforced polymer composites.  
PREREQ: ECS 325, CIE 332.

CIE 687 Environmental Geostatistics 3 E  
Crosslisted with: GEO 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.

CIE 690 Independent Study 1-6 IR  
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. R

CIE 737 Applied Soil Mechanics 3 SI  
Shallow and deep foundations, buried structures, and earth structures.  
PREREQ: CIE 638.

CIE 739 Soil Stabilization 3 SI  
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 3 SI  
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 764 Industrial Hygiene Eng 3 IR  
Environmental hazards to human health. Toxic properties of industrial dusts, gaseous contaminants, and ionizing radiations. Theories and principles of maximum permissible doses. Control techniques.

CIE 789 Special Investigtns/CIE 3 S  
Special investigations and research in civil engineering designed to meet the needs of individual students. R

CIE 995 Master's Exit Paper 0 S  
Written paper on a topic in civil or environmental engineering, supervised by a faculty advisor and submitted in accordance with current departmental guidelines.

CIE 996 Master's Project 3 S  
Investigation of a civil engineering or environmental engineering or science problem. A written report is required in accordance with current departmental guidelines. Required of all students electing the non-thesis option for a master's degree. R

CIE 997 Masters Thesis 0-6 S  
Research thesis on some phases of engineering to be selected by student and approved by department chair. R

CIE 999 Dissertation 0-15 S  
Research Studies directed to the dissertation under supervision of member of Graduate School faculty. R

### Computer And Information Science

CIS 500 Selected Topics 1-3  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

CIS 521 Discrete Mathematics and Data Structures 3 S  
Basic discrete mathematics: sets, relations, graphs, functions. Fundamental properties of linked lists, graphs and trees, their computer representations and algorithms that manipulate them. Hash Tables, relational structures, directory structures.

CIS 531 Compiler Construction 3 SI  
Programming a small compiler. Lexical analysis, tokens, finite automata, hashing. Syntax analysis, grammars, syntax trees, error recovery. Scope and type analysis, symbol tables. Run-time stack, variable addressing, expression evaluation, procedure activation, recursion. Code generation, Optimization, portability.  
PREREQ: CIS 351.

CIS 542 Computer Organization and Architecture 3  
Instruction set design, computer arithmetic, processor organization, high-level programs and machine code, memories, performance measurement, pipelining, input-output organizations.  
COREQ: CIS 555.

CIS 543 Control of Robots 3 Y  
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 3 Y  
Crosslisted with: MAT 545  
Permutations, combinations, recurrence relations, generating functions, inclusion-exclusion and applications, introductory graph theory.  
PREREQ: CIS 275 OR MAT 375.

CIS 551 Modern Programming in Java 3  
Programming in Java with generic classes. Defining generic classes. Specifying types and inheritance. Verifying correctness of Java methods and classes. Managing concurrency, remote method invocation, and performance considerations.

**CIS 553 Software Systems Implementation 3 Y**

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++ 3 Y**

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 555 Principles of Programming I 3**

Abstract data structures, linked structures, trees including AVL and B-trees, hashing, memory management, search and sort algorithms, object-oriented programming. COREQ: CIS 521.

**CIS 556 Principles of Programming II 3**

Functional programming, modules, data encapsulation, types and polymorphism, program correctness, lambda-calculus, beta-reduction, evaluation strategies, basic implementation techniques.

PREREQ: CIS 521 AND 555.

**CIS 565 Introduction to Artificial Neural Networks 3 Y**

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 3**

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 3 IR**  
Processes, events, alphabets, and trace sets. Process equivalence. Divergence, dead-lock, fairness, and termination. Message channels, buffers, pipelines, trees, rings, grids, recursive nets. Mutual exclusion, semaphores, conditional critical regions, monitors, remote procedures. Programming exercises in Joyce.

**CIS 583 Systems Assurance Seminar 3 Y**  
Crosslisted with: CSE 583

Basic terminology of assurance and cryptography. Social and privacy issues of assurance. Ethics in computing. Legal aspects and implications of system assurance. Weekly presentations by external and internal speakers.

**CIS 606 Computational Methods for Distributed Information Systems 3**  
Double Numbered with: CIS 406

Computational methods and algorithms for information technologies. Includes network issues, digital media, Web access to databases, software and hardware architectures, and virtual reality. Project or term paper required for CIS 606, not for CIS 406.

**CIS 607 Mathematical Basis for Computing 3 Y**

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 3 Y**

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 3 S**

Reasoning about programs: specification, design, and realization of provably correct programs. Program and data structures, binding, procedures, recursion.

PREREQ: CIS/CSE 607.

**CIS 625 Computer Graphics 3 IR**

Graphics programming. User interfaces. Modeling and viewing transformations. Shading techniques. Representations of three-dimensional models. Curves and non-planar surfaces. Ray tracing and radiosity. Antialiasing. Programming project required.

**CIS 626 Theoretical Foundations of Computer Science 3 Y**

Computability and decidability, first-order logic, lambda calculus systems, program verification, semantics of programming languages, theory of language.

PREREQ: CIS 521.

**CIS 628 Introduction to Cryptography 3**

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.

PREREQ: CIS 575, 675, MAT 534 OR 541.

**CIS 631 Compiler Design 3 IR**

Development of the logical design of a compiler: lexical analyzer, parser, symbol table, error routines, code generator, and code optimizer. Analysis of formal algorithms for each component, description of overall compiler-construction techniques.

**CIS 632 Modeling Concurrent Systems 3 SI**

Formal methods for specifying, modeling, and analyzing concurrent systems, and mathematical basis for such methods.

Automated and semi-automated tools to apply these methods to analyze emergent behavior of computing related applications.

PREREQ: CIS/CSE 607.

**CIS 634 Assurance Foundations 3 Y**

Crosslisted with: CSE 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.

**CIS 643 Computer Security 3**

Crosslisted with: CSE 643

Operating system security. Unix security.

Trusted Computing Base. Authentication.

Access control. Security models. Capability.

Sandboxing. Software vulnerabilities. Worms.

Viruses. Secure engineering principles. Secure programming. Auditing. Forensics.

CIS 644 Internet Security 3 Y

Crosslisted with: CSE 644

Internet architecture. Security and attacks on TCP/IP, DNS, and BGP protocols. Internet protocol security. Firewall. Intrusion detection. Network traceback. Web security. Encryption. Public Key infrastructure. One-way hash function. Digital signature. Security protocols.

CIS 645 Graph Theory 3 Y

Crosslisted with: MAT 645

Fundamentals of graph theory and special topics including networks, matching, connectivity, planarity, and automorphism groups.

PREREQ: MAT 531.

CIS 646 Enumeration, Designs, and

Matroids 3 IR

Crosslisted with: MAT 646

Generating functions, Polya enumeration, set systems, design parameters, finite projective planes, matroids.

PREREQ: MAT 531.

CIS 652 Building Assured Components 3 Y

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.

PREREQ: CIS 634.

CIS 655 Computer Architecture 3 IR

Computer-architecture characteristics and their effect on the design and performance of programs. Price-performance tradeoffs, instruction set design, memory hierarchies, pipelining, storage systems, selected topics in parallel architectures. Architecture of specified computers.

PREREQ: CIS 341.

CIS 656 Concepts in Concurrent Programming 3 IR

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.

PREREQ: CIS 623.

CIS 657 Principles of Operating Systems 3 IR

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.

PREREQ: CIS/CSE 486 OR EQUIVALENT.

CIS 661 Logic Programming I 3 IR

Formal logic as a programming language. Use of theorem prover as interpreter for programming languages, particularly Horn clause systems. Representation of problem transformations of programs. Applications, including natural-language processing, database representation, and query and expert systems; extensions of Horn clause formalisms.

CIS 662 Logic Programming II 3 IR

Formal logic as a programming language. Use of theorem prover as interpreter for programming languages, particularly Horn clause systems. Representation of problem transformations of programs. Applications, including natural-language processing, database representation, and query and expert systems; extensions of Horn clause formalisms.

CIS 663 Logics for Artificial Intelligence 3 E

Fundamentals of logical systems applicable to artificial intelligence. Survey of classical first-order logic, proof theory and model theory. Multivalued logics, nonmonotonic logics, temporal and modal logics, fuzzy reasoning. Readings in recent technical papers and surveys.

CIS 665 Computer Vision 3 O

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 3 SI

Crosslisted with: CSE 683

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.

CIS 667 Introduction to Artificial Intelligence 3 SI

Crosslisted with: CSE 684; Double Numbered with: CIS 467

Knowledge representation, production systems, search algorithms, game playing, uncertainty handling, learning, automated reasoning, computer vision, and natural language processing. Programming project or term paper required for CIS 667, not for CIS 467.

CIS 668 Natural Language Processing 3 SI

Crosslisted with: IST 664; Double Numbered with: CIS 468

Linguistic and computational aspect of natural language processing technologies. Lectures, readings, and projects in the computational techniques required to perform all levels of linguistic processing of text. Additional work required of graduate students.

CIS 671 Introduction to the Theories of Computation and Complexity 3

Graduate-level survey of regular languages, finite state machines, elementary theory of computation, classification of unsolvable problems, elementary computational complexity theory, NP-completeness, and related notions.

PREREQ: CIS 521.

CIS 672 Mathematical Logic I 3

First order logics and interpretations. Godel-Henkin completeness theorem, Herbrand's Theorem, compactness theorem, and the Lowenheim-Skolem Theorem. Basic model theory with applications to the theory of fields. Categoricity in power.

CIS 675 Design and Analysis of Algorithms 3 S

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. PREREQ: CIS/CSE 607.

CIS 678 Quantum Computing 3

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/CSE 607, MAT 397 OR MAT 331.

CIS 681 Software Modeling and Analysis 3 Y

Crosslisted with: CSE 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.

CIS 685 Simulation & Modelling 3 IR

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, 525.

CIS 686 Discrete Event Systems 3

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 3 Y

Crosslisted with: CSE 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.

CIS 688 Internet Programming 3

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 689 Mobile Systems Security 3 Y

Double Numbered with: CIS 489

Components in Mobile OS; basic mobile app development; sandbox mechanism; permission enforcement; vulnerabilities; malware attacks. Additional work required of graduate students.

CIS 690 Independent Study 1-6

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. R

CIS 712 Data Parallel Computing 3

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 3

Perceptions, capabilities and limitations. Supervised and unsupervised neural learning. Error back propagation and related algorithms. Hopfield model, feature maps, associative memory, simulated annealing, Boltzmann machines, and genetic algorithms. Complexity, capabilities, applications of neural networks.

CIS 752 Wireless Network Security 3

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 3

The classical theory of effective computability, primarily concerned with the existence of computer methods. Topics: Turing machines, computable functions, recursion, unsolvable problems, degrees of unsolvability, applications.

PREREQ: CIS 521.

CIS 774 Principles of Distributed Access Control 3 Y

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/CSE 607.

CIS 775 Distributed Objects 3 Y

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 3 Y

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 778 Advanced Windows Programming 3 Y

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 3 Y

Crosslisted with: CSE 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 682 OR CSE 687.

CIS 787 Analytical Data Mining 3 Y

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 3 Y

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 1-6 Y  
R

CIS 999 Dissertation 1-15 Y  
R

## Computational Science

CPS 504 Introduction to C++ 3

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 3  
Programming in C: data types, control structures; the preprocessor; arrays and pointers. Substantial programming assignments. For students in computer science.

CPS 640 Tpcs:Ntwkng&Multimed Appl 3  
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. R

CPS 690 Independent Study 1-6  
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. R

### Computer Engineering

CSE 561 Digital Machine Design 3 Y  
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 3 SI  
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 3

CSE 581 Introduction to Database Management Systems 3 Y  
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 3 Y  
Crosslisted with: CIS 583  
Basic terminology of assurance and cryptography. Social and privacy issues of assurance. Ethics in computing. Legal aspects and implications of system assurance. Weekly presentations by external and internal speakers.

CSE 588 Translator Design 3 SI  
Compiling or interpreting computer languages. Lexical analysis, grammars, parsing, intermediate code design, semantic processing, optimizing, error processing, and diagnostic tools. Senior or graduate standing in computer engineering.  
PREREQ: CSE 382.

CSE 591 Special Problems in Computer Systems Engineering 1-4 SI  
Students work on special projects. Instructors present new or special material. R29, 30 credits maximum

CSE 607 Mathematical Basis for Computing 3 Y  
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 612 Cloud Computing 3 Y  
Crosslisted with: CIS 612  
Virtualized data centers, including virtual machine management, power management, and networking; cloud computing applications; and mobile cloud computing.  
PREREQ: CSE 458 AND CSE 486.

CSE 634 Assurance Foundations 3 Y  
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 643 Computer Security 3  
Crosslisted with: CIS 643  
Operating system security. Unix security. Trusted Computing Base. Authentication. Access control. Security models. Capability. Sandboxing. Software vulnerabilities. Worms. Viruses. Secure engineering principles. Secure programming. Auditing. Forensics.

CSE 644 Internet Security 3 Y  
Crosslisted with: CIS 644  
Internet architecture. Security and attacks on TCP/IP, DNS, and BGP protocols. Internet protocol security. Firewall. Intrusion detection. Network traceback. Web security. Encryption. Public Key infrastructure. One-way hash function. Digital signature. Security protocols.  
PREREQ: CSE 585, CIS 586.

CSE 652 Building Assured Components 3 Y  
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 658 Data Networks: Design and Performance 3 Y  
Crosslisted with: ELE 658  
Data network design principles. Performance, modeling, and analysis of networks. Delay models. Multi access communications. Routing and flow control algorithms. Familiarity with basics of data networks.

CSE 661 Advanced Computer Architecture 3 Y  
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.

CSE 664 VLSI Design Methods 3 Y  
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 3 SI  
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 3 Y  
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 681 Software Modeling and Analysis 3 Y

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 3 Y

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 3 SI

Crosslisted with: CIS 666

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 3 SI

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 CIS 667, not for CIS 467.

CSE 686 Internet Programming 3 SI

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 3 Y

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 1-6 IR

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. R

CSE 691 Special Problems in Computer Systems Engineering 1-4 SI

Topics vary and represent current interests in computer engineering. R

CSE 731 VLSI Timing Analysis 3 Y

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 3 SI

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, 661.

CSE 764 Advanced Topics in Synthesis of VLSI Systems 3 Y

Issues in design and synthesis of modern VLSI systems from abstract high-level behavioral specifications: temporal and spatial optimizations, synthesis for low power, reconfigurable computing, (digital/analog and SW/HW) co-design, formal specification and verification.

PREREQ: CSE 561, 664.

CSE 765 VLSI Testing and Verification 3 Y

Fault modeling and simulation, automatic test pattern generation, design for testability, boundary scan architectures, and built-in self-test. Functional simulation, coverage metrics, event- and assertion-based verification, and formal methods including model checking and logical equivalence checking.

PREREQ: CSE 561, 664.

CSE 771 Sequential Machine Theory 3 SI

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 3 SI  
Physical circuit failures and fault models. Test generation algorithms. Fault stimulation and fault coverage. Random pattern testing. Sequential circuit testing. Test application and response processing techniques. Memory, PLA, and function testing. Design for test.

CSE 773 CAD: Formal Design 3 Y

This course teaches the theory, practice, and tools for using higher-order logic as a means for describing, designing, and verifying computer systems.

PREREQ: CSE 561, 607.

CSE 774 Principles of Distributed Access Control 3 Y

Crosslisted with: CIS 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/CSE 607.

CSE 775 Distributed Objects 3 Y

Crosslisted with: CIS 775

Design and implement software components using the Component Object Model (COM). Students will develop programs with COM components, ActiveX controls, and distributed applications.

PREREQ: CSE 681 AND 687.

CSE 776 Design Patterns 3 Y

Crosslisted with: CIS 776

A seminar course based on the book "Design Patterns." Object oriented design methods emphasizing conceptual understanding rather than software development projects.

PREREQ: CSE 681 AND 687.

CSE 778 Advanced Windows

Programming 3 Y

Crosslisted with: CIS 778

Seminar/projects course including: MFC library; windows architecture Graphics Device Interface; common, ActiveX, and Explorer controls; bitmaps; property sheets; toolbars; and status bars.

PREREQ: CSE 681 OR CSE 687.

CSE 781 Database Management Systems 3 SI  
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 581.

CSE 782 Models and Metrics in Software Engineering 3 SI  
Need of models and metrics; software science; cyclomatic complexity; and extensions; error analysis; reliability, cost and productivity models.  
PREREQ: CSE 682 AND ELE 606.

CSE 784 Software Engineering Studio 3 Y  
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 3 Y  
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 3 Y  
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 Comuter Aided Design of Digital Systems: Logic Design 3 Y  
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, 607.

CSE 791 Special Problems in Computer Systems Engineering 1-4 SI  
Topics vary and represent current interests in computer engineering. R5, 24 credits maximum

CSE 864 Topics in VLSI Design 3 IR  
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 1-6 SI  
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. R

CSE 891 Special Problems in Computer Systems Engineerin 1-4 SI  
Work on special projects. Instructor presents new or special material. R

CSE 995 Engineer Degree Project 0-6 SI  
Independent investigation or original research on engineering problem under faculty supervision. R, 6 credits maximum

CSE 996 Master's Project 0 SI  
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. R

CSE 997 Masters Thesis 1-6 SI  
Independent investigation on a topic of interest under supervision of a member of the graduate school faculty. Credit to be arranged. R, 6 credits maximum

CSE 999 Dissertation 1-15 SI  
Research on a doctoral dissertation under the supervision of a member of the graduate school faculty. Credit to be arranged. R29

## Electrl & Computer Engr

ECE 756 Random Processes 0

## Engineering And Computer Science

ECS 511 Sustainable Manufacturing 3 SI  
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 3 IR  
Sample spaces, events, and probabilities. Conditional probability and independence. Random variables, random vectors. Probability distributions and densities. Expectations. Moment-generating functions. Introduction to data analysis. Engineering applications.

ECS 526 Statistics for Engineers 3 Y  
Point estimation, confidence intervals, simple hypothesis testing, nonparametric tests, curve fitting and regression, analysis of variance, factorial experiments, and engineering applications.  
PREREQ: ECS 525 OR MAT 521.

ECS 570 Professional Practice 0 S  
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.

ECS 588 Principles of Wind Turbines 3 SI  
Crosslisted with: CIE 588, MAE 588  
Aerodynamics, performance, control, and electrical aspects wind turbines.  
PREREQ: MAE 341.

ECS 636 Infrastructure Systems Engineering and Asset Management 3 O  
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 650 Managing Sustainability: Purpose, Principles, and Practice 3 Y  
Crosslisted with: BUA 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.

ECS 651 Strategic Management and the Natural Environment 3 Y  
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/BUA 650.

ECS 666 Advanced Course in Engineering I 6

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 6

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 1

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 3 Y

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/BUA 650 AND ECS/BUA 651.

## Engineering

EGR 670 Professional Practice 0 S

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. R

EGR 770 Professional Training 0 S

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. R

## Electrical Engineering

ELE 512 Linear Control Systems 3 Y

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 3 SI  
Equivalent circuits for the components of a power system. Analysis of balanced and unbalanced polyphase systems. Symmetrical components and sequence networks. Fault studies, load-flow analysis, stability considerations.

ELE 516 Control of Robots 3 Y

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 3 SI

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 Compatibility 3 SI

Introduction to electromagnetic compatibility (EMC). EMC requirements for electron systems. Nonideal behavior of circuit components. Signal spectra. Maxwell equations. Antenna theory. Control of radiated and conducted emissions. PREREQ: ELE 324 AND 351.

ELE 530 Electric Power Generation and Distribution 3 Y

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 3 IR

Principles of design and processing of monolithic and hybrid integrated circuits. Current technology and its scientific basis.

ELE 551 Communication Systems 3 Y

Communications systems. Amplitude modulation techniques. Angle modulation or frequency modulation. Sampling and quantization of analog signals. Basic digital modulation techniques. Introduction to noise. System modeling evaluating performance using industry tools. PREREQ: ELE 352.

ELE 553 Communications Engineering 3 IR

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 1-4 SI

Students work on special projects. Instructors present new or special material. R

ELE 599 Electrical Engineering Laboratory IV 3 Y

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. R

ELE 601 Applications of Complex Function Theory 3 SI

Theory of functions of a complex variable. Fourier and Laplace transforms. Applications to engineering problems.

ELE 602 Boundary Value Problems I 3 SI

Partial differential equations in engineering problems. Method of separation of variable. Sturm-Liouville systems and orthogonal functions. Series and integral representations.

ELE 603 Functional Methods of Engineering Analysis 3 Y

Linear functional systems from the viewpoint of vector spaces. Function spaces, differential and integral operators, eigenvalues and eigenfunctions, Jordan forms, functions of a matrix and state-space solutions.

ELE 606 Probabilistic Methods in Electrical Engineering 3 Y

Set-theoretic basis of probability. Probabilistic modeling of practical problems. Random variables in one and several dimensions. Functions of random variables. Moments, characteristic functions, correlation, sampling. Poisson process. Laws of large numbers and central limit theorem.

ELE 612 Modern Control Systems 3 Y

State space representation. State variable feedback design. Controllability, observability, and identifiability. Optimum design and the matrix Riccati equation.

ELE 621 Electromagnetic Fields 3 Y

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 3 SI  
Experimental illustration of fundamentals of microwave measurement: reflection and transmission measurements; characteristics of common microwave components. Manual and automatic network analyzers and their use. Spectrum analysis techniques.

ELE 625 High Frequency Transmission Systems 3 SI  
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 3 Y  
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, wave-form generators, phase-locked loops.

ELE 635 Digital Electronic Circuits 3 Y  
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 3 SI  
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 567.

ELE 643 Theory of Semiconductor Devices 3 SI  
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 3 Y  
Baseband data transmission. Advanced digital modulation techniques. Optimum receivers. Topics in information theory and coding.  
PREREQ: ELE 551.

ELE 658 Data Networks: Design and Performance 3 Y  
Crosslisted with: CSE 658  
Data network design principles. Performance, modeling, and analysis of networks. Delay models. Multi access communications. Routing and flow control algorithms. Familiarity with basics of data networks.  
PREREQ: CIS 321 OR MAT 521; COREQ: ELE 606.

ELE 659 Digital Signal Processing I 3 Y  
Discrete time signals. Z-transform. Discrete Fourier transform. Fast Fourier transform. Finite impulse response filters. Infinite impulse response filters. Effects of finite word length.

ELE 664 VLSI Design Methods 3 Y  
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 3 SI  
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 3 SI  
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 3 SI  
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 3 SI  
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 1-4 SI  
Topics vary and represent current interests in electrical engineering. R

ELE 702 Boundary Value Problems II 3 SI  
Continuation of ELE 602. Green's functions, integral equations, transform methods, and approximation techniques.  
PREREQ: ELE 601, 602.

ELE 703 Special Topics in Engineering Mathematics 3 SI  
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. R

ELE 704 Neural Networks and Fuzzy Logic Applications 3 SI  
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 3 IR  
Performance criteria and static optimization. The Maximum Principle. Optimum regulator problem. Dynamic programming. Gradient methods for dynamic optimization.  
PREREQ: ELE 612.

ELE 715 Robot Manipulators I 3 IR  
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 3 SI  
Characteristics of electromagnetic radiators. Equivalent circuits of antenna elements: dipoles, loops, helices, horns, and other radiators. Phased arrays. Pattern synthesis. Numerical methods. Broadband antennas. Measurement techniques.  
PREREQ: ELE 621.

ELE 722 Microwave Filters 3 IR  
General filter structures at microwave frequencies. Prototype filters obtained by network synthesis method. Image parameters. Richards' transformation. Kuroda Identities. Coupled-line equivalent circuits. Design, simulate, build, and test a microwave filter.  
PREREQ: ELE 623.

ELE 723 Microwave Transistor Amplifiers 3 IR  
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 3 IR  
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 3 SI  
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 3 SI  
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 3 IR  
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 3 SI  
Electronic properties of dielectric, magnetic, and superconducting materials. Application to devices.  
PREREQ: ELE 621.

ELE 751 Wireless Communications 3 SI  
Cellular communication systems. Mobile radio propagation. Modulation techniques. Equalization, diversity, and channel coding. Link budget analysis. Speech coding. Multiple access techniques. Spread spectrum systems and CDMA. Wireless systems and networking.  
PREREQ: ELE 606 AND 651.

ELE 752 Coding Theory and Its Applications 3 SI  
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 651.

ELE 753 Radar Engineering 3 SI  
Radar system requirements and principles of radar detection and parameter estimation. Factors affecting radar range, signal detection in noise, decision criteria. Target identification techniques. Radar antenna characteristics. Time-space-frequency-phase interrelationships.  
PREREQ: ELE 651.

ELE 755 Digital Image Processing 3 SI  
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, 659.

ELE 756 Random Processes 3 SI  
Stationary and nonstationary random processes. Gaussian process. Narrow-band representation. Response of linear filters and nonlinear detectors to random processes. Applications to communication problems.  
PREREQ: ELE 606; COREQ: ELE 651.

ELE 757 Information Theory 3 SI  
Basic information measures. Source coding. Capacity of discrete channels. Coding theorem for noisy channel. Concepts of error correction codes. Extensions to continuous and wave form channels.  
PREREQ: ELE 606; COREQ: ELE 651.

ELE 758 Selected Topics in Data Networks 3 SI  
Topics vary each term. Typical topics: Gigabit networks, network security, ATM networks, and personal communication networks.  
PREREQ: ELE 658. R

ELE 759 Digital Signal Process II 3 SI  
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 3 SI  
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 3 SI  
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 3 SI  
Topics include: 1) wave propagation in anisotropic media, 2) index modulation tensors, 3) birefringent optical 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 3 SI  
Review of quantum mechanics, review of light propagation theory. Interaction of light and atoms and electrons. Rate equations. Mode locking and Q. switching, gas, solid-state and semiconductor lasers, laboratory experiments/demonstrations.  
PREREQ: ELE 681.

ELE 791 Advanced Topics in Electrical Engineering 1-4 SI  
Topics vary and represent current interests in electrical engineering. Each offering has a graduate-level prerequisite. R

ELE 821 Special Topics in Electromagnetic Theory 3 SI  
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. R

ELE 827 Electromagnetic Engineering II 3 SI  
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 3 SI  
Optical and optoelectronic properties of semiconductors. Applications to lasers, lamps, photodetectors, and solar cells. PREREQ: ELE 643.

ELE 849 Special Topics in Solid State 3 SI  
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.

ELE 851 Detection and Estimation Theory 3 SI  
Hypothesis testing and parameter estimation. Series representation of random processes. Detection and estimation of known signals in white and nonwhite Gaussian noise. Detection of signals with unwanted parameters. PREREQ: ELE 756.

ELE 852 Kalman Filters 3 SI  
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, 756.

ELE 853 Advanced Topics in Communication Theory 3 SI  
Typical topics: spread-spectrum techniques, synchronous communications, signal theory, spectral estimation, radar and sonar applications of detection and estimation theory. PREREQ: ELE 756. R

ELE 890 Independent Study 1-6 Y  
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. R

ELE 995 Engineer Degree Project 0-6  
Independent investigation or original research on an engineering problem under supervision of member of the faculty. Credit to be arranged. R, 6 credits maximum

ELE 996 Master's Project 0 S  
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. R

ELE 997 Masters Thesis 1-6 Y  
Independent investigation on a topic of interest under supervision of a member of the Graduate School faculty. Credits to be arranged. R, 6 credits maximum

ELE 999 Dissertation for the PhD 1-15 Y  
Research work on a doctoral dissertation under the supervision of a member of the Graduate School faculty. Credits to be arranged. R, 30 credits maximum

### Industrial Engineering And Operations Research

IOR 628 Stochastic Models 3 IR  
Poisson and renewal processes, Markov chains, and continuous time Markov processes. Application to queuing, inventory control, reliability, and production systems.

IOR 678 Statistical Design and Analysis of Experiments 3 IR  
Paired and independent tests and their validity, K-variable analysis, and randomized block design analysis of variance, factorial and fractional designs, method of least squares, response surface methodology, nonlinear least squares.

IOR 682 Operations Research II: Stochastic Models 3 IR  
Major stochastic techniques in operations research. Development of stochastic models, the underlying mathematics, and their applications. PREREQ: IOR 681.

IOR 685 Linear Programming 3 IR  
Developing and proving the theory of the optimization of linear models: revised, dual, and primal-dual complex algorithms; duality theorems; decomposition; cutting plane algorithms; and network algorithms.

IOR 687 Queuing Theory 3 IR  
Single channel and multichannel queuing systems to obtain state probabilities, waiting times, busy period lengths, etc. PREREQ: IOR 525 AND 526, OR MAT 521, 525.

IOR 765 Advanced System Simulation 3 Y  
Digital simulation, such as programming and simulation languages, time flow mechanism, experimental design and statistical analysis of output data, optimization, generation of random numbers of random variates, and variance reduction techniques. PREREQ: CIS 685.

IOR 781 Topics in Operations Research 3 IR  
May vary semester to semester. R

### Mechanical And Aerospace Engineering

MAE 510 Nuclear Power Plant Design, Operation and Safety 3 SI  
Crosslisted with: NUC 510  
Basics of fission reactor design and control; nuclear power plant design criteria and energy conversion; thermo-fluid dynamics of fission reactors; design, operation and safety issues; reactor accident case studies. PREREQ: NUC 301 AND MAE 551.

MAE 536 Composite Materials 3 E  
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 3 SI  
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 3 Y  
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 3 SI  
Crosslisted with: CIE 551  
Energy demand and resources. Fundamentals of combustion. Power plants, refrigeration systems. Turbines and engines. Advanced systems. Direct energy conversion. Alternate energy sources. Energy storage. Costs and environmental impact.  
PREREQ: MAE 251.

MAE 552 Building Environmental Measurements and Controls 3  
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 3  
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 3  
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 3 SI  
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 3  
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 331 AND 414.

MAE 585 Principles of Turbomachines 3 SI  
Crosslisted with: AEE 685, MEE 685  
Fluid dynamics and thermodynamics of turbomachines. Performance characteristics and analysis of axial and radial turbomachines. Cascade theory. Radial equilibrium equation. Meridional flow analysis. Three dimensional flow characteristics of turbomachines.  
PREREQ: MAE 251 AND 341.

MAE 587 Design of Solar Energy System 3 IR  
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 3 SI  
Crosslisted with: CIE 588, ECS 588  
Aerodynamics, performance, control, and electrical aspects wind turbines.  
PREREQ: MAE 341.

MAE 615 Instrumentation 3 IR  
Basic theory of electronics, modulation, recording, and measurement combined with basic fundamentals in mechanical engineering, such as acoustics, vibration, heat transfer, stain, and turbulence.

MAE 621 Failure Analysis of Composite Materials 3 SI  
Review of mechanical behavior of composites. Failure predictions for composites based on macroscopic mechanisms. Fatigue and fracture. Damage, delamination and debond growth. Residual strength and life predictions. Damage tolerance and nondestructive inspection.

MAE 625 Fracture Mechanics 3 SI  
Introduction to basic elements: elastic and elastic-plastic crack tip stress and strain fields, stress intensity factor, crack extension form, J integral, fracture toughness, fatigue crack growth, and the applications of fracture mechanics.

MAE 626 Vibration of Mechanical Systems 3 SI  
Fundamental physical and mathematical aspects of vibration phenomena in linear systems. Theory of transients, eigenvalue problems, vibration isolation and measurement techniques.

MAE 627 Advanced Helicopter Dynamics 3 IR  
Mathematics of rotating systems, rotary wing dynamics, and calculation of aerodynamic forces both in rotating and fixed frames.

MAE 630 Advanced Practical Optimization 3 Y  
Advanced theory and application of numerical optimization. Topics may include: Unconstrained/constrained linear and nonlinear problems; multiobjective, discrete and global optimization; optimization under uncertainty; evolutionary optimization. Knowledge of Linear Algebra and Ordinary Differential Equations required. Matlab used.

MAE 635 Advanced Mechanics of Materials 3 SI  
Stress analysis. Beam-column analysis by series and variational techniques, beams on elastic foundation, torsion with restrained warping, deflections due to transverse shear, introductory problems in plates and shells.  
PREREQ: ECS 325..

MAE 643 Fluid Dynamics 3 Y  
Crosslisted 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 3 SI  
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 3 SI

Measurement of pressure, density, and velocity in low- and high-speed flows. Hot wire anemometry and laser Doppler anemometry. Flow visualizations and image analysis. Digital data acquisition and time series analysis. Uncertainty estimation. Lecture and laboratory sessions.

MAE 647 Gas Dynamics 3 IR

Equations of motion for compressible perfect fluids. Crocco's equation. Wave equation. Acoustic speed. Unsteady flows. Shock formation. Normal and oblique shocks. Prandtl-Meyer expansion. Wave interactions. Method of characteristics. Supersonic diffuser, nozzle jet flows.

MAE 648 Biofluid Dynamics 3 SI

Crosslisted with: BEN 648

Principles of momentum transfer in bioengineering systems. Flight and swimming in nature including flagellar propulsion. Newtonian and non-Newtonian fluid phenomena, including low-Reynolds-number flow, pulsatile and separated flows. Flow past bifurcations. Respiratory and blood circulatory flows.

MAE 651 Advanced Thermodynamics 3 SI

Thermodynamic laws and macroscopic coordinates of general systems. Reversibility, equilibrium, and availability.

MAE 655 Advanced Heat Transfer 3 IR

Theory and application of heat transfer by conduction and radiation for both steady and unsteady state conditions. Mathematical, graphical, and numerical methods of solution.

MAE 657 Convective Heat and Mass Transfer 3 SI

Fluid properties and transport equations. Introduction to turbulent transport. Laminar and turbulent heat transfer in internal and external flows. Free convection. Heat transfer in high-speed flow. Convective mass transfer. Special topics.

PREREQ: MAE 643.

MAE 658 Building Environmental Modeling and Simulations 3 Y

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 3 Y

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 3 SI

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 3 SI

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 3 Y

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 721 Theory of Elasticity 3 SI

General theorems governing the mechanics of linear elastic solids. Cartesian tensor analysis. Kinematics of infinitesimal deformations and force transmission. Balance principles and linear elastic constitutive theory. Plane and three-dimensional problems in elastostatics and elastodynamics.

MAE 723 Asymptotic Methods for Engineering Applications 3 IR

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 3 SI

Small-deflection theory of plates. Analysis of variously shaped plates under various loading and support conditions. Membrane theory of shells. Bending theory of cylindrical shells. PREREQ: MAE 635.

MAE 735 Buckling Problems 3

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 3 SI

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 3 SI

Exact solutions of Navier-Stokes equations. Low Reynolds-number flows. Hydrodynamic theory of lubrication. Boundary-layer equations, exact and approximate methods of solution. Compressible viscous flows. PREREQ: MAE 643.

MAE 765 Combustion Phenomena in Engineering 3 IR

Reacting gases-equilibrium composition and kinetics. Kinetically and diffusively controlled combustion. Ignition. Flames in premixed gases. Laminar flame speed. Turbulent flames. Detonation Diffusion flames. Applications to combustion equipment. PREREQ: MAE 651.

MAE 771 Computational Fluid Mechanics 3 SI

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 3 IR

Foundations of the mechanics of deformable bodies. Elements of tensor calculus. Kinematics of deformation and transmission of force. Balance principles. Theory of constitutive equations and an introduction to hyperelastic solids and Stokesian fluids.

MAE 849 Advanced Topics in Fluid Mechanics 3 IR

Topics dealing with fluid flow, such as theories of turbulence, jets, wakes, cavities, magnetohydrodynamics. R1, 6 credits maximum

MAE 879 Advanced Topics in Mechanical Design 3 IR

Selected topics dealing with problems in mechanical design, such as theory of lubrication and bearings, balancing problems, high-speed mechanisms. R1, 6 credits maximum

MAE 889 Selected Topics 3 IR

Selected topics dealing with the theory and design of steam and gas turbines, centrifugal and axial flow compressors. R1, 6 credits maximum

MAE 990 Independent Study 1-6 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. R

MAE 994 Capstone Project 0

Review technical papers or reports in the open literature related to student's field of interest. Students prepare oral presentation to the faculty summarizing the technical content of the document.

MAE 995 Graduate Seminar 0 S

Crosslisted with: AEE 995

MAE 997 Master's Thesis 1-9 S  
R

MAE 999 Dissertation 1-15 S  
R

## Mechanical Engineering

MEE 524 Microprocessors in Mechanical and Manufacturing Engineering 3 SI

Introduction to the microprocessor and its various configurations used in controlling machine operations, data acquisition, etc. Project-oriented work involving program development in machine, assembly, and basic languages. Micro-computers used for off-line program development. Not open to electrical and computer engineering students.

MEE 571 Computer Aided Design 3 SI

Use CAD software and hardware in the solution of mechanical engineering problems. Computer graphics, computer aided geometry (space curves, splines, patches) design, solid modeling, optimization and an introduction to finite element method.

PREREQ: MAE 184 AND MAT 331.

MEE 584 Noise from Industrial Flow Systems 3 IR

Basic fluid mechanics and acoustics. Noise generation by fluid flows and their interaction with solid bodies. Types of noise sources. Analysis and control of such flow noise sources in manufacturing, transportation, propulsion, power generation, and industrial control systems.

PREREQ: MAE 341.

MEE 585 Fuel & Energy Utilization 3

MEE 637 Mechanics of Heterogeneous Solids 3 IR

Effective elastic moduli of composite materials. Bounds on effective moduli. Classical analysis of laminated plates. Higher order laminated plate theory. Wave propagation. Inelastic and nonlinear effects.

MEE 685 Principles of Turbomachines 3 SI

Crosslisted with: AEE 685, MAE 585  
Fluid dynamics and thermodynamics of turbomachines. Performance characteristics and analysis of axial and radial turbomachines. Cascade theory. Radial equilibrium equation. Meridional flow analysis. Three dimensional flow characteristics of turbomachines.

MEE 715 Robot Manipulators I 3 IR

Crosslisted with: ELE 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.

MEE 725 Advanced Engineering Dynamics 3 SI

Newton's laws of motion. Motion of a particle; a rigid body. Work and energy. Theorem of virtual displacements. D'Alembert's principle. Generalized coordinates. Lagrange's equations. Hamilton's principle. Small vibrations. Ballistics. Balancing. Gyroscopes.

MEE 757 Heat Exchange Systems 3 SI

Heat exchange equipment and systems. Counterflow, parallel flow, and cross flow heat exchangers. Heat pipes and liquid coupled exchange systems. Periodic flow and rotary regenerators. Systems for heat recovery in buildings.

PREREQ: MAE 655.

MEE 775 Dynamics of Controls 3 IR

Continuation of MEE 725. Analysis of mechanical and hydraulic control systems of linear and nonlinear characteristics. Stability criteria in systems subject to self-induced vibrations. Operational calculus and Laplace transforms for linear systems of one and two degrees of freedom. Multiple controller servomechanisms.

PREREQ: MEE 725.

MEE 825 Theory of Plasticity 3 IR

Basic behavior of materials and formulation of laws governing plastic flows. Different inelastic behaviors of metals. Yielding and the yielding loci. Strain hardening laws. Complete stress-strain relations. Total strain theory and incremental strain theory. Plastic potential. Boundary value problems. Variational principles. Plastic anisotropy.

PREREQ: MAE 721.

MEE 829 Advanced Topics in Dynamics 3 IR

Selected topics dealing with dynamics of rigid bodies, vibration and stability of linear systems.

PREREQ: MEE 727.

MEE 856 Advanced Topics in Heat Transfer 3 IR

Selected topics in heat transfer. Boiling, condensation, melting, ablation, rarified gas flow, liquid metals, cooling of electronic components.

PREREQ: MAE 655.

MEE 859 Advanced Topics in Thermodynamics 3 IR

Selected topics in classical and statistical thermodynamics of interest to mechanical and aeronautical engineers.

PREREQ: MAE 651. R1, 6 credits maximum

MEE 885 Advanced Topics in Thermal Engineering 3 IR

Selected topics in theory and design of equipment and plants for power generation, air conditioning, refrigeration, water purification, and other thermal engineering application.

PREREQ: MAE 655. R1, 6 credits maximum

MEE 895 Advanced Topics in Mechanics of Deformable Bodies 3 IR  
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. R1, 6 credits maximum

MEE 990 Independent Study 1-6 SI  
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. R

MEE 996 Special Projects 1-6 S  
R

## Manufacturing Engineering

MFE 534 Statistical Quality Control 3 IR  
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 3 SI  
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 3 IR  
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 3 IR  
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 629 Modeling and Optimization Techniques 3 SI  
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.  
PREREQ: ECS 526.

MFE 633 Enterprise Systems 3 SI  
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: CSE 581 OR IST 659.

MFE 634 Productivity and Quality Engineering 3 Y  
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 3 Y  
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 3 Y  
Properties of metals, polymers, ceramics; mechanics and mechanisms of deformation processing, manufacturing processes. Laboratory demonstrations.

MFE 639 CAD/CAM Systems 3 Y  
Advanced topics in Computer Aided Design and Solid Modeling, Computer-integrated Manufacturing, Concurrent Engineering, Process Planning, Manufacturing Control, Measurement and Analysis.

MFE 654 Production System Design and Control 3 Y  
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 3 SI  
Application of microcomputers, programmable controllers, numerical controls, analog-digital conversion, robotics, software development, laboratory experiments.

MFE 692 Design for Manufacturing 3 SI  
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 3 SI  
Artificial Intelligence as a tool for modeling, planning, and controlling manufacturing systems. Knowledge representation, inference methods, expert systems, blackboard framework, neural networks, and their application in manufacturing systems. Issues involved in building intelligent manufacturing systems.  
PREREQ: MFE 635.

MFE 850 Advanced Topics in Manufacturing 3 IR  
Selected topics in conventional and non-conventional manufacturing processes, flexible manufacturing cell, automated manufacturing, production planning, quality control. R1, 6 credits maximum

MFE 997 Master's Thesis 0-9  
R

## Materials Science

MTS 533 Introduction to Theory of Materials 3 IR  
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 3 IR  
Diffusion mechanisms, diffusion equations and their methods of solution.

MTS 570 Nondestructive Testing 3 IR  
Determination of defects in structural materials. Nondestructive inspection methods include noise emission techniques, X-ray radiography, leak detectors, ultrasonics, magnetic and electrical methods. R

MTS 581 X-Ray Diffraction 3 SI  
Kinematic theory of X-ray diffraction and its applications in materials science. Experimental methods. Integrated intensity, line broadening, and peak shift analyses. Crystal structure. X-ray effects of imperfections in crystals.

MTS 625 Topics in Solid-State Thermodynamics 3 IR  
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 3 IR  
Solid-state processes. Structure of pure metals. Phase diagrams. Solid solutions, eutectic and peritectic reactions. Diffusion, nucleation, and growth phenomena. T transformation processes.

MTS 632 Transformations in the Solid State 3 IR  
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.  
PREREQ: MTS 631.

MTS 655 Electron Transport Phenomena in Crystals 3 SI  
Electron states. Dynamics of electrons. Electron spin. Thermal energy. Interaction of electrons with the lattice and crystal defects. Thermoelectricity. Hall Effect, magneto resistance. Optical properties. Superconductivity.

MTS 671 Mechanical Behavior of Materials 3 IR  
Mechanical behavior of metallic materials. Effects of stress systems on deformation. Static and dynamic properties of metals and alloys. Plastic deformation. Residual stresses. Stress concentrations. Metal forming.

MTS 672 Dislocation Theory 3 IR  
Deformation laws on the basis of dislocation theory. Types of dislocations. Stress field of dislocations. Interaction between dislocations. Yield point phenomenon; strain hardening. Age hardening. Fracture initiation and crack propagation.

MTS 682 Electron Diffraction and Electron Microscopy 3 IR  
Kinematic theory of electron diffraction and electron microscopy. Dynamics theory. Contrast from perfect and imperfect crystals. Specimen preparation and experimental methods.  
PREREQ: MTS 581.

MTS 684 Modern Microstructural Techniques 3 IR  
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 3 IR  
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. R

MTS 721 Properties of Thin Solid Films 3 IR  
Topics chosen principally from: mechanical, piezoelectric, magnetic, electron transport, superconductive, and optical properties.

MTS 748 Theory of Alloys 3 IR  
The application of bond theories in prediction of: structure, 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 3 IR  
Orbital magnetic susceptibility, spin paramagnetism, ferro, 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 1-3 IR  
Imperfections in solids, fracture and yielding criteria, fatigue, creep, ultrasonic effects, radiation damage, surface phenomena and related subjects of current interest. R

MTS 820 Selected Topics in Materials Science 1-4 Y  
Recent developments in the field of materials science. R

MTS 837 Advanced Problems in the Physics of Metals 3 IR  
Quantitative treatment of the theory of the properties of metals and alloys.  
PREREQ: PHY 662.

MTS 867 Theory of Surfaces and Interfaces 3 IR  
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 3 SI  
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. R1, 6 credits maximum

MTS 960 Advanced Seminar in Materials Science 3 SI  
Recent scientific and engineering advances in specific fields of materials science. R

MTS 997 Masters Thesis 1-6 SI

MTS 999 Dissertation 1-15

### Nuclear Energy Track

NUC 510 Nuclear Power Plant Design, Operation and Safety 3 SI  
Crosslisted with: MAE 510  
Basics of fission reactor design and control; nuclear power plant design criteria and energy conversion; thermo-fluid dynamics of fission reactors; design, operation and safety issues; reactor accident case studies.  
PREREQ: NUC 301 AND MAE 551.

NUC 520 Radiochemistry, Nuclear Fuel Reprocessing and Nonproliferation 3 SI  
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 201.

NUC 530 Electric Power Generation and Distribution 3 Y  
Crosslisted with: ELE 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

NUC 540 Experiential Studies in Nuclear Technology 3 SI  
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 201 AND (NUC 510 OR NUC 520).

### Solid-State Science And Technology

SST 684 Modern Microstructural Techniques 3 IR  
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 1-4 SI  
Recent developments in the field. R

SST 990 Independent Study 1-6 S  
Exploring a problem or problems in solid-state science. Individual independent study upon plan submitted by student. R

SST 997 Masters Thesis 0-6  
R

SST 999 Dissertation 1-15  
R

# Faculty

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Riyad S. Aboutaha, Associate Professor  
Ph.D., University of Texas at Austin, 1994  
Structural design, evaluation, and  
rehabilitation; structural concrete and  
composites; infrastructure renewal

Amit Agrawal, Assistant Professor  
Ph.D. University of Utah, 2008  
Nanoplasmonics, Metamaterials,  
Nanophonics, Nanofabrication, Terahertz  
Optoelectronics, Nonlinear Optics and  
Ultrafast Optics.

Jeongmin Ahn, Assistant Professor  
Ph.D., University of Southern California 2006  
Energy Conversion, Combustion, Thermal  
Management, PowerMEMS

Benjamin Akih-Kumgeh, Assistant  
Professor  
PhD, McGill University, Canada, 2011  
Combustion Physics & Chemistry; Fuel  
Technology.

Ercument Arvas, Professor  
Ph.D., Syracuse University, 1983  
RF/Microwave devices and circuits,  
electromagnetic scattering

Rebecca Bader, Assistant Professor  
Ph.D. Materials Science, Oregon State  
University, 2006  
Drug delivery; Molecular biotechnology;  
Nanotechnology

Karl R. Behnke, Adjunct  
M.S., University of Houston at Clear Lake,  
1991  
Statistics and quality control

Shobha K. Bhatia, Laura J. and L. Douglas  
Meredith Professor  
Ph.D., University of British Columbia, 1980  
Geosynthetic applications, image processing,  
soil dynamics, geo-environmental

Howard A. Blair, Associate Professor  
Ph.D., Syracuse University, 1980  
Knowledge Representation and Automated,  
hybrid systems, formal methods and  
verification

Michelle Blum, Assitant Professor  
PhD, University of Notre Dame, May 2012  
Orthopedic implant development, polymer  
characterization and simulation of tribological  
contacts

Edward A. Bogucz Jr., Associate Professor  
Ph.D., Lehigh University, 1985  
Fluid mechanics, heat transfer, numerical  
methods

Jesse Q. Bond, Assistant Professor  
Ph.D. University of Wisconsin, Madison 2009

Tomislav Bujanovic, Research Associate  
Professor

Katie D. Cadwell, Assistant Professor,  
Undergraduate Chemical Engineering Program  
Director  
Ph.D. University of Wisconsin, Madison 2007

Douglas F. Call, Assistant Professor  
Ph.D., Penn State University, 2011  
Environmental biotechnology, microbiology,  
bioenergy, waterwaster treatment

Frederick J. Carranti, Instructor  
M.S.M.E., Syracuse University, 1994  
Licensed professional engineer, energy system  
analysis, manufacturing processes

Joseph Chaiken, Professor, Chemistry  
Ph.D. University of Illinois 1982  
Spectroscopy

David G. Chandler, Associate Professor  
Ph.D., Cornell University, 1998  
Hydrology, soil physics, environmental  
monitoring

Stephen J. Chapin, Associate Professor  
Ph.D., Purdue University, 1993  
Operating systems, distributed systems,  
computer networking, computer security,  
system assurance

Biao Chen, Professor  
Ph.D., University of Connecticut, 1999  
Signal processing, Communication and  
Information Theory

C.Y. Roger Chen, Professor  
Ph.D., University of Illinois, 1987 CAD for  
VLSI physical synthesis and multimedia  
information technologies

Hao Chen, Research Assistant Professor  
Ph.D. Syracuse University 2007  
Signal and image processing and  
communications, including wireless sensor  
networks (WSN), stochastic resonance (SR),  
detection and estimation, remote sensing and  
image processing.

Shiu-Kai Chin, Professor  
Ph.D., Syracuse University, 1986  
Formal verification, security, access control

Lisa B. Cleckner, Research Faculty  
Ph.D., University of Michigan, 1995  
Environmental health sciences

Samuel P. Clemence, Laura J. and L.  
Douglas Meredith Professor  
Ph.D., Georgia Institute of Technology, 1973  
Soil mechanics, geotechnical engineering,  
foundation engineering

Andria Costello Staniec, Associate  
Professor, Associate Provost for Academic  
Programs  
Ph.D., California Institute of Technology,  
1999  
Environmental biology

Thong Dang, Professor  
Ph.D., Massachusetts Institute of Technology,  
1985  
Theoretical/ computational fluid dynamics of  
internal/external flows

Joan V. Dannenhoffer, P.E., Associate  
Professor  
M.S., University of Connecticut, 1998; MBA,  
Rensselaer Polytechnic Institute, 1986  
Engineering education pedagogy, engineering  
mechanics, groundwater remediation

John F. Dannenhoffer, Associate Professor  
Sc.D., Massachusetts Institute of Technology,  
1987  
Computational fluid dynamics, modeling and  
analysis in industry, collaborative education

Andrew L. Darling, Assistant Professor,  
Undergraduate Bioengineering Program  
Director  
Ph.D. Mechanical Engineering, Drexel  
University, 2005  
Biomaterials/Tissue Engineering; Molecular  
Biotechnology; Nanotechnology

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  
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

Mahmoud EL Sabbagh, Professor of Practice  
Ph.D. University of Maryland College Park 2002  
Modeling, optimization, and design of RF/Microwave components such as: low cost miniaturized and tunable microwave filters for radar and satellite, miniaturized antennas, and antennas with pattern diversity for wireless devices; Development and design of microwave sensors for material characterization; Model, design, and implement metamaterials as strong surface-wave suppressor used for EMI/EMC applications or redirection of electromagnetic waves; Material characterization; RF/microwave measurements and calibration; Numerical analysis and scientific computations for electromagnetic applications using MMT, MOM, FEM, and FDFD; Electrical characterization of nanomaterials and their integration in microwave components; Thin film characterization using Scanning Electron Microscopy (SEM) and Transmission Electron Microscopy (TEM).

Gustav A. Engbretson, Professor Emeritus  
Ph.D. Zoology, University of Oklahoma, 1976

Ehat Ercanli, Associate Professor  
Ph.D., Case Western Reserve University, 1997  
VLSI, computer-aided design, design automation for digital systems, computer architecture

Makan Fardad, Assistant Professor  
Ph.D., University of California, Santa Barbara, 2006  
Structured control of spatially distributed and large-scale systems, input-output analysis of PDEs with periodic coefficients, parametric resonance in spatio-temporal systems

Bart Farrell, 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

Julian Fernandez, Research Assistant Professor, Biomedical and Chemical Engineering; Institute for Sensory Research  
Ph.D., National University of LaPlata (Argentina), 1998  
Biological evolution models

Prasanta Ghosh, Professor; Electrical Engineering Program Director  
Ph.D., Pennsylvania State University, 1986  
Microelectronics, solidstate devices, optoelectronics, thin film processes, power engineering

Jeremy L. Gilbert, Professor  
Ph.D. Metallurgical and Materials Science, Carnegie Mellon University 1987  
Biomaterials/Tissue engineering; Corrosion and electrochemistry; Multi phase systems; Nanotechnology

Eileen D. Gilligan, Adjunct  
Ph.D., Syracuse University, 1983  
Environmental geology

Mark N. Glauser, Professor; Associate Dean for Research and Doctoral Programs  
Ph.D., University at Buffalo, SUNY, 1987  
Turbulence, flow control, fluid mechanics of built environments, dynamical systems, unsteady aerodynamics, heat transfer, acoustics, applied mathematics, signal processing and instrumentation

Amrit L. Goel, Professor  
Ph.D., University of Wisconsin, 1968  
Software engineering; data mining applications, radial basis function models

Albert Goldfain, Research Assistant Professor

Melissa Green, Assistant Professor  
Ph.D. Princeton University, 2009  
Experimental Fluid Dynamics

Mustafa Cenk Gursoy, Associate Professor  
Ph.D. Princeton University, 2004  
Wireless Communications, Information Theory, Communication Networks, and Signal Processing.

Carlos R.P. Hartmann, Professor  
Ph.D., University of Illinois, 1970  
Development of the theory of decoding and the design of practical decoding algorithms for error-correcting codes, fault detection in digital systems

Julie M. Hasenwinkel, Associate Professor  
Ph.D. Biomedical Engineering, Northwestern University 1999.  
Biomaterials/Tissue engineering; Complex fluids, soft condensed matter, rheology; Drug delivery; Multi phase systems; Nanotechnology

James H. Henderson, Assistant Professor, Graduate Bioengineering Program Director  
Ph.D., Mechanical Engineering, Stanford University, 2004  
Biomaterials/Tissue engineering; Indoor air quality/environmental engineering; Molecular biotechnology

John C. Heydweiller, Associate Professor  
Ph.D. Chemical Engineering, Kansas State University 1977  
Mathematical and numerical analysis

Robert Irwin, Research Assistant Professor  
Ph.D., Syracuse University 2011  
Generalized Dynamical Systems, Computability and Complexity, Quantum Computation

Can Isik, Professor, Senior Associate Dean, College of Engineering and Computer Science  
Ph.D., University of Florida, 1985  
Applications of Neural Nets and Fuzzy Logic, Intelligent Systems, Controls, Medical Instrumentation, Environmental Control Systems

Chris E. Johnson, Associate Professor, Department Chair of Civil and Environmental Engineering; Director, Environmental Engineering Program  
Ph.D., University of Pennsylvania, 1989  
Environmental geochemistry, soil chemistry, statistical modeling

Kaveh Jokar Deris , Assistant Professor  
Ph.D., University of Victoria, Canada, 2008  
Computer architecture and low power design;  
parallel computing and chip multi-core  
processors, VLSI design: semiconductor  
fabrication and ASIC design,  
firmware/hardware digital design: FPGA  
prototyping and real-time systems

Lashun K. Thomas, Assistant Professor  
Ph.D, Virginia Tech, 2011  
Groundwater and soil remediation,  
bioremediation, monitored natural attenuation

Swiatoslaw W. Kaczmar, Adjunct  
Ph.D., Michigan State University, 1983  
Toxicology and environmental disposition of  
chemical and physical contaminants

H. Ezzat Khalifa, Professor, Mechanical and  
Aerospace Engineering; Director, NY STAR  
Center of Environmental Quality Systems  
Ph.D., Brown University, 1976  
Thermofluid dynamics of environmental  
control and energy systems, fluid machinery,  
valuation of technology

Philipp Kornreich, Professor  
Ph.D., University of Pennsylvania, 1967  
Fiber light amplifiers, lasers, optical fibers,  
image propagation through fibers

Donald W. Lake, Adjunct  
B.S., SUNY at Buffalo, 1970  
Urban stormwater and erosion control

Andrew Chung-Yeung Lee, Assistant  
Professor  
Ph.D., University of Maryland, College Park,  
1998  
Artificial intelligence, data structures,  
operating systems, software engineering,  
computer theory, computer security

Jay Kyoon Lee, Professor  
Ph.D., Massachusetts Institute of Technology,  
1985  
Electromagnetic fields and waves, microwave  
remote sensing, antennas and propagation,  
waves in complex media

Raymond D. Letterman, Professor Emeritus  
Ph.D., Northwestern University, 1972  
Physical-chemical separation in water and  
wastewater treatment

Alan J. Levy, Professor  
Ph.D., Columbia University, 1982  
Theoretical and applied mechanics, applied  
mathematics

Jacques Lewalle, Associate Professor  
Ph.D., Cornell University, 1981  
Fluid mechanics, thermodynamics

Yingbin Liang, Assistant Professor  
Ph.D. University of Illinois at Urbana-  
Champaign, 2005  
Wireless Communications and Networks,  
Information Theory, Probabilistic Graphical  
Models, Information Security, Scheduling in  
Mobile Ad-hoc Wireless Networks, Resource  
Allocation for Wireless Networks, Cognitive  
Radio Wireless Networks

Eric Mun Lui, Laura J. and L. Douglas  
Meredith Professor, Associate 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

James A. Mandel, Professor Emeritus  
Ph.D., Syracuse University, 1967  
Composite materials, fiber reinforced  
concrete, curved bridge design, finite element  
analysis

Duane L. Marcy, Associate Professor  
Ph.D., Rensselaer Polytechnic Institute, 1996  
Semiconductor manufacturing, processes, and  
devices; molecular electronics using the  
protein bacteriorhodopsin with applications of  
volumetric and holographic memories and thin  
films for semiconductor-protein based devices

Shalabh Maroo, Assistant Professor  
Ph.D. University of Florida, 2009  
Multi-scale transport phenomenon, Thermal  
Management and Bio-mechanical Systems.

George C. Martin, Professor  
Ph.D. Chemical Engineering, University of  
Minnesota 1976  
Complex fluids, soft condensed matter,  
rheology

Patrick T. Mather, Milton and Ann  
Stevenson Professor of Biomedical &  
Chemical Engineering & Director, Syracuse  
Biomaterials Institute  
Ph.D. Materials, University of California at  
Santa Barbara 1994  
Biomaterials/Tissue engineering; Complex  
fluids, soft condensed matter, rheology;  
Corrosion and electrochemistry; Drug  
delivery; Molecular biotechnology;  
Nanotechnology

Kishan G. Mehrotra, Professor  
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

Achille Messac, Distinguished Professor and  
Department Chair  
Ph.D., Massachusetts Institute of  
Technology, 1986

Chilukuri K. Mohan, Professor, Electrical  
Engineering and Computer Science; Chair  
Ph.D., State University of New York at Stony  
Brook, 1988  
Artificial intelligence, neural networks,  
evolutionary algorithms, optimization,  
pattern recognition, uncertainty

Young Bai Moon, Associate Professor,  
Mechanical and Aerospace Engineering;  
Director, Institute for Manufacturing  
Enterprises  
Ph.D., Purdue University, 1988  
Manufacturing systems, machine learning,  
concurrent engineering

Belal Mousa, Adjunct  
Ph.D., Syracuse University, 1994  
Structural analysis and design, composite  
materials, computer analysis

Vadrevu R. Murthy, Professor  
Ph.D., Georgia Institute of Technology, 1974  
Helicopter dynamics, aeroelasticity and  
structural dynamics

Shikha Nangia, Assistant Professor  
Ph.D. Chemistry, University of Minnesota,  
2006  
Multiscale computational modeling of  
nanomaterials and targeted cancer drug  
delivery

Dawit Negussey, Professor  
Ph.D., University of British Columbia, 1985  
Geotechnical engineering, experimental soil  
mechanics, stress strain behavior

Ruixin Niu, Research Assistant Professor  
Ph.D., University of Connecticut, 2001  
Statistical signal processing and  
communications; data fusion and distributed  
detection and tracking; collaborative signal  
processing in wireless sensor networks; video-  
based change detection and object tracking

Kent Ogden, Part Time Associate Professor  
Ph.D., Medical College of Wisconsin, 1999

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

Lisa Osadciw, Assistant Professor  
Ph.D., University of Rochester, 1998  
Spread spectrum signal design, wireless  
communications and Radar Systems, radar  
signal processing, multi-sensor fusion  
processing, digital receivers, adaptive and  
statistical signal processing, tracking

Emmet M. Owens Jr., Adjunct Associate  
Professor  
M.S.C.E., Colorado State University 1977  
Hydraulics, environmental fluid mechanics,  
water quality modeling

Daniel J. Pease, Associate Professor  
Ph.D., Syracuse University, 1981  
Design and development of shared and  
distributed parallel systems, software and tools;  
performance optimization for multi-thread  
client/server application in C, C++, Ada, Java,  
and .NET applications on different parallel  
architectures, including mobile wireless  
systems and cyber security on mobile systems

Peter W. Plumley, Research Associate  
Professor  
Ph.D., University of California, Santa Cruz,  
1984  
Science education, K-12 outreach

Leonard J. Popyack Jr., Research Associate  
Professor  
Ph.D., Binghamton University, 1998  
Watermarking, steganography, information  
attack detection, information security system  
architectures

Qinru Qiu, Associate Professor, Computer  
Engineering Program Director  
Ph.D. University of Southern California 2001  
Dynamic power, thermal and performance  
management of multiprocessor system-on-  
chip Power and performance optimization of  
energy harvesting real-time embedded systems  
Neuromorphic computing and high  
performance computing for bioinformatics  
and cognitive applications

Laleh Rabieirad, Research Assistant  
Professor

Dacheng Ren, Assistant Professor, Graduate  
Chemical Engineering Program Director  
Ph.D., Chemical Engineering, University of  
Connecticut, 2003  
Biomaterials/Tissue engineering; Corrosion  
and electrochemistry; Indoor air  
quality/environmental engineering; Molecular  
biotechnology; Sustainable energy production;  
Systems biology/metabolic engineering

Philip A. Rice, Professor Emeritus  
Ph.D. Chemical Engineering, University of  
Michigan, 1963

Jorge Luis Romeu, Research Professor  
Ph.D., Syracuse University, 1990  
Statistical modeling, data analysis, simulation  
modeling, operations research

Utpal Roy, Professor, Program Director,  
Mechanical Engineering  
Ph.D., Purdue University, 1989  
Computer-integrated design and  
manufacturing, development and application  
of operations research, finite-element  
methods, geometric modeling, computational  
geometry, artificial intelligence techniques

James S. Royer, Professor  
Ph.D., State University of New York at  
Buffalo, 1984  
Theory of the computational complexity of  
higher-type functionals, structural  
computational complexity theory,  
computational learning theory, biological  
computing

Ossama M. Salem, Professor, Yabroudi  
Chair of Sustainable Civil Infrastructures  
Ph.D. University of Alberta, 1998  
Construction engineering & management,  
sustainable infrastructures and green  
construction, asset management

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, Biomedical and  
Chemical Engineering; Associate Director,  
Syracuse Center of Excellence in  
Environmental and Energy Systems  
Sc.D., Harvard University, 1989  
Air pollution, hazardous wastes management

Tapan K. Sarkar, Professor  
Docteur Honoris Causa de l'Universite Blaise  
Pascal, France; Docteur Honoris Causa,  
Politechnic University of Madrid, Spain,  
2004; Ph.D., Syracuse University, 1975  
Analysis and design of electromagnetic  
radiation from various devices like computers,  
radio-television towers, and satellite and cable  
broadcasting system; design of mobile adaptive  
communication systems including antennas;  
analysis intelligent signal processing

Fred Schlereth, Research Associate  
Professor  
Ph.D. Syracuse University, 1969  
Past research interests include: Quadrupole  
Mass Spectrometer, Fourier Transform Ion  
Cyclotron Resonance Mass Spectrometer,  
Quartz Crystal Vacuum Deposition Monitor,  
Halogen Gas Leak Detector; Analog and  
Digital Signal Processing and Circuit Design,  
VLSI Circuit Design; Architecture, Algorithms  
and Hardware for Parallel Computation; VLSI  
Cellular Array Computer; Distribution-free  
Detection Theory, Imaging in Dispersive  
Media; Neural Networks for Financial  
Applications. Current research interests  
include: design of VLSI Signal Processing  
Circuits for Software Defined Radio.

Klaus Schroder, Professor Emeritus  
Ph.D., University of Göttingen, 1954

Walter H. Short, Adjunct, Biomedical and Chemical Engineering Research Professor; Department of Orthopedic Surgery, SUNY Upstate Medical University  
M.D., SUNY Upstate Medical University, 1975

Orthopedic biomechanics

Ernest Sibert, Professor  
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

Q. Wang Song, Professor  
Ph.D., Pennsylvania State University, 1989  
Photonic switching, fiber communications, electro-optics, guided-wave optical devices, optical sensors

Eric F. Spina, Professor, Vice Chancellor and Provost  
Ph.D., Princeton University, 1988  
Fluid dynamics, compressible flows, turbulence

Laura J Steinberg, Dean  
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.

Radhakrishna Sureshkumar, 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, Assistant 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

William C. Tetley, Part-Time Instructor

Chi Tien, Distinguished Professor Emeritus  
Ph.D., Northwestern University, 1958

Pramod K. Varshney, Distinguished Professor; Research Director, NY State Center for Advanced Technology in Computer Applications and Software Engineering (CASE)

Ph.D., University of Illinois, 1976  
Communications, signal and image processing, multisensor data/information fusion, remote sensing, wireless communications, detection theory

Thomas D. Vedder, Instructor Emeritus, Mechanical and Aerospace Engineering; Director, Engineering Management Program  
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

David S. Wazenkewitz, Adjunct  
B.S., Syracuse University  
Environmental engineering and solid waste management

Volker Weiss, Research Professor, Electrical Engineering and Computer Science, Professor Emeritus, Mechanical and Aerospace Engineering, Physics; Director, Engineering Physics Program; Faculty, Solid-State Science and Technology

Ph.D., Syracuse University, 1957  
Mechanical behavior of solids, materials science and engineering; computer applications

Min Xu, Research Assistant Professor

Abdallah Yabroudi, Adjunct Professor Civil and Environmental Engineering  
B.S. Syracuse University

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, Research Associate Professor

Christian Zemlin, Part-time Assistant Professor  
Ph.D., Humbolt University, Germany, 2002

Jianshun S. Zhang, Professor  
Ph.D., University of Illinois, Urbana-Champaign, 1991  
Building environmental and mechanical systems, materials emissions and indoor air quality, room air and contaminant distributions, multizone air and air contaminant transports in buildings, building energy efficiency, integrated computer simulation tools for building environmental and mechanical system design, system analysis and optimization

Josef J. Zwislocki, Distinguished Professor Emeritus  
Sc.D. Federal Institute of Technology, Zurich 1948

# David B. Falk College Of Sport And Human Dynamics

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Diane Lyden Murphy, Dean  
119 Euclid Avenue  
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 professional programs in Child and Family Studies, Hospitality Management, Marriage and Family Therapy, Nutrition Science and Dietetics, Public Health, Sport Management and Social Work, along with course work in Food Studies, 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.

The Falk College leadership team includes:

- Irene Kehres, Assistant Dean, Student Services
- Eileen Lantier, Senior Associate Dean, Academic Affairs
- Deborah J. Monahan, Associate Dean, Research

The Dean's Office of the Falk College, located at 119 Euclid Avenue, can be reached at 315-443-5555 for more information about academic programs, services and all other activities related to the College.

Dean Diane Lyden Murphy, M.A., M.S.W., Ph.D.

## Dean's Message

### Welcome To The

### David B. Falk College Of Sport And Human Dynamics

The Fall 2013 semester marks the start of my ninth year as the dean of the Falk College where our academic programs address the entire gamut of human behavior—from the physical through the psychological to the social and cultural dimensions of individual, family and community life.

The faculty and staff in our College are excited about the work they do at Syracuse University where they are engaged in our local community and committed to their respective fields of research and scholarship that span the globe. Together, we continue to work strategically and purposefully on every level for one reason—our students.

With new academic programs and degree offerings, we have added faculty and staff to provide our students with the best possible educational experiences both inside and outside of the classroom. Our College Research Center supports interdisciplinary research, scholarship and entrepreneurship.

As Dean, I couldn't be more excited about the work we are doing in the David B. Falk College of Sport and Human Dynamics and the opportunity to offer students the educational experiences of their lives. That our students have selected Syracuse University and the Falk College is an honor and a privilege we take very seriously.

We are committed to developing our students as leaders and good global citizens who don't simply solve problems but whose life mission is to find a better way to answer the needs of our society.

It is my honor to introduce you to the David B. Falk College of Sport and Human Dynamics. I hope you will be as impressed as I continue to be with our faculty, staff and students and all they do to make our College one of the most inspiring and innovative members of the SU community.

Sincerely,  
Diane Lyden Murphy, M.A., M.S.W., Ph.D.  
Dean

## Graduate Program Overview

### David B. Falk College Of Sport And Human Dynamics

Diane Lyden Murphy, Dean  
119 Euclid Avenue



## Graduate Program Overview

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 in order to find new, more effective approaches to important social issues. Master's degree programs are offered in child and family studies, marriage and family therapy, nutrition science, child and family health in the global community, 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 provide health, wellness, and recreational services that 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, and industry.

## Graduate Financial Assistance

See Financial Assistance on the introduction page of this catalog.

Applicants who wish to be considered for University Fellowships are encouraged to submit a complete admission package no later than January 1.

## Tuition Scholarships

A variety of tuition scholarships in varying amounts are offered to outstanding students depending on academic record and need. A full scholarship provides tuition for a total of 24 credits per academic year.

## Assistantships

The College may offer a teaching, technical, and/or research assistantship to some qualified graduate scholarship recipients, including first-year students.

A full assistantship in the first year of graduate study includes a stipend for the academic year plus a tuition scholarship for 24 credits per year.

Graduate assistants are required to extend their work in a degree program to compensate for the time spent in teaching or other duties. Renewal of assistantships is based on superior performance in coursework and in assistantship assignments.

## Academic Departments

### David B. Falk College Of Sport And Human Dynamics

Diane Lyden Murphy, Dean  
119 Euclid Avenue  
315-443-2027

## Academic Departments

The 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 can—and does—change the places and people where they live and work.

Our academic programs include:

- Child and Family Studies
- Marriage and Family Therapy
- Public Health, Food Studies and Nutrition
- Social Work
- Sport Management

## Child And Family Studies

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### Department Of Child And Family Studies

Robert P. Moreno, Chair, 315-443-2757.  
426 Ostrom Ave

Faculty Colleen Baish Cameron, D. Bruce Carter, Joseph P. Fanelli, Irene Kehres, Ambika Krishnakumar, Eunjoo Jung, Robert P. Moreno, Matthew Mulvaney, Kamala Ramadoss, Rachel Razza, Jaipaul L. Roonarine

## UNDERGRADUATE

Robert P. Moreno, Undergraduate Program Director, 315-443-1715

The Department of Child and Family Studies (CFS) is involved in the scientific investigation of children and families. Students engage in multidisciplinary learning about the challenges facing families and children across social, cultural, and contextual settings. In addition, students study the factors that promote strengths and resiliency to foster healthy families and children. CFS students not only learn in the classroom, they receive first hand experience in the community as well. For example, CFS seniors are involved in a 180-hour community practicum that allows them to apply the knowledge gained in the classroom to real life settings. As a result, CFS students have a comprehensive understanding of children and families in theory and in practice.

Students in the 124 credit B.S. degree program pursue interests in one of four tracks of specialization: (a) Early Child Development, (b) Youth and Family Development, (c) Early Childhood Education (4+1), (d) Child Life Specialist. Core courses focus on child and youth development (i.e., infancy, play, interpersonal competence, human sexuality) and family development (i.e., parenting, marriage, domestic violence). CFS also offers minors in Child and Family Studies and Child and Family Policy.

CFS graduates pursue careers working with children and families in a variety of areas including early education and intervention programs, social service and mental health agencies, the juvenile justice system, youth programs, schools and parent and family services. Many students also pursue post baccalaureate degrees in fields such as social work, psychology, medicine, family law, counseling, health care, and education as well as child and family studies.

## GRADUATE

Robert P. Moreno, Graduate Program Director; 315-443-2757

A unique aspect of the Department of Child and Family Studies 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.

## Marriage And Family Therapy

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### 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, Thomas Schur, Linda Stone Fish, Dyane Watson

Clinic Supervisor Tracey Reichert-Schimpff

Internship Coordinator Lisa Tedeschi

### GRADUATE PROGRAM

Linda Stone Fish, Graduate Program Director, 315-443-3024

The Department of Marriage and Family Therapy offers an M.A. and a Ph.D. and provides training in marriage and family therapy theory, research, and

practice. 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.

### 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 Advance Standing MSW program), or a 78-credit two-year program (for students admitted to the MSW Advance 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.

## Public Health, Food Studies And Nutrition

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### Department Of Public Health, Food Studies And Nutrition

Kay Stearns Bruening, Chair, 315-443-2386  
426 Ostrom Ave.

The Department of Public Health, Food Studies and Nutrition offers academic programs in: Child and Family Health in the Global Community, M.S.; Hospitality Management, B.S.\*; Nutrition, B.S. ; Nutrition Science, B.S., M.A., M.S.; Public Health, B.S.; Addiction Studies (C.A.S.); Dietetic Internship (C.A.S.); and Global Health (C.A.S.); as well as course work in Food Studies. Students' academic programs move outside of the classroom to gain hands-on experiences in their chosen field(s) of concentration.

In 2011, to reflect faculty research and applied interests in public health, nutrition science, hospitality, and dietetics, the individual academic departments that previously housed programs in these areas were combined into a singular signature department—the Department of Public Health, Food Studies and Nutrition. Today, the faculty and students in the Department of Public Health, Food Studies and Nutrition 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.

\*Currently, the Hospitality Management program is not accepting new students.

### Hospitality Management

Kay Stearns Bruening, Director, 315-443-2386  
Lyman Hall

Faculty Tim Barr, Kimberly Johnson, Mary Ann P. Kiernan, Linchi Kwok

### UNDERGRADUATE PROGRAM

Currently, the Hospitality Management program is not accepting new students.

The Hospitality Management program requires a diversity of skills from many disciplines, including accounting, computer applications, mathematics, chemistry, law, marketing, management, nutrition, and food and beverage management. The curriculum is designed to prepare students for success within changing business conditions and to present both theoretical and practical approaches to the diverse needs of the global hospitality industry.

### Nutrition Science And Dietetics

Kay Stearns Bruening, Director, 315-443-2386  
426 Ostrom Avenue

Faculty Anne C. Bellows, Lynn S. Brann, Kay S. Bruening, Tanya M. Horacek, Sudha Raj, Sarah H. Short, Jane B. Uzcatogui, Rick Welsh

Dietetic Program Director Nancy Rindfuss, 315-443-2386

Dietetic Internship Director Debra Z. Connolly, 315-443-2386

## UNDERGRADUATE

Kay Stearns Bruening, Undergraduate Program Director, 315-443-2386

The Nutrition Science and Dietetics program offers two major programs: nutrition/dietetics and nutrition science. Students may select one major program or choose a double-major with another program in the David B. Falk College of Sport and Human Dynamics or in another school or college. Students also have the opportunity to pursue a minor.

Dietetics is the application of the knowledge of human nutrition to support the nutritional needs of the healthy as well as the sick. The study of human nutrition encompasses biology, physiology, chemistry, and the behavioral and social sciences. Students study the changes in nutritional needs throughout the life cycle, examine the factors that influence the selection of foods, and explore ways in which diet can be modified.

Additional courses in chemistry and the biological sciences are prerequisites for many human nutrition courses, which cover basic and advanced nutrition, medical nutrition therapy, practice of dietetics, community nutrition, food science, and food service systems.

All students who complete degree requirements will be eligible for the B.S. in Nutrition. Additional requirements must be met to receive a dietetics verification statement. Dietetic verification statement requirements are posted on the departmental website in the program handbook.

Nutrition Science emphasizes the biological and physical sciences. In addition to food science, nutrition in health, medical nutrition therapy, and advanced nutrition, studies include work in general and organic chemistry, biology, physiology, and biochemistry. In nutrition science, students prepare to pursue post-graduate work in medicine, dentistry, education, or health care or work for major food or pharmaceutical companies.

## GRADUATE

Sudha Raj, Graduate Program Director, 315-443-2386

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

Kay Stearns Bruening, Chair, 315-443-2386  
426 Ostrom Avenue

Faculty Dessa Bergen-Cico, James Byrne, Luvenia W. Cowart, Brooks Gump, Sandra D. Lane, Eileen Lantier, David Larsen, Katherine McDonald, Mary Ann Middlemiss, Lutchie Narine, Lisa Olson-Gugerty, Maureen Thompson, Evan Weissman

## Undergraduate Program

Maureen Thompson, Undergraduate Program Director, 315-443-9815, mlthomps@syr.edu

The Public Health program offers a 123-credit hour Bachelor of Science degree (B.S.) in public health. Our graduates are prepared to work in community health education and health promotion in public health agencies, as well as in newly emerging preventive health services in corporate wellness centers, college health services, insurance agencies, or pharmaceutical companies. Many also plan for graduate education in public health, health-related social sciences (medical anthropology, medical sociology, or health psychology), law, and the health professions (medicine, nursing, physician assistance, pharmacy, or dentistry).

The public health program includes a 46 credit liberal arts core, a 45 credit public health core, and a 32 credit elective requirement. The public health core includes key public health concepts such as environmental health, epidemiology, health systems administration, and social & behavioral determinants of health as well as those specific to community health education, a sub-field within public health. The generous number of electives facilitates the completion of minor(s) or a second major. In addition, the flexibility of the program enables students to study abroad.

Students frequently move outside the classroom to gain hands-on experience in initiatives to improve the health of individuals, families, and communities. Each student completes a 9-credit internship and capstone project during their senior year.

## Graduate Program

Brooks Gump, Graduate Program Director, 315-443-2208, bbgump@syr.edu

The Public Health program offers advanced certificates in Addictions Studies and Global Health, and a master of science in Child and Family Health in the Global Community.

The 18 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 as a supplement to professional work experience or a graduate program of study. The academic program is designed to support working professionals and supplement undergraduate and graduate study in fields such as anthropology, child and family studies, counseling, couples and family therapy, education, law, nutrition, psychology, public health, public policy, sociology, and social work, among others. 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. Courses include an optional study abroad component in Amsterdam.

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. 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 graduate program in Child and Family Health in the Global Community offers students an in-depth and comprehensive understanding of the factors influencing the health and well-being of children and families in the context of the global community. The program examines a broad spectrum of factors, including infectious and chronic diseases, genetics and disabilities that require families to interface with medical care providers, service agencies, and policy decision makers in their communities. The program incorporates the study of cultural health norms and practices, barriers and facilitators of family-health practitioner relations and how children define and interpret their symptoms, how they feel about themselves, and how they respond to treatment. The program also integrates the study of historical experiences of ethnic groups (e.g., racial prejudice) and their culturally determined patterns of dealing with issues of health and illness.

The department also participates with Upstate Medical University in a Masters of Public Health Degree.

## School Of Social Work

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### School Of Social Work

Carrie Jefferson Smith, Director, 315-443-5562  
Sims Hall

Faculty Keith A. Alford, Maria Brown, Kendra DeLoach, Paul Caldwell, Kenneth N. Corvo, Ellen deLara, Alejandro Garcia, Pamela Johnson, Eric Kingson, Karen E. Kirkhart, Tracey Musarra Marchese, Deborah J. Monahan, Nancy R. Mudrick, Merrill Silverstein, Carrie Jefferson Smith, Bette Brown Thoreck

Director of Field Instruction TBA

#### UNDERGRADUATE

Bette Brown Thoreck, Baccalaureate Program Director, 315-443-9723

The undergraduate professional social work program offers a bachelor of science degree. The goals of this program, in order of priority, are as follows:

1. To prepare undergraduate students for competent and effective generalist professional practice by developing the requisite social work knowledge, values, and skills, and
2. To prepare undergraduate students for continuing professional education and/or graduate education.

The social work program is based on the concept of ecological systems, which maintains that the fundamental focus of social work practice is on the transactions of people and their environments, and on the constant state of reciprocity in which each shapes the other. Social work intervention aims to promote the progressive forces and minimize the regressive forces in those transactions. The curriculum incorporates instruction in five professional foundation areas: social welfare policy and services, human behavior in the social environment, research, social work practice, and field practicum. Instruction in these areas builds upon a carefully chosen and strong liberal arts preparation in the humanities, the social and behavioral sciences, and the natural sciences taken within the College of Arts and Sciences.

The program is accredited by the Council on Social Work Education.

#### GRADUATE

Contact Carrie J. Smith, MSW Program Director, 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 master of social work (M.S.W.) 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 Advance Standing MSW program), or a 78-credit two-year program (for students admitted to the MSW Advance 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 Juris Doctor/Master of Social Work 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 are eligible for the Advanced Standing program in social work (72 Law and 30 Social Work).

#### ADMISSION

Students in the two-year M.S.W. program begin full-time study only in the fall semester. Advanced standing students begin study in the second summer session. The awarding of the degree requires a minimum cumulative GPA of 3.0 in all courses required for the degree. All degree requirements must have been completed within seven years prior to the date of the degree award.

Matriculated students who voluntarily interrupt graduate study for more than one academic year and wish to be re-admitted will be evaluated by the MSW Program and Field Office directors. Required reevaluation criteria vary according to individual circumstances. The re-admission process is initiated by a letter to the director of the MSW program in the School of Social Work, outlining circumstances of interruption and plans for completion of graduate study.

#### TRANSFER CREDIT

Graduate credit earned in another accredited graduate school and carrying a grade of B or higher may be transferred toward the M.S.W. 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.

## Academic Offerings

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## Certificate Of Advanced Study In Addiction Studies

For more information please contact Dr. Brooks Gump, 315-443-2208, [bbgump@syr.edu](mailto:bbgump@syr.edu)

The 18 credit hour Certificate of Advanced Study (CAS) in Addiction Studies addresses one of society's major problems and provides students with opportunities to develop broad competencies in preparation for employment in a number of fields addressing substance abuse, gambling and related behavioral addiction problems. This certificate program is an intensive study of addictions and is designed to support working professionals and supplement undergraduate and graduate study in fields such as anthropology, child and family studies, counseling, couples and family therapy, education, law, nutrition, psychology, public health, public policy, sociology, and social work, among others. Students are exposed to broad perspectives in the addictions field through the core curriculum, and may subsequently apply their courses toward their professional fields and expand employment and placement opportunities. Students do not need to be enrolled in a graduate program or have a graduate degree for this Certificate of Advanced Study (CAS) in Addiction Studies. Students may simultaneously complete a graduate degree and this CAS in addictions, counting some coursework towards both their terminal graduate degree and the CAS in Addiction Studies with prior approval from both program directors.

The minimum number of credits for the Certificate of Advanced Study (CAS) in Addiction Studies is 18 credit hours. Pursuit of state or national certification is not required, but it is an option we would like to make students aware of.

Upon completion of the addiction studies certificate, students will have partially met the New York State Office of Alcoholism and Substance Abuse Services (OASAS) educational requirements for the Certified Alcoholism and Substance Abuse Counselor (CASAC), Certified Prevention Specialist (CPS), or Certified Prevention Professional (CPP). Students will have completed the educational, but not supervised professional practice, requirements for national certification as a Certified Addiction Specialist (CAS) which is governed by the American Academy of Health Care Providers in the Addictive Disorders. It is common for people to fulfill training and supervision, that is required for certification, in their first year(s) of work. All state and national addictions certifications require supervised internship and work experience beyond their education requirements. Certification as a CPP, CPS, CAS or CASAC is voluntary for students and not required for this certificate program.

**Required Courses:** All students pursuing a Certificate of Advanced Study (CAS) in Addiction Studies must take these four courses.

HTW 618 Alcohol, Other Drugs, Gambling and Sex: Dynamics of Addiction 3 credit

HTW 606 Clinical Evaluation and Assessment of Addictions 3 credit

HTW 607 Wellness Counseling and Coaching: Overcoming Resistance to Change 3 credit

HTW 608 Addictions in Cultural Context 3 credit

Total required core credits 12 credits

**Elective Courses:** Students pursuing a Certificate of Advanced Study (CAS) in Addiction Studies select two of the following electives.

HTW 605 Cognitive Behavioral Approaches to Stress Reduction 3 credit

HTW 609 The Impact of Addictions on Families and Relationships 3 credit

HTW 610 Addictions Treatment Planning and Referral 3 credit

SWK 781 Alcohol and Other Drugs in Social Work Practice 3 credit

The minimum number of credits for the Certificate of Advanced Study (CAS) in Addiction Studies is 18 credit hours.

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## MS IN CHILD AND FAMILY HEALTH IN THE GLOBAL COMMUNITY

Contact: Brooks Gump, Graduate Program Director, 315-443-2208, [bbgump@syr.edu](mailto:bbgump@syr.edu)

The 36-credit hour master of science in Child and Family Health in the Global Community (CFHGC), is a key component of the educational programs comprising the College's signature in public health.

Many threats to children's health exist today—from biomedical challenges, such as infectious diseases, chronic illnesses and disabilities—to psychosocial challenges, such as child abuse and neglect. Ecological and cultural factors shape the meanings that health practitioners and families attribute to children's health and illness, and how these connotations influence choices made regarding care practices, children's exposure to potential dangers, requests for assistance, and responses to interventions.

The program incorporates the study of cultural health norms and practices, barriers and facilitators of family-health practitioner relations and how children define and interpret their symptoms, how they feel about themselves, and how they respond to treatment. The program will also integrate the study of historical experiences of ethnic groups (e.g., racial prejudice) and their culturally determined patterns of dealing with issues of health and illness.

The M.S. in Child and Family Health in the Global Community is a unique interdisciplinary academic program in the David B. Falk College of Sport and Human Dynamics that builds on expertise in areas including public health, child and family development, social work, nutrition, inclusive education and law. The faculty come from diverse backgrounds with extensive experience in the U.S., Caribbean, Canada, East Asia and the Middle East that will offer students valuable exposure to issues and lifestyles of these cultures. The varieties of faculty disciplines offer students more than the traditional perspective that will add in-depth knowledge from multiple perspectives.

This degree is designed to prepare graduates for health careers in a variety of local, national and international settings. The graduate training includes education in and outside the classroom. Students gain an in-depth understanding of health related factors that limit performance in schools and access to and use of legal and health systems for all individuals including those with physical disabilities. Graduates will be well-trained professionals in health and social policies; and program development, implementation, and evaluation. This combination of theory and practice allows students to work in policy, research, and service settings.

## Unique Program Features

- A focus on prenatal and postnatal health disparities and their impact on life-long health;
- Understanding multi-faceted challenges (physiological, social, psychological) on children's health;
- Ecological and cultural meanings of child health/well being and relationship to health practices;
- Inclusion of a scholarship-in-action perspective to learning;
- Inclusion of role of men and other caregivers in health-related behaviors and practices;
- Focus on developmental and ecological transitions along the life course;
- Addressing the challenges of children and families with mental health disabilities;
- An interdisciplinary approach to understanding child health and implementing health programs

## Required Courses

DSP/CFE 614: Critical Issues in Disability & Inclusion – 3 credits or

HTW 669: Disability and Health – 3 credits

CFS 631: Research Methods for Child & Family Studies – 3 credits

CFS 653: Child & Family Development Across the Life Cycle – 3 credits

HTW 664: Social and Biological Influences in Child & Family Health in the Global Community – 3 credits

HTW 668: Applied Epidemiology in Child & Family Health in the Global Community—3 credits

HTW 702: Child & Family Health Policy in the Global Community

HTW 779: Implementation & Evaluation of Child & Family Health Programs in the Global Community – 3 credits

HTW 781: Graduate Practicum in Child & Family Health in the Global Community – 3 credits

NSD 627: Public Health Nutrition – 3 credits

SWK 778: Policy Practice and Advocacy – 3 credits

Elective I – 3 credits

Elective II – 3 credits

Elective coursework can be selected from within the department and from other University departments such as child and family studies, social work, anthropology, psychology, education, sociology, gerontology, social science, nutrition, special education, or women's studies. Students must demonstrate a satisfactory knowledge of basic statistics.

All students must take the core courses in the department, with the exception of up to 6 credits, which maybe petitioned for substitution or transfer. Substituted/transferred course work should cover material equivalent to that which is covered in the relevant required course. Additional substitutions/transfers may be considered but only in exceptional cases. 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.

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## M.A., M.S. In Child And Family Studies

All students must complete the M.A./M.S. 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.

For students majoring in child and family studies, career opportunities exist in programs and agencies serving children, youth, and families, and in other community services.

Core Courses required for the M.A. and M.S. degrees are:

CFS 621 Statistical Concepts I (3 credits)

CFS 631 Research Methods for Child and Family Studies I (3 credits)

CFS 637 Theories, Interpretations, and Applications in Child Development (3 credits)

CFS 648 Family Theories: Interpretation and Application (3 credits)

CFS 667 Childhood and Family in Cross-Cultural Perspective (3 credits)

Suggested courses for each of the four possible areas of concentration are:

Child Development

CFS 633 Intervention Models for Infants and Preschoolers (3 credits)

CFS 635 Observation and Assessment of Infants and Young Children (3 credits)

CFS 638 Child Development in the Context of Schooling (3 credits)  
CFS 645 The Developing Infant (3 credits)  
CFS 665 Language Development in Children and Families (3 credits)  
CFS 667 Childhood and the Family in Cross-Cultural Perspective (3 credits)  
CFS 830 Seminar in Child Development (3 credits)  
CFS 835 Issues and Problems in Child and Family Development (3 credits)

#### Family Studies

CFS 557 Separation and Divorce: Impact on Families and Children (3 credits)  
CFS 649 Marital and Cohabiting Roles and Responsibilities (3 credits)  
CFS 657 Contemporary Issues in Human Sexuality (3 credits)  
CFS 659 Families and Workplaces (3 credits)  
CFS 668 Family Variations: Social Class and Ethnic Determinants (3 credits)  
CFS 687 Family Stress and Resilience: Theory and Interpretation (3 credits)  
CFS 840 Seminar in Family Relationships (3 credits)

#### Early Childhood Education

CFS 534 Practicum in Early Childhood Education (3 credits)  
CFS 597 Early Childhood Program Administration (3 credits)  
CFS 635 Observation and Assessment of Infants and Young Children (3 credits)  
CFS 638 Child Development in the Context of Schooling (3 credits)  
CFS 645 The Developing Infant (3 credits)  
CFS 665 Language Development in Children and Families (3 credits)  
RED 547 Children's Literature (3 credits)

#### Distribution of Credits

Core Requirements 15  
Suggested Courses 12\*  
Thesis/Project 3

Total 30

\*The MA in CFS compliments the CAS in Addiction Studies in the Department of Public Health, Food Studies and Nutrition. Students may use their 12 credits of electives to complete part of the 18 credits required for the CAS in Addiction Studies.

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## Ph.D. In Child And Family Studies

The Child and Family Studies doctoral program is an interdisciplinary degree designed to train students in advanced theory and empirical research in the field of Child and Family Studies. The program prepares students for careers as faculty, research scientists, and administrators in various governmental and nongovernmental agencies. Students enrolled in the doctoral program engage in research activities under the supervision of a faculty mentor. The Ph.D. program consists of 72 credits and the completion of a dissertation.

Core course requirements include: CFS 637 Theories, Interpretations, and Applications in Child Development; CFS 648 Family Theories: Interpretation and Application; CFS 621 Statistical Concepts in Human Development I; CFS 622 Statistical Concepts in Human Development II; CFS 631 Research Methods for Child and Family Studies I; CFS 667 Child and Family in Cross Cultural Perspectives; CFS 732 Research Methods for Child and Family Studies II; CFS 835 Issues and Problems in Child and Family Development.

In addition to completing the core requirements (27 credits), students are required to take additional supporting courses (33 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 or the 600 level. All students must complete a two-semester sequence in statistics and research methods. Students must also select an additional research methods course (advanced statistics, qualitative research) in preparation for their doctoral research.

Subject to departmental approval, a maximum of up to 30 credits of Masters level coursework (in CFS or related disciplines at Syracuse University or other universities) may be applied to your Ph.D. program as electives. Courses in research methodology, statistics, and major or substantive areas of study within Child and Family Studies or related disciplines are eligible to be considered.

#### Comprehensive Examination

After completing required coursework and prior to their dissertation, doctoral students must complete the comprehensive examination. These examinations are intended to advance learning by requiring students to integrate substantive knowledge within the broad field of Child and Family Studies. Students are expected to synthesize, critically analyze, and evaluate the literature in the field and also articulate this scientific information through written and oral defenses. Formal acceptance as a Ph.D. candidate is contingent upon successful completion of both written and oral portions of the examination. Comprehensive examinations are scheduled twice each year.

#### Dissertation

Students are expected to take 12 dissertation credits. The dissertation is a final requirement of the Ph.D. program wherein students are expected to undertake original research that makes a significant contribution to the body of knowledge in child and family studies (students complete 12 dissertation credits). Students are expected to present a dissertation proposal to a committee of three faculty members. Only after approval of the dissertation proposal are students allowed to undertake the proposed research project. Upon completion of the dissertation, an oral defense is scheduled before a dissertation committee. The dissertation must meet additional requirements specified by the department and the Graduate School.

Distribution of Credits:

Core Requirements 27

Electives 33 (including an additional research tool)

Dissertation 12

Total 72

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## Global Health C.A.S.

Contact: Brooks Gump, Graduate Program Director, 315-443-2208, [bbgump@syr.edu](mailto:bbgump@syr.edu)

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 Applicants must have earned a bachelor's degree from an accredited institution, with a minimum cumulative GPA of 3.0 in undergraduate coursework.

### REQUIRED COURSES

HTW 661—Development and Evaluation of Global Health Programs— 3 credits

HTW 664—Social and Biological Influences in Child & Family Health in the Global Community – 3 credits

HTW 665—Applied Global Health Practice and Policy – 3 credits

HTW 667—Graduate Practicum in Global Health – 4 credits

HTW 668 : Applied Epidemiology in Child & Family Health in the Global Community—3 credits

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/HTW 663—Global Health and HTW 604—Comparative Health Policy.

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## Law/Social Work (Licensed Clinical)

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 Renfro, LMSW, Coordinator of Graduate Admissions, 419 Sims Hall (443-1443; [alrenfro@syr.edu](mailto:alrenfro@syr.edu)). Students with general questions and inquiries concerning procedures regarding joint degrees should contact Keri Foster, Associate Director for Student Life, College of Law, Suite 444 (443-1146; [kdfoster@syr.edu](mailto:kdfoster@syr.edu)).

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## J.D./Master Of Science In Social Work

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 MSW 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](mailto: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](mailto:studentlife@law.syr.edu)

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## M.A. In Marriage And Family Therapy

Linda Stone Fish, Graduate Program Director, 315-443-3024

The M.A. program consists of a 60-credit curriculum that has been accredited since 1972 by the Commission on Accreditation for Marriage and Family Therapy Education (COAMFTE) and is designed to meet academic requirements for clinical membership in the American Association for Marriage and Family Therapy. Students are mature individuals who have a strong commitment to the family therapy profession and to meeting the mental health needs of underserved populations.

The M.A. program focuses on the family as a system and the cultural and societal frameworks within which couples and families grow and develop. Students are trained as therapists and scholars who challenge themselves by fostering relationships with others who hold various and diverse world views. By working toward the creation of an environment of respect, honesty, and integrity, students and faculty in the program strive to increase cultural sensitivity, heighten awareness of self in relation to others, and generate an understanding of the role played by context in issues presented in therapy.

All students enroll in a clinical practicum and complete 500 hours of supervised clinical practice with individuals, couples, and families. They spend one year training at the Couple and Family Therapy Center. During their second year they have the opportunity to train at a variety of local health and human service agencies.

Enrollment in the marriage and family therapy program is limited due to the intense clinical training students receive; Most admission decisions are made in spring for the following fall; however, spring and summer admissions are available on a limited basis

### Course Requirements for M.A. Program

#### Marriage and Family Therapy Courses

MFT 661 Introduction to Family Therapy Practice  
MFT 662 Systems Dynamics in a Group Setting  
MFT 671 Introduction to Family Systems  
MFT 672 Couple Therapy: Theory and Techniques  
MFT 681 Marriage and Family Therapy Ethics and Issues  
MFT 682 Marriage and Family Therapy Theory and Techniques  
MFT 688 Family Therapy Across the Life Cycle  
MFT 750 Introduction to Marriage and Family Therapy Practicum  
MFT 760 Practicum in Marriage and Family Therapy I  
MFT 761 Practicum in Marriage and Family Therapy II  
MFT 762 Practicum in Marriage and Family Therapy III  
MFT 763 Practicum in Marriage and Family Therapy IV  
MFT 567 Sexual Issues for the Helping Professional  
MFT 600 Selected Topics: Family Therapy Practice in Substance Abuse or  
MFT 781 Alcohol and Other Drugs in Social Work Practice  
MFT 663 Applied Research in Social Work  
MFT 724 Psychopathology  
MFT 684 Family Therapy Perspectives on Cultural Diversity  
MFT 997 Masters Project or Comprehensive Examination

#### Elective Courses

MFT 764 Practicum in Marriage and Family Therapy V  
MFT 641 Divorce Mediation  
MFT 600 Couple and Family Therapy with LGBTQ Relationships  
MFT 643 Family Therapy with Complex Trauma  
MFT 686 Play Therapy  
MFT 687 Spirituality in Therapy  
EDU 647 Statistical Thinking and Applications  
SWK 626 Persons in Social Context

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## Dual Master's Degrees In Social Work And Marriage And Family Therapy

### Contact:

Carrie J. Smith, Associate Professor, Director School of Social Work  
[cjsmith@syr.edu](mailto:cjsmith@syr.edu) 315-443-5562

Thom deLara, Associate Professor, Director Marriage and Family Therapy  
[tdelara@syr.edu](mailto: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.

## 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 requirements 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 in Sims 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

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## Ph.D. In Marriage And Family Therapy

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### Currently, The Doctoral Program Is Not Accepting New Students

Linda Stone Fish, Graduate Program Director, 315-443-3024

The doctoral program in marriage and family therapy prepares 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 master's degree in marriage and family therapy, and is designed to provide students with an understanding of advanced clinical theory and research methodology. The program is accredited by the Commission on Accreditation for Marriage and Family Therapy

## Education (COAMFTE).

All students must continuously be involved in clinical practice during their program of study and spend two years working at the Goldberg Couple and Family Therapy Center.

The 90-credit curriculum consists of 39 credits from an M.A. in marriage and family therapy or the equivalent; 29 credits of doctoral courses in marriage and family therapy; 12 credits of advanced research methodology; 10 credits of dissertation; at least two years of supervised practicum in the Goldberg Center; and a 9-month internship. Upon completion of the doctoral coursework, all students must pass the qualifying exam. Completion of the exam must occur before the internship and the dissertation proposal. (Contact the department for details.)

Students entering the doctoral program without an M.A. in marriage and family therapy from a COAMFTE-accredited program are required to complete the degree or its equivalent. Equivalency is determined on an individual basis after admission.

Students admitted to the doctoral program are individuals who demonstrate a promise for doctoral work and a commitment to advancing the field of marriage and family therapy. An admission interview with the faculty will be scheduled following receipt of the completed application. The doctoral program is small and personalized, so enrollment is limited.

### Required Doctoral Courses in MFT(23 credits)

MFT 860 Advanced Family Therapy Practicum

MFT 861 Supervision in MFT

MFT 862 Advanced Family Therapy with Children and Adolescents

MFT 863 Advanced Couple Therapy

MFT 865 Advanced Family Therapy Theory

MFT 870 Practicum in Marriage and Family Therapy Supervision

MFT 875 Cultural Diversity: Family Theory and Therapy

One elective

Two courses from the following:

MFT 772 Divorce and Remarriage: Family Theory and Therapy

MFT 773 Family Violence: Theory and Therapy

MFT 774 Parenting and Family Enrichment: Programs and Research

MFT 776 Dysfunctional Families: Theory and Therapy

MFT 777 Family Perspectives on Gender Roles and Socialization: Theory and Therapy

MFT 778 Loss Across the Life Cycle: Family Theory and Therapy

MFT 779 Sexual Identity and Family Therapy

MFT 864 Family Systems and Family Health

### Required Doctoral Research Courses (12 Credits)

CFS 622 Statistical Concepts II

CFS 732 Research Methods CFS II

MFT 882 Assessment and Research Methods in MFT

MFT 885 Qualitative Research Methods in Family Therapy

Also

MFT 960 Internship in MFT (0 credits)

MFT 999 Dissertation (10 credits)

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## M.A., M.S. In Nutrition Science

Contact Sudha Raj, 315-443-2386

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 and 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 (15-18 credits)

NSD 555 Food, Culture, and Environment

NSD 654 Nutrition Research Methods

NSD 665 Vitamins and Minerals

NSD 666 Metabolism

NSD 695 Nutritional Status Evaluation

#### Courses of Special Interest (0-9 credits)

NSD 511 Nutrition Education

NSD 512 Nutrition Counseling

NSD 648 Dietetics Practice Across the Life Span

NSD 681/682 Medical Nutrition Therapy I and Lab

NSD 683/684 Medical Nutrition Therapy II and Lab

NSD 755 Field Experience in Community Nutrition

#### Other Nutrition Courses (0-9 credits)

NSD 610 Readings in Foods

NSD 647 Weight Management, Obesity and Disordered Eating

NSD 655 Issues in Community Nutrition

NSD 658 Participatory Program Planning

NSD 660 Readings in Nutrition

NSD 670 Experience Credit

NSD 680 Seminar in Food and Nutrition

NSD 690 Independent Study

NSD 755 Field Experience in Community Nutrition

NSD 756 Food and Public Policy

NSD 765 Problems in Human Metabolism

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 For the M.S. degree the topic for 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.

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## Dietetic Internship Program C.A.S.

Contact: Dietetic Internship Director, Debra Z. Connolly, 315 -443 -2386

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. 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).

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## Ph.D. In Nutrition Science

**Note: Currently, The Nutrition Science P.H.D. Program Is Not Accepting New Students.**

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.

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## Master Of Public Health (CNYMPH) Program Overview

Contact: Thomas H. Dennison, Ph.D., Associate Director

426 Eggers Hall; 315-443-9060; thdennis@maxwell.syr.edu

[www.upstate.edu/cnymph](http://www.upstate.edu/cnymph)

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, L.C. Smith 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.

A certificate of Advanced Study in Public Health (CASPH) a 5 course (15-credit hour) program of study, is also offered. 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.

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/mp\\_h\\_degree/how\\_to\\_apply.php](http://www.upstate.edu/cnymph/academic/mp_h_degree/how_to_apply.php)

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## M.S.W. Program In Social Work

Contact Carrie J. Smith, 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 601,602 Fundamentals of Social Work Practice I and II 6

SWK 611 Social Welfare Policy and Services 3

SWK 626 Persons in Social Contexts 3

SWK 628 Human Diversity in Social Contexts 3

SWK 662 Applied Research in Social Work 3

SWK 671/672 Field Instruction I and II 6

M.S.W. Advanced Concentrations in Social Work

After completing the foundation curriculum, students elect an advanced concentration of 36 credits in either Social Work Practice with Individual, Families and Groups (clinical focus) or Community Organization, Policy, Planning and Administration ("macro" practice). Field placements are available in child welfare, health, mental health, gerontology, schools, substance use disorders and many other practice settings.

#### SOCIAL WORK PRACTICE WITH INDIVIDUALS, FAMILIES, AND GROUPS (IFG)

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.

#### COMMUNITY ORGANIZATION POLICY, PLANNING, AND ADMINISTRATION (COPPA)

The curriculum includes a selection of advanced social work practice courses addressing practice theory, method, and skills in community organization and development, program planning, policy planning and advocacy, and administration applied to practice settings.

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## Dual Master's Degrees In Social Work And Marriage And Family Therapy

Contact:

Carrie J. Smith, Associate Professor, Director School of Social Work  
[cjsmith@syr.edu](mailto:cjsmith@syr.edu) 315-443-5562

Thom deLara, Associate Professor, Director Marriage and Family Therapy  
[tdelara@syr.edu](mailto: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.

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 in Sims 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

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## M.S.W. Advanced Standing Program

Contact Carrie J. Smith, MSW Program Director, 315-443-5562.

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.

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## Social Work And Marriage And Family Therapy Dual Degree

#### Contact:

Carrie J. Smith, Associate Professor, Director School of Social Work  
cjsmith@syr.edu 315-443-5562

Thom deLara, Associate Professor, Director 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.

#### 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 requirements 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 in Sims 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

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## M.S. In Sport Venue And Event Management

### GRADUATE

Chad McEvoy, Graduate Program Director, 315-443-2630

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 and entertainment venues and associated event planning opportunities. Instruction will center 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 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 housed in the David B. Falk Center for Sport Management, which is an interdisciplinary, collaborative initiative that is unique among graduate level sport management programs.

The degree prepares students for careers in managerial aspects of professional and recreational sports, including stadium and arena facilities management; event management and planning production and programming of events; marketing and public relations; technological operations management; and middle-level management, marketing and planning in the sport industry.

### Graduate Courses in Sport Venue & Event Management

SPM 614 —Foundations of Sport Venue & Event Mgmt.  
SPM 624—Sport Facilities Mgmt.  
SPM 634—Sport Event & Hospitality Mgmt.  
SPM 644—Technologies in Sport Venues  
SPM 654—Sport Venue Operations  
SPM 664—Financial Mgmt. of Sport Facilities & Events  
SPM 670—Experience Credit

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.

#### Admission

The admissions requirements for this program include:

- undergraduate degree with a minimum cumulative 3.0 GPA,
- TOEFL scores (for international applications),
- undergraduate transcripts,
- three letters of recommendation,
- a resume and personal statement.
- GRE scores are required.

# Courses

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## Child And Family Studies

CFS 534 Practcm/Early Chldhood Ed 3 IR  
Planning and implementing curriculum for prekindergarten or kindergarten children. Fieldwork and seminar.

CFS 535 Quality Infant Care Giving 2-3 SI  
Crosslisted with: EDU 535  
Workshop. Research theories and demonstrations of infant/toddler care, development, and assessment; group care, legal and budgeting issues, and work with parents.

CFS 557 Sep & Div:Impct/Chld&Fam 3 IR  
Social and psychological issues, theories, and research.

CFS 577 Urban Families Strengths and Challenges 3 IR  
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 3 SI  
Prepares students to administer, coordinate, promote, consult, and assist in the start-up and development of early childhood program services.

CFS 600 Selected Topics 1-3  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

CFS 621 Statistical Concepts I 3 Y  
First course in statistics; provides tools for data analysis. Descriptive and inferential statistics.

CFS 622 Statistical Concepts II 3 Y  
Second course in statistics. Analysis of variance, multiple regression, and multivariate analysis.  
PREREQ: CFS 621.

CFS 631 Research Methods/Cfs I 3 Y  
Fundamental concepts of research methodologies employed in the study of children and families, focusing on the research process.  
PREREQ: CFS 621.

CFS 633 Intrvntn Mdls:Inft&Pre-Sc 3 IR  
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 634 Secondary Data Analysis Using Social Science Data 3 IR  
A quantitative focus on the research process through practical examples drawn from data sets deposited with Inter University Consortium for Political and Social Science Research.  
PREREQ: CFS 621 AND 622 AND 631.

CFS 635 Obs&Assesmt/In fnts&Chldrn 3 IR  
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 3 IR  
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 3 Y  
Disparate theoretical approaches to child development, especially competing interpretations of the behavior of young children.

CFS 638 Child Development in the Context of Schooling 3 IR  
Exploration of some of the issues relevant to understanding the development of children in the context of schooling.

CFS 645 The Developing Infant 3 Y  
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 3 IR  
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&Apple 3 Y  
Critical assessment of the theoretical perspectives of family studies; survey of major substantive developments.

CFS 649 Marital and Cohabiting Roles and Relationships 3 IR  
In-depth examination of the theory and research in the areas of marriage, cohabitation, and same-sex relationships.  
PREREQ: CFS 648 AND 631.

CFS 653 Child and Family Development Across the Life Cycle 3 Y  
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 Cntmp Iss/Human Sexuality 3 IR  
Individual responses to social pressures. Issues of the sexual revolution and its impact in terms of sexual behavior and dysfunction.

CFS 658 Prosocl&Moral Dev in Chld 3 IR  
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 3 IR  
A multi-disciplinary perspective on the evolution of the relationship between workplaces and families.

CFS 665 Lang Dev in Childr & Fam 3 Y  
Double Numbered with: CFS 365  
Psycholinguistic theories and child language research.-Social class, cultural, familial, and dialectical influences. Language enrichment programs and assessments. Systematic observations of child language required. Additional work required of graduate students.

CFS 667 Chld&Fam Crss/Ctrl Persp 3 Y  
Introduction to field methods, the study of childhood, and family in cross-cultural perspectives.

CFS 668 Fam Var:Soc Class&Eth Det 3 IR  
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 1-6  
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. R

CFS 686 Family Life Education 3 IR  
Double Numbered with: CFS 486  
The course is intended to prepare students for the role of family life professionals and educators. Students will learn to apply their knowledge of family theories and other relevant theoretical perspectives to real life settings. Additional work required of graduate students.

CFS 687 Family Stress and Resilience: Theory and Interpretation 3 IR  
Theoretical and empirical research on 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 1-6  
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. R

CFS 695 Sex Role Socialztn & Fam 3 IR  
Influence of sex discrimination on sex and gender development over life span. Origin and development of family as sex-typed system. Relationship between changing sex roles and family patterns.

CFS 700 Selected Topics 1-3  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

CFS 732 Research Methods/CFS II 3 Y  
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 631.

CFS 800 Selected Topics 1-3  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

CFS 830 Sem Child Development 3 IR  
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. R

CFS 835 Iss & Probs/Chld&Fam Devt 3 IR  
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 3 IR  
An interactive approach to contextualizing development and examining the multitude of influences on child and family development.  
R1, 6 credits maximum

CFS 990 Independent Study 1-6  
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. R

CFS 997 Masters Thesis or Project 0-6 S  
R

CFS 999 Dissertation 1-15 S  
R14, 15 credits maximum

## Food Studies

FST 600 Selected Topics 1-3 SI  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

FST 700 Selected Topics 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. First offered in Summer 2014 R

## Hospitality Management

HPM 500 Selected Topics 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

HPM 690 Independent Study 1-6 IR  
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. R

## Health And Wellness

HTW 603 Introduction to Trauma Studies 3 Y

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 6 SS  
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 3 Y  
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 3 Y

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 Wellness Counseling and Coaching: Overcoming Resistance to Change 3 Y

Double Numbered with: HTW 407

Knowledge of the philosophies, practices, policies and outcomes of models of behavior change. Motivational interviewing and solution-focused approaches to addictions counseling. Individual counseling, goal setting and relapse prevention techniques. Additional work required of graduate students.

HTW 608 Addictions in Cultural Context 3 Y

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 3 Y

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 3 Y

Double Numbered with: HTW 410

Treatment, planning, clinical record keeping, and discharge planning in addition to individual and group, recovery models, replacement therapy, and dual-diagnosis. Additional work required of graduate students. PREREQ: HTW 606.

HTW 612 Global Perspectives in Alcohol & Other Drug Policies 3 S

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.

HTW 615 Public Health Ethics 3 Y

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 3 S

Double Numbered with: HTW 318

The biological, psychological, and social factors of substance use and related addictions that exist across cultures and species. Additional work required of graduate students.

HTW 661 Development and Evaluation of Global Health Programs 3 Y

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 662 Culture and Reproductive Health and Medicine 3 IR

Crosslisted with: ANT 662; Double Numbered 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 663 Global Health 3 Y

Crosslisted with: ANT 663; 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 664 Social and Biological Issues in Child and Family Health in the Global Community 3 Y

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 665 Applied Global Health Practice and Policy 3 Y

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 667 Graduate Practicum in Global Health 4 S

An opportunity for students to understand and apply global health competencies through direct experience in a global setting, providing cross-cultural experience and understanding of global health policies and practices in the field. PREREQ: HTW 661 AND 664 AND 665 AND 668.

HTW 668 Applied Epidemiology for Child & Family Health in Global Community 3 Y

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 Health 3 Y

Major theories, historical events, law, services, and research related to health and wellness for persons with disabilities including disparities, health promotion, ethics, aging, violence, and disaster preparedness.

HTW 670 Experience Credit 1-6 R

HTW 690 Independent Study 1-6 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. R

HTW 702 Child and Family Health Policy in the Global Community 3 Y

Overview of the major health and welfare policies and programs for children and families in the U.S. and other global settings. Students will learn about issues around community participation in selected global contexts.

HTW 779 Implementation and Evaluation of Child & Family Health Programs in the Global Community 3 Y

Techniques and methods for the implementation and evaluation of child and family health programs in the global community. Exposure to examples and applications from both the US and international settings.

HTW 781 Graduate Practicum in Child & Family Health in the Global Community 3 Y

Application of knowledge and competencies at a national or international agency under the direction of an approved preceptor. Students selecting a US site are encouraged to choose one with a global focus.

PREREQ: HTW 664 AND 668 AND 702 AND 779 AND CFS 631 AND 653 AND NSD 627.

## Marriage And Family Therapy

MFT 567 Sexual Issues for the Helping Professional 3 SS

Sexual abuse, sexual assault, sexual dysfunction, sex and disability, and nontraditional sexual relationships. Introduction to educational and therapeutic intervention.

MFT 600 Selected Topics 1-3 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. R

MFT 603 Introduction to Trauma Studies 3 Y

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 3 IR

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 3 SS

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 Couple and Family Therapy with LGBTQ Relationships 3 SI

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 3 SS

Explores the effects of trauma on child development and family functioning, and introduce the use of family therapy for the treatment of complex trauma. Learn to develop treatment intervention strategies in a systemic framework.

MFT 661 Introduction to Family Therapy Practice 3 Y

Introduces basic therapeutic skills of family therapy practice.

MFT 662 Systems Dynamics in a Group Setting 3 Y

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 3 Y

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 3 Y

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 3 Y

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 3 IR

Child development, relationship development, and family therapy theory and techniques. The dynamic interplay among family systems, gender, child development, and other contextual variables.

MFT 681 Marriage and Family Therapy Ethics and Issues 3 Y

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 3 Y

Theory and practice of the major family therapies. PREREQ: MFT 671.

MFT 683 Assessment in Marriage and Family Therapy 3 SS

Individual, couple, and family assessment utilizing a family systems perspective.

MFT 684 Family Therapy Perspectives on Cultural Diversity 3 Y

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 3 SS

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 3 SS

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 3 Y

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 3 Y

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. Prerequisite does not apply to MFT students.

MFT 750 Introduction to Marriage & Family Therapy Practicum 3 Y

Introduction to clinical practice in the Goldberg Couple and Family Therapy Center

MFT 760 Practicum in Marriage and Family Therapy I 3 Y

First course of four required courses in supervised clinical practice in Couple and Family Therapy for students in the Marriage and Family Therapy program. PREREQ: MFT 750. R

MFT 761 Practicum in Marriage & Family Therapy II 3 Y

Second course of four required courses in supervised clinical practice in Couple and Family Therapy for students in the Marriage and Family Therapy program.

PREREQ: MFT 760.

MFT 762 Practicum in Marriage and Family Therapy III 3 Y

Third course of four required courses in supervised clinical practice in Couple and Family Therapy for students in the Marriage and Family Therapy program.

PREREQ: MFT 761.

MFT 763 Practicum in Marriage and Family Therapy IV 3 Y

Elective course in supervised clinical practice in Couple and Family Therapy for student in the Marriage and Family Therapy program who have not completed the required 500 hours.

PREREQ: MFT 762.

MFT 764 Practicum in Marriage and Family Therapy V 1-3 Y

Elective course in supervised clinical practice in Couple and Family Therapy for student in the Marriage and Family Therapy program who have not completed the required 500 hours.

PREREQ: MFT 763. R1, 6 credits maximum

MFT 771 Family Systems Approach to Addictions and Eating Disorders: Theory and Therapy 3 IR

Family-systems approach to the assessment and treatment of addictions, alcoholism, eating disorders, and obesity.

MFT 772 Divorce and Remarriage:

Family Theory and Therapy 3 IR  
Family-systems approach to separation, divorce, remarriage, and stepfamily formation. Review of research and family intervention strategies.

MFT 773 Family Violence: Theory and Therapy 3 IR

Systemic approach to assessment and treatment of family violence. Child, spousal, and parental abuse.

MFT 774 Parenting and Family

Enrichment: Programs and Research 3 IR  
Theory and research on parenting and family enrichment. Overview of intervention programs

MFT 776 Dysfunctional Families: Theory and Therapy 3 IR

Family-systems approach to treatment of multiproblem, chronically distressed, and rigid families.

MFT 777 Family Perspectives on Gender Roles and Socialization: Theory & Therapy 3

Gender and its implications for socialization, family functioning, and family therapy.

MFT 778 Loss Across the Life Cycle:

Family Theory and Therapy 3 IR  
Systemic approach to theory and treatment of normative and non-normative losses across the family life cycle.

MFT 779 Sexual Identity and Family Therapy 3 IR

Systemic approach to sexual identity and family therapy theory and clinical applications.

MFT 781 Alcohol and Other Drugs in Social Work Practice 3 Y

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 1 S

Advanced supervised clinical experience for Marriage and Family Therapy doctoral students. A minimum of four credits required R

MFT 861 Supervision in Marriage and Family Therapy 3 E

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 3 E

Assessment, diagnosis, and family treatment of child-hood and adolescent dysfunction. Interaction between child and family system.

MFT 863 Advanced Couple Therapy 3 O

Family systems approach to the assessment and treatment of couple dynamics, including sexuality.

MFT 864 Family Systems and Family Health 3 IR

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 3 E

Critique of family therapy theories. Theory development.

MFT 870 Practicum in Marriage and Family Therapy Supervision 1 IR

Supervision of Marriage and Family Therapy therapists-in-training. Partial fulfillment of AAMFT requirements for approved supervisor status.

PREREQ: MFT 861. R

MFT 875 Cultural Diversity: Family Theory and Therapy 3 O

Influence of racial, ethnic, and religious heritage on family structure and therapeutic intervention.

MFT 882 Assessment and Research Methods in Marriage and Family Therapy 3 O

Overview of family assessment techniques. Issues and procedures in family therapy process and outcome research.

MFT 885 Qualitative Research Methods in Family Therapy 3

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 0 S

Supervised internship in Marriage and Family Therapy. Nine to 12-month family therapy internship with AAMFT approved supervision. R

MFT 997 Master's Thesis or Project 0-6 S R

MFT 999 Dissertation 1-12 S

## Nutrition Science And Dietetics

NSD 500 Selected Topics 1-3 IR

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

NSD 505 Nutritional Biochemistry

Overview 1 Y

Brief overview of structure/function of atoms and molecules of biological importance.

Structure/function of proteins, carbohydrates and lipids in the complex biological environment. Introduction to metabolic pathways involved in utilization of energy nutrients.

PREREQ: CHE 106.

NSD 511 Nutrition Education 3 Y

A theoretical basis for nutrition education and opportunity to develop skills for a wide variety of individuals.

PREREQ: NSD 225 AND 342.

NSD 512 Nutrition Counseling 3 S

A theoretical basis for counseling related to nutrition and increased opportunities to develop nutrition counseling skills for a wide variety of individuals.

PREREQ: NSD 225 AND 342 AND 481 AND 482 AND 511.

NSD 513 Nutrition Education Experience 1 S

Prepare, disseminate and evaluate nutrition education curriculum for peer or other audiences. Provide nutrition education on campus and in the community through table events, group presentations, and media campaigns.

PREREQ: NSD 511. R4, 5 credits maximum

NSD 515 Physical Assessment and

Multiskilling for Dietitians 1 S

Practice and skill validation in basic cardiovascular, respiratory, abdominal, muscular, and integumentary assessment. Diabetes and enteral feeding management.

PREREQ: NSD 481 OR 681.

NSD 555 Food, Culture and Environment 3 Y

Crosslisted with: WGS 555

Understand the environment in which nutrition education and communication occur. The broader environment includes cultural diversity, the food system from farm to table, as well as functionality of food components.

PREREQ: NSD 115 AND 225.

NSD 610 Readings in Foods 1-3 IR

R5, 6 credits maximum

NSD 621 Morality of a Meal: Food Ethics 3 Y

Double Numbered with: NSD 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.

NSD 625 Nutrition for Fitness and Sports 3 Y

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.

PREREQ: NSD 225.

NSD 627 Public Health Nutrition 3 Y

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 647 Weight Management, Obesity and Disordered Eating 3 Y

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 3 IR

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 1-6 S

Structured experience in dietetics management, community, and clinical nutrition in community agencies, hospitals, and food systems operations integrated with classroom theory. R

NSD 654 Nutrition Research Methods 3 Y

Integrates an understanding and application of nutrition research methods. Emphasis on evidence-based analysis.

NSD 658 Participatory Program Planning 3 S

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.

PREREQ: NSD 225.

NSD 660 Readings in Nutrition 1-3 S  
R1, 6 credits maximum

NSD 665 Vitamins And Minerals 3 Y

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 3 Y

Metabolic interrelationships and control in the use of proteins, carbohydrates, and lipids.

NSD 670 Experience Credit 1-6 S

Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination.

Limited to those in good academic standing. R

NSD 680 Seminar in Food and Nutrition 1-3 Y

Topics in food and nutrition. R1, 6 credits maximum

NSD 681 Medical Nutrition Therapy I 3 Y

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.

PREREQ: NSD 225 AND BIO 216, 217;

COREQ: NSD 682.

NSD 682 Medical Nutrition Therapy I Lab 1 Y

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.

PREREQ: NSD 225 AND BIO 216 AND BIO 217;

COREQ: NSD 681.

NSD 683 Medical Nutrition Therapy II 3 Y  
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.  
PREREQ: NSD 681. COREQ: NSD 684.

NSD 684 Medical Nutrition Therapy II Lab 1 Y  
Double Numbered with: NSD 484  
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. COREQ: NSD 683.

NSD 690 Independent Study 1-6 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. R

NSD 695 Nutritional Status Evaluation 3 Y  
Principles and practices. Dietary, biochemical, anthropometric, and clinical procedures. Laboratory experiences.

NSD 755 Field Experience in Community Nutrition 3 IR  
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 3 IR  
Introduction to theory of public policy illustrated with examples of a variety of food, nutrition, and agricultural policies. Historical development of policies. Legislative and regulatory issues.

NSD 765 Problems in Human Metabolism 3 IR  
Selected topics in therapeutic nutrition and metabolism for students with substantial background in nutrition and disease.  
PREREQ: NSD 666.

NSD 795 Research Methods 3 SI  
Research techniques applicable to the study of nutrition. R1, 6 credits maximum

NSD 885 Graduate Seminar 0 IR

NSD 897 Graduate Project 0-6 Y  
Project comparable to 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.

NSD 997 Master's Thesis 1-6 S  
R

### Sport Management

SPM 600 Selected Topics 1-3 SI  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

SPM 611 Intercollegiate Athletics in Higher Education 3 Y  
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 3 Y  
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 3 Y  
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.  
SPM 611 AND 612 AND HED 621 AND (HED 721 OR 712).

SPM 614 Foundations of Sport Venue and Event Management 3 Y  
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 624 Sport Facilities Management 3 Y  
Planning and managing different types of sport facilities. Through examples and recognized theory, students gain understanding about the complexity involved in conceptualizing, constructing, promoting, managing and maintaining modern sport stadiums, arenas, domes and multi-purposes facilities.  
PREREQ: SPM 614.

SPM 634 Sport Event and Hospitality Management 3 Y  
Theoretical and practical principles and procedures for designing, planning, implementing, and evaluating a variety of sporting events.  
PREREQ: SPM 614.

SPM 644 Technologies in Sport Venues 3 Y  
Technology applied to sport management, venue management events, infrastructure, and performance measurement systems. Information, communication and data management systems in sport organizations within the intercollegiate, professional and international segments of the sport industry.  
PREREQ: SPM 614.

SPM 654 Sport Venue Operations 3 Y  
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 664 Financial Management of Sport Facilities and Events 3 Y  
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 670 Experience Credit 1-6 SI  
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. R

SPM 690 Independent Study 1-6  
R

SPM 700 Selected Topics 1-3 SI  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

## Social Work

SWK 600 Selected Topics 1-3 SI  
Exploration of a topic in social work, not covered by the standard curriculum, but of interest to faculty and students in a particular semester. R

SWK 601 Fundamentals of Social Work Practice I 3 Y

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 3 Y

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 611 Social Welfare Policy and Services 3 Y

Historical antecedents of social welfare policy, programs. Social work values, roles. Structure and organization of public and voluntary strategies for achieving economic security, health, and mental health welfare goals. Cultural, racial, ethnic, gender diversity. Policy analysis frameworks.

SWK 626 Persons in Social Context 3 Y

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 3 Y

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 3 SI

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 3 IR

Aspects of health care delivery for social work practice. Social patterns of illness and utilization of health care facilities relevant to present and future organization of health care facilities. R

SWK 641 Divorce Mediation 3 SS

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 3 Y

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 3 SI

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 3 S

Crosslisted with: MFT 663

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.

SWK 671 Field Instruction I 3 S

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 3 S

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 689 Individualized Readings Program 3 S

Selected readings in social work and related fields under guidance of appropriate faculty.

SWK 690 Independent Study 1-6 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. R

SWK 700 Selected Topics 1-3 SI

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. R

SWK 702 Social Work Practice in Family Mental Health 3 SI

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 3 IR

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, 602, 657.

**SWK 707 Short Term Intervention in Social Work 3 Y**

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 3 Y**

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 1-6 SI**

Developing issues and current trends. Shifting directions in social work practice and theory: methods, strategies, and techniques of intervention. Services to diverse populations. Developing issues and current trends. Shifting directions in social work practice, policy, and theory. Service models, techniques, and strategies of intervention for diverse populations. U.S. or international. R

**SWK 712 Clinical Social Work with Groups 3 Y**

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 3 SI**

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 3 SI**

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 602.

**SWK 715 Administration in Human Services 3 Y**

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 724 Psychopathology 3 Y**

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. Prerequisite does not apply to MFT students.

**SWK 727 Family Violence: Policy, Practice and Research 3 Y**

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 3 Y**

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.

PREREQ: SWK 626. R

**SWK 732 Advanced Practice with Individuals, Families and Groups 3 Y**

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; COREQ: SWK 771.

**SWK 735 Principles and Methods of Social Work Practice with Black Families 3 Y**

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 3 Y**

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 3 Y**

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 3 Y**

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 3 Y**

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 3 Y**

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 3 Y  
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 761 Mental Health Policy 3 Y  
Policies, programs in mental health and developmental disabilities fields. Deinstitutionalization, community-based services. Special mental health issues related to poverty, ethnicity, gender, sexual orientation. Policy analysis.  
PREREQ: SWK 611.

SWK 763 Health Care Policy 3 SI  
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 611.

SWK 765 Public Policy and Aging 3 Y  
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 611.

SWK 766 Seminar in International Social Welfare Policy and Social Work 3 SI  
Cross-national comparisons.  
PREREQ: SWK 611.

SWK 768 Family & Child Welfare Policy 3 Y  
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 611.

SWK 771 Field Instruction III 3 S  
Supervised practice experience in social agencies related to student's concentration choice. No credit will be given for only one semester of field work.

SWK 772 Field Instruction IV 3 S  
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 3 Y  
Planning, development, and funding of social service programs in both private nonprofit and public settings.

SWK 775 Program Evaluation 3 S  
Evaluation of human service programs reflected in students' field placements. Evaluability assessment. Program description. Posing evaluation questions. Quantitative and qualitative methods of needs assessment, information management, process evaluation, outcome evaluation, cost analysis, reporting results.  
PREREQ: SWK 662; COREQ: SWK 771 OR 772.

SWK 776 Clinical Practice Evaluation 3 S  
Evaluation of clinical practice reflected in students' field placements. Principles of measurement. Single system design. Critical thinking in clinical decision making. Quantitative and qualitative methods of systematic self-evaluation, instrument design, data analysis.  
PREREQ: SWK 662; COREQ: SWK 771 OR 772.

SWK 777 Community Organization and Development 3 Y  
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 3 Y  
Social policy analysis, planning and advocacy knowledge, methods and skills applied to social reform and social change in health and welfare arenas.  
PREREQ: SWK 611.

SWK 779 Seminar in Organizational Development and Leadership 3 Y  
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 3 Y  
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 3 SI  
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 789 Individualized Reading Program 1-4 S  
Selected readings in social work and related fields under guidance of appropriate faculty.

SWK 790 Independent Study 1-6 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. R

SWK 997 Masters Thesis 0-6 SI  
Individual thesis guidance. Comprehensive research plan is presented for faculty approval. Thesis submitted to Graduate School for examination.

# Faculty

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Keith A. Alford, Associate Professor, Social Work  
Ph.D., Ohio State University, 1997

Colleen Baish Cameron, Professor of Practice, Child and Family Studies  
M.Ed., University of Nevada, 2003

Tim Barr, Instructor, Public Health, Food Studies and Nutrition  
B.S., Rochester Institute of Technology, 1971

Anne C. Bellows, Professor, Public Health, Food Studies and Nutrition  
Ph.D., Rutgers University, 1999

Dessa Bergen-Cico, Assistant Professor, Public Health, Food Studies and Nutrition  
Ph.D., Syracuse University, 1992

Lynn S. Brann, Assistant Professor, Public Health, Food Studies and Nutrition  
Ph.D., University of Tennessee, 2003

Maria Brown, Assistant Research Professor, Social Work  
Ph.D., Syracuse University, 2010

Rick Burton, David B. Falk Professor, Sport Management  
M.B.A., Marquette University, 1991

James R. Byrne, Professor of Practice, Public Health, Food Studies and Nutrition  
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.

Kenneth N. Corvo, Associate Professor, Social Work  
Ph.D., Case Western Reserve University, 1993

Luvenia W. Cowart, Professor of Practice, Public Health, Food Studies and Nutrition  
Ed.D., Syracuse University, 1980

Ellen deLara, Associate Professor, Social Work  
Ph.D., Cornell University, 2000

Thom deLara, Professor of Practice, Chair, Marriage and Family Therapy  
M.S.W., Syracuse University, 1975

Kendra DeLoach, Assistant Professor, Social Work  
Ph.D., University of South Carolina, 2010

Dennis Deninger, Professor of Practice, Sport Management  
B.A., Syracuse University, 1973

Bonnie Everhart, Instructor, Sport Management  
Ph.D., The Ohio State University, 1994

Joseph P. Fanelli, Instructor, Child and Family Studies  
Ph.D., Syracuse University, 1980

Rashmi Gangamma, Assistant Professor, Marriage and Family Therapy  
Ph.D., Ohio State University, 2008

Alejandro Garcia, Professor, Social Work  
Ph.D., Brandeis University, 1980

Mary E. Graham, Professor, Sport Management  
Ph.D., Cornell University, 1995

Brooks B. Gump, Professor, Public Health, Food Studies and Nutrition  
Ph.D., University of California, San Diego, 1995

Tanya M. Horacek, Associate Professor, Public Health, Food Studies and Nutrition  
Ph.D., University of Nebraska, 1996

Kimberly Johnson, Instructor, Public Health, Food Studies and Nutrition  
M.S., Syracuse University, 2008

Pamela J. Johnson, Assistant Professor, Social Work  
Ph.D., Case Western Reserve University, 2010

Eunjoo Jung, Assistant Professor, Child and Family Studies  
Ed.D., Illinois State University, 2004

Irene Kehres, Assistant Dean, David B. Falk College of Sport and Human Dynamics, Professor of Practice, Child and Family Studies  
Ph.D., Syracuse University, 2004

Mary Ann P. Kiernan, Instructor, Public Health, Food Studies and Nutrition  
B.S., Florida International University, 1988

Eric Kingson, Professor, Social Work  
Ph.D., Brandeis University, 1979

Karen E. Kirkhart, Professor, Social Work  
Ph.D., University of Michigan, 1979

Ambika Krishnakumar, Associate Professor, Child and Family Studies  
Ph.D., University of Tennessee, 1997

Linchi Kwok, Assistant Professor, Public Health, Food Studies and Nutrition  
Ph.D., Texas Tech University, 2009

Sandra D. Lane, Professor, Public Health, Food Studies and Nutrition  
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, Food Studies and Nutrition  
Ph.D., Syracuse University, 1992

David Larsen, Assistant Professor, Public Health, Food Studies and Nutrition  
Ph.D., Tulane University, 2013

Tracey Musarra Marchese, Professor of Practice, Social Work  
M.S.W., Rutgers University, 1993

Katherine McDonald, Associate Professor, Public Health, Food Studies and Nutrition  
Ph.D., University of Illinois at Chicago, 2006

Chad McEvoy, Professor, Sport Management  
Ed.D., University of Northern Colorado, 2002

Mary Ann Middlemiss, Associate Professor, Public Health, Food Studies and Nutrition  
Ph.D., Syracuse University, 1987

Deborah J. Monahan, Associate Dean, David B. Falk College of Sport and Human Dynamics, Professor, Social Work  
Ph.D., University of Arizona, 1985

Robert P. Moreno, Associate Professor, Chair, Child and Family Studies  
Ph.D., Stanford University, 1995

Nancy R. Mudrick, Professor, Social Work  
Ph.D., Brandeis University, 1976

Matthew Mulvaney, Associate Professor, Child and Family Studies  
Ph.D., University of New Hampshire, 2004

Lutchmie Narine, Associate Professor, Public Health, Food Studies and Nutrition  
Ph.D., University of Toronto, 1993

Lisa Olson-Gugerty, Instructor, Public Health, Food Studies and Nutrition  
Ph.D., Nova Southeastern University, 2005

Rodney Paul, Professor, Sport Management  
Ph.D., Clemson University, 2000

Gina Pauline, Associate Professor, Sport Management  
Ed.D., Ball State University, 2006

Jeff Pauline, Associate Professor, Sport Management  
Ed.D., West Virginia University, 2001

Sudha Raj, Assistant Professor, Public Health, Food Studies and Nutrition  
Ph.D., Syracuse University, 1991

Kamala Ramadoss, Assistant Professor, Child and Family Studies  
Ph.D., Purdue University, 2008

Rachel Razza, Assistant 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

Thomas J. Schur, Instructor, Marriage and Family Therapy  
MSW, Syracuse University, 1979

Sarah H. Short, Professor, Public Health, Food Studies and Nutrition  
Ph.D., Syracuse University, 1975

Merril Silverstein, Marjorie Cantor Endowed Professor in Aging, Social Work  
Ph.D., Columbia University, 1990

Carrie Jefferson Smith, Associate Professor, Director, Social Work  
D.S.W., Howard University, 1998

Kay Stearns Bruening, Associate Professor, Chair, Public Health, Food Studies and Nutrition  
Ph.D., New York University, 1997

Linda Stone Fish, Professor, Marriage and Family Therapy  
Ph.D., Purdue University, 1985

Maureen Thompson, Associate Professor, Public Health, Food Studies and Nutrition  
Ph.D., Syracuse University, 1990

Elizabeth Brown Thoreck, Instructor, Social Work  
LMSW, Syracuse University, 1993

Jane Uzategui, Instructor, Public Health, Food Studies and Nutrition  
M.S., Finch University of Health Related Sciences, 2002

Michael D. Veley, Professor of Practice, Chair, Sport Management  
M.P.S., Cornell University, 1982

Dyane Watson, Instructor, Marriage and Family Therapy  
Ph.D., Michigan State University, 2007

Evan Weissman, Assistant Professor, Public Health, Food Studies and Nutrition  
Ph.D., Syracuse University, 2012

Rick Welsh, Professor, Public Health, Food Studies and Nutrition  
Ph.D., Cornell University, 1995

John Wolohan, Professor, Sport Management  
J.D., Western New England University, 1992

# School Of Information Studies

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Liz Liddy, Dean  
Hinds Hall  
ischool.syr.edu



## About The School

The Syracuse University School of Information Studies (iSchool) is a leading University center in advancing both the theory and practice of the information professions, based on an interdisciplinary view of information phenomena. The iSchool at Syracuse—the original information school—is a leader in the information field, which lies at the intersection of management, technology, and people. The iSchool offers an innovative curriculum that is continuously updated to meet future industry trends and incorporate rapidly changing technologies. The iSchool at Syracuse University is currently ranked No. 1 in information systems, according to U.S. News & World Report.

Our approach stands out from other institutions that offer computer science, management, information science, and related programs in that our focus is on users and user information needs as a starting point for integrating information and information technology into organizations. The faculty combines expertise in information systems, linguistics, computer science, library science, education, business management, school media, digital literacy, management information systems, telecommunications, wireless and emerging technologies, and communication. The faculty are very active in research topics that reflect their diverse intellectual backgrounds and interests.

### The Central Themes of the School of Information Studies

Five basic themes express the school's research and teaching mission. These themes define our vision of the information field and provide a focus for both the design of our curriculum and our sponsored research.

### The Interrelationship Among the Five Central Themes of the School of Information Studies:

- Information and Telecommunications Management considers information and technologies within organizational contexts.
- Information in the Marketplace relates how organizations interact with each other and exchanging information and products.
- Information Representation and Retrieval forms the building blocks of information systems as well as the processes necessary to enable humans to access and use information.
- Human-Information Interaction focuses on people and how the individual or group seeks and uses the products of information representation and retrieval.
- Information and Society considers the implications and issues for culture and society of the broad scope of information systems and technologies.

The School of Information Studies offers the following degree programs:

#### Undergraduate

- Bachelor of Science in Information Management and Technology
- Bachelor of Science in Systems and Information Science
- Dual Major with the Martin J. Whitman School of Management
- Dual Major with the S.I. Newhouse School of Public Communication
- Minor in Information Management and Technology
- Minor in Global Enterprise Technology
- Minor in Information Technology Design & Startups

#### Graduate

- Master of Science in Library and Information Science
- Master of Science in Library and Information Science, School Media Specialization
- Master of Science in Information Management
- Master of Science in Telecommunications and Network Management
- Executive Master of Science in Information Management
- Ph.D in Information Science and Technology
- Doctorate of Professional Studies in Information Management

#### Certificates of Advanced Study

- Cultural Heritage Preservation
- Data Science

- Digital Libraries
- eGovernment Management and Leadership
- Global Enterprise Technology
- Information Innovation: Social Media
- Information Security Management
- Information Systems and Telecommunications Management
- School Media

## Message From The Dean

Elizabeth D. Liddy

The greatest challenge facing us in our increasingly digital world is the potential for the wealth of information that now exists to create a poverty of attention. We as a society need to better organize, represent, locate, and provide information efficiently and effectively, or risk being consumed by this overabundance of information. That's where the Syracuse University School of Information Studies (iSchool) makes one of its most significant contributions.

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.

Our expertise in information management is attracting the attention of companies as well as governments and organizations around the globe that compete to recruit our graduates. For instance, financial services giant, JPMorgan Chase, initiated a collaboration with Syracuse University, partly because of the iSchool's No. 1 ranking in information systems and excellent reputation across all of its programs. Our faculty members are working with JPMorgan Chase leadership to craft and deliver a world-class enterprise information technology curriculum as well as develop research projects that maximize our faculty members' expertise on issues important to JPMorgan Chase, including green data centers, global collaboration, and identity management and access control. We have similar ties with a range of corporations and industries.

We educate our library and information science students to take leadership positions in and to develop forward-looking policies and guidelines for libraries and other organizations. Our school media faculty members and graduates are changing policies to improve the quality of education and to motivate learning in students of all ages. Our faculty and alumni of the telecommunications and network management program are reshaping Internet governance and telecommunications policies around the globe, securing our networks and information systems, and expanding access to information communication and technology through innovative product design and implementation.

Our faculty members are masters of many academic fields and work across traditional disciplinary lines, and they teach our students to do the same. This unified diversity is the strength of the school as well as of the information field itself. The information profession is the field of the future, and we invite you to become part of this future. Let us provide you with the skills to achieve positive change at the intersection of management, technology, and people.

Join us!

## Vision And Values

The School of Information Studies, established in 1896 and renamed as the first Information School in 1974, has a long tradition of leading innovation and change. Our ideals and values are the foundation for our success.

### Our Vision

To expand human capabilities through information.

What matters is that we make a difference in everything we do, and that this difference is a positive one affecting individuals, organization, and ultimately society. We intend to add value to society through education and through the information, systems, and services we help to create. We pledge to do this ethically, competently, professionally, with respect for the individual, and with passion.

### Our Values

- **Inquiry.** We are dedicated to exploration. Exploration and innovation are critically important to the information field and a vital part of our school. We share the university's vision of being a leading student-centered research university by dedication to being a student-centered research college. We promote this aim through discovery, development, application, integration, and active learning.
- **Individuality.** We are committed to the individual. High-performance organizations are composed of high-performance individuals. Our faculty, staff, students, and partners are risk takers who have a high tolerance for ambiguity. While we value our work together in a highly spirited team atmosphere, we value the individual, and respect individuality as such. Our organizational norms dictate that we are relentless in attacking problems, but supportive in valuing individual differences.
- **Diversity.** We are intellectually diverse. Complex problems require multidimensional and interdisciplinary analysis and solutions. The school fosters a multiplicity of "voices" addressing the important areas of teaching and research in the information field. The school seeks faculty from many related disciplines who respect a diversity of opinion and perspective, and thrive on the tension of discussion and debate.

- **Adaptability.** We are adaptive and able to evolve. Today's competitive, complex, and ever-changing environment requires innovation, flexibility, and rapid responses. Our initiatives and developmental processes are driven by a Do-Learn-Revise model. This model encourages entrepreneurship and risk-taking, celebrating success as a community achievement and embracing challenge as a learning opportunity.
- **Unity.** We are a faculty of one. The faculty sits as a whole, not as individuals or groups who represent one specific program in which they teach or ascribe affiliation. Students and faculty are challenged to benefit from the paradox of a single information field manifested in many professional expressions. Students and faculty learn from each other by shared intellectual experiences and by appropriate curriculum integration across the degree programs.
- **Continuity.** We are an enduring organization. With over a century of innovation and leadership behind us, the school makes an enduring contribution to our field. In building our school we concentrate on building an enduring organization that goes beyond the influence of any particular dean or member of the faculty.

#### Our Goal

To transform the information field through leadership in research, development, and education.

#### Our Points of Distinction

- whatever we do, we do through information and for people
- through information we transform individuals, organizations, and society
- we recognize that information technology and management processes are means and not ends

## Research Centers

Many of the faculty conduct their research individually and in small, flexible, interdisciplinary teams. For certain specialized areas and 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 Digital Literacy** CDL is an interdisciplinary, collaborative research and development center at Syracuse University dedicated to (1) understanding the impact of information, technology, and media literacies on children and adults (particularly those from underserved populations) in today's technology-intensive society and (2) studying the impact having or not having these literacies has on people, organizations, and society.
- **Center for Convergence and Emerging Network Technologies** CCENT The mission of CCENT is to understand the future of networking technologies, and to engage students, faculty and industry in the process of defining and shaping that future. CCENT currently has setup four testbeds for studying emerging network technologies, including wireless networking, network security, unified communication systems, Internet protocol version 6.
- **Center for Information and Systems Assurance and Trust** Established in June 2009, CISAT promotes the exploration of new ideas in information and systems assurance and trust by bringing together faculty from seven schools and colleges at Syracuse University: the School of Information Studies, L.C. Smith College of Engineering and Computer Science, College of Law, Maxwell School of Citizenship and Public Affairs, Newhouse School of Public Communications, Whitman School of Management, and the College of Arts and Sciences, who share a common vision of improving society through the creation of trustworthy systems.
- **Center for Natural Language Processing** CNLP advances the development of human-like language understanding software capabilities for government, commercial, and consumer applications.
- **Center for Research on Collaboratories and Technology Enhanced Learning Communities** Cotelco is a social science research center organized to explore the socio-technical infrastructure required to support geographically distributed collaboration and knowledge work, particularly between developed and developing countries.
- **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.
- **Because Play Matters** This research lab explores the intersection of games and libraries, and provides advice to librarians about the most appropriate gaming activities for different demographic groups and library goals and provide advice to the gaming industry about the needs of libraries and schools regarding gaming.
- **Internet Governance Project** IGP seeks to inform and shape Internet public policy choices by providing independent analysis and timely recommendations in ways that facilitate global participation in the Internet and promote individual rights. It is an alliance of academics that puts expertise into practical action in the fields of global governance, Internet policy, and information and communication technology.
- **WiGiT** WiGiT is a Virtual Organization, and a shared experimental testbed spanning campuses and communities. WiGiT is conducting research and refining open specifications for transformative technologies to create infrastructureless ad hoc networks and markets, bridging the gap between wireless network middleware and grid application layers and accelerate commercialization and adoption of new products and services.

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 with a cafe that features coffee, pastries and sandwiches.

Equipped with high-performance wireless networking, the facility supports virtual collaborations with global partners and includes an enhanced computer

laboratory infrastructure with four main labs:

- The iLab—Accommodating up to 40 students, this is the signature computer lab, featuring dual display screens for increased productivity in a variety of computer applications.
- iTELL (Information Technology Experiential Learning Lab)—Students get 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 iSchool’s more technical classes, this lab features a variety of hardware and software for students to use.
- Innovation Studio—This multi-purpose, highly reconfigurable 1,000-square-foot space is modeled after an artist’s studio to promote collaboration, idea generation, and rapid prototype development for student and faculty teams. A video studio with editing bays is attached.

Check out our modern classrooms, laboratories/meeting rooms by taking a video tour of Hinds Hall.

The School of Information Studies’ home in Hinds Hall received a 2008 American Institute of Architects Central New York Chapter Citation Award for the redesign and renovations conducted by Ashley McGraw Architects of Syracuse.

## 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 computer storage devices to the people and organizations needing it. As a professional school, the School of Information Studies 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, and transmitted. 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 and is ranked No. 1 in information systems by U.S. News & World Report.

### 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 iSchool distance education programs. With limited residencies and asynchronous course delivery, 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 equality in campus and online learning programs. Graduates emerge prepared to excel in the information profession of their choice.

### Programs

All master's and certificates of advanced study programs (except the eGovernment Management and Leadership and the Cultural Heritage Preservation certificate programs) offered by the School of Information Studies can be completed on campus or in the online/distance learning format. Each distance 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 distance and campus students. The only difference is the delivery mode.

Graduates of the School of Information Studies distance 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 audit on campus, online, or in a limited residency format. Courses are open to non-matriculated and matriculated graduate students, and most courses meet in an intensive 9 a.m. to 5 p.m. format, and online courses meet asynchronously via our Learning Management System courseware 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.
- Doctorate of Professional Studies in Information Management--The 51-credit, limited residency Doctorate of Professional Studies in Information Management prepares executives to be the catalyst for positive change within their organizations. Senior managers and executives in business, public administration, military, and other industries need proven governance and decision-making skills and the ability to empirically and critically evaluate processes and technologies. Mid-career professionals who graduate from the Executive Doctorate program have the expertise and capacity to lead their organizations to the next level.

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 life-long 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

The Syracuse University 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.

### iSchool iCaucus

We are a founding member of the iCaucus, an educational organization consisting of deans from a growing number of leading information schools across the globe who have joined together to build awareness of, support for, and involvement with the information field.

## Academic Offerings

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### Certificate Of Advanced Study In Cultural Heritage Preservation

Certificate of Advanced Study in Cultural Heritage Preservation

Contact Kenneth Lavender, Program Director, 226 Hinds Hall, 315-443-6890, [igrad@syr.edu](mailto:igrad@syr.edu); [ischool.syr.edu/culturalheritage](http://ischool.syr.edu/culturalheritage)

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 archaeological 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

##### Required Course (3 credits)

IST 622 Introduction to Cultural Heritage Preservation

##### 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

ANT 682 Life Histories/Narratives

ANT 645/NAT 645 Public Policy and Archaeology

ANT 461/ANT 661/NAT Museums and Native Americas

ANT 781 Ethnographic Methods

IST 616 Information Resources: Organization and Access

IST 624 Preservation of Library and Archival Collections

IST 628 Management and Organization of Archival Collections

IST 632 Management and Organization of Special Collections

IST 677 Creating, Managing, and Preserving Digital Assets

MUS 500 Museums & Contemporary Practice

MUS 506 Introduction to Curatorship

MUS 607 Collections Management

MUS 703 Advanced Curatorship

With consent of program advisors, a student may petition to substitute other courses for elective credit towards the CAS.

##### 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, or IST 971, or upon approval of the appropriate program advisor. By petition, the student may receive 150 hours of credit upon completion.

##### Summation

In their final semester students will:

- 1) 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;
- 2) 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.

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## Certificate Of Advanced Study In Data Science

Certificate of Advanced Study In Data Science

Contact Erin Bartolo, Data Science Program Manager, 114D Hinds Hall, 315-443-3777, [iGrad@syr.edu](mailto:iGrad@syr.edu); [www.ischool.syr.edu/datascience](http://www.ischool.syr.edu/datascience)

The CASDS program requires 15 credit hours covering specific focus areas of digital curation, data science education, and information analytics. It comprises 2 Core Courses (6 credits) in databases and data science. The remaining credits (9) are elective credits to be selected from such areas as communication and collaboration, digital curation, digital libraries, information assurance, project management, mashups, research, scripting, statistics, technologies, and visualization.

All candidates should have a bachelor's degree or equivalent. In addition, it is recommended that potential students have a strong background in science, statistics, research, and/or information technology. Applicants should have an interest in interdisciplinary work focused on managing big data using information technologies as tools. Prospective students who have an interest in data science, but lack the recommended undergraduate background, are encouraged to inquire. Individual consultations are available for such prospective students to explore their potential candidacy.

#### Required Courses

IST 659 Data Administration Concepts and Database Management  
IST 687 Applied Data Science

#### Elective Courses

IST 558 Technologies for Web Content Management  
IST 565 Data Mining  
IST 645 Managing Information Systems Projects  
IST 657 Basics of Information Retrieval Systems  
IST 664 Natural Language Processing  
IST 676 Foundations of Digital Data  
IST 677 Creating and Managing Digital Assets  
IST 681 Metadata  
IST 718 Advanced Data Analytics  
IST 719 Information Visualization  
IST 722 Data Warehouse\*  
IST 769 Advanced Database Management  
IST 776 Research Methods in Information Science and Technology  
IST 777 Statistical Methods in Information Science and Technology

#### \* Additional Course Descriptions:

IST 722 Data Warehouse: Introduction to concepts of business intelligence (BI) and the practice/techniques in building a BI solution. Focuses are on how to use data warehouses as a BI solution to make better organizational decisions.

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## Certificate Of Advanced Study In Digital Libraries

### Certificate of Advanced Study in Digital Libraries

Contact Jill Hurst-Wahl, Associate Professor of Practice, 343 Hinds Hall, 315-443-2911, [igrad@syr.edu](mailto:igrad@syr.edu);  
<http://ischool.syr.edu/future/cas/digitallibraries.aspx>

The Digital Libraries Certificate of Advanced Studies (CAS) program prepares students to be leaders in the library and information profession. Organized collections of digital information - whether text, images, numbers, or sound - have become society's places to go for organized information on a wide variety of topics. Calling these digital collections "libraries" draws attention to components that organize the collections and services that contribute to their use. This certificate can be tailored to meet the needs of those who want to work with organizing and managing collections of digital data and/or information, either within or outside of established libraries.

Challenges exist that will make the arena of digital libraries a fertile environment for innovation. These challenges include technical and information architecture, metadata, optimal retrieval engines, user-friendly design and display of information, institutional repositories for data outputs, archiving and preservation, and machine and human mediated services for using the collections.

The Certificate of Advanced Studies is offered in campus and distance learning formats to full-time or part-time students.

### CAS in Digital Libraries Curriculum

To earn the CAS in Digital Libraries, you must complete 18 credits, including three required core courses and three additional elective courses. The core courses cover the basics of creating and managing digital libraries and the electives allow students to tailor their program to their interests.

#### Core Courses (9 credits)

The 9-credit core provides a foundation for further study and encompasses essential professional concepts and competencies. The following are the required

#### core courses:

- IST 676 Foundations of Digital Data
- IST 677 Creating, Managing, and Preserving Digital Assets
- IST 971 Internship in Information Studies

#### Electives (9 credits)

Electives allow students to extend their core knowledge and skills in directions of their choice. Students choose from the following recommended online or campus courses, or from approved courses offered during the academic year or the Regnier Summer Institute.

- IST 553 Information Architecture for Internet Services
- IST 558 Technologies in Web Content Management
- IST 565 Data Mining
- IST 631 Theory of Classification and Subject Representation
- IST 637 Digital Information Retrieval Services
- IST 638 Indexing and Abstracting Systems and Services
- IST 639 Enterprise Technologies
- IST 641 User-Based Design
- IST 645 Managing Information Systems Projects
- IST 649 Human Interaction with Computers
- IST 653 Introduction to Telecommunications and Network Management
- IST 654 Information Systems Analysis
- IST 657 Basics of Information Retrieval Systems
- IST 659 Data Administration Concepts and Database Management
- IST 662 Instructional Strategies and Techniques for Information Professionals
- IST 667 Information Technology for Libraries and Information Centers
- IST 681 Metadata
- IST 686 Social Media in the Enterprise
- IST 687 Applied Data Science
- IST 719 Information Visualization
- IST 735 Copyright for Information Professionals
- IST 769 Advanced Data Administration Concepts and Database Management

#### 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 18 credits completed for the certificate can be included in the 42-credit requirement Master of Science in Information Management or 36-credit Master of Science in Telecommunications Management. Selective credits may be applied to the 36-credit Master of Science in Library and Information Science.

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## Certificate Of Advance Study In E-Government Management And Leadership

Certificate of Advance Study in E-Government Management and Leadership

Contact: [igrad@syr.edu](mailto:igrad@syr.edu)

<http://ischool.syr.edu/future/cas/egov.aspx>

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: 1) leadership and management of information and communication technology applications found in public organization E-government systems, and 2) technical design aspects of E-government in public organizations. There are two required courses for this degree:

- IST 711 Electronic Government, Concepts and Practice
- PAI 895 Executive Education Seminar

Through careful advisement, students will select two additional courses offered in either the iSchool or Maxwell School based on their prior education and experience as well as professional needs. The certificate program is intended to prepare students to lead and manage e-government applications in complex public and private sector organizations.

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## Certificate In Advanced Study In Global Enterprise Technology

Certificate in Advanced Study in Global Enterprise Technology

Contact David Dischiave, Program Director, 225 Hinds Hall, 315-443-2911, [ddischia@syr.edu](mailto:ddischia@syr.edu); Sarah Weber, Program Manager, 114 Hinds Hall, 315-443-5801 [stweber@syr.edu](mailto:stweber@syr.edu); [get-su.syr.edu](mailto:get-su.syr.edu)

The Certificate of Advanced Study in Global Enterprise Technology (CAS in GET) is an interdisciplinary program designed to prepare students with the fundamental knowledge useful in pursuing careers in large global organizations where they will be working with large-scale, complex organizational and information systems. It is a unique combination of coursework and experiential learning that can be tailored to a student's desired emphasis of information management or information systems technology.

This is a 15 credit hour program that leads to a Certificate of Advanced Study in Global Enterprise Technology.

#### Prerequisites:

All candidates should have a bachelors degree or equivalent, and a minimum of two years work experience.

#### Curriculum

##### Certificate Core (7.5 credits)

The core requirement courses are designed to each reflect subject matter from all three component schools, and then a capstone course combines the concepts learned throughout the CAS at a summary level based upon a group project and is taught by faculty representing all three component schools. The 1.5-credit format of the core courses allows the full diversity of subjects to appear in the core while allowing additional electives to reflect the student's own choice of emphasis in the remainder of the program.

GET 665 IT Strategy & Business Value  
GET 662 Enterprise Systems Strategies  
GET 634 Effective Communication within a Global Enterprise  
GET 683 System Modeling and Simulation  
GET 684 Large-scale IT Projects

##### Certificate Electives (7.5 credits)

###### Information Studies Track (Online)

IST 654 Information Systems Analysis\*  
IST 683 Management of IT-Enabled Change  
IST 625 Enterprise Risk Management  
IST 645 Managing Information Systems Projects  
GET 646 Advanced Enterprise Systems Development Life Cycle  
GET 675 The Business of IT

Any graduate course focusing upon global business issues in IT – up to 3 credits

###### Management Track (Online)

(Courses require enrollment permission from the Whitman Graduate Studies Office)

MBC 631 Financial Accounting  
MBC 636 Marketing Management  
MBC 639 Leadership in Organizations  
MBC 643 Legal, Ethical and Natural Environment of Business  
MBC 645 Strategic Management

Any graduate course focusing upon leadership and ethical issues in business management – up to 3 credits

###### Engineering and Computer Science Track

CSE 643 Computer Security (Hybrid - in class or online)  
CSE 644 Internet Security (Hybrid - in class or online)  
CIS 655 Computer Architecture (in class)  
CSE 661 Advanced Computer Architecture (in class)

#### Earn a Master's Degree:

Participants in this program have the option of applying these graduate credits towards a masters degree offered in any one of the three sponsoring schools to the extent that the courses will satisfy the stated requirements of those degrees. Every effort has been made in the design of this program to allow the maximum flexibility of the CAS in GET for satisfying these other degree requirements, but the actual transfer of credits into those degree programs remains subject to the application process for those individual programs.

#### Possible Internal Cohort Approach:

A CAS in GET program consisting of the core courses and certain electives could be structured for a cohort of employees within a given organization.

These students would study together in a series of course sections scheduled to accommodate the availability of the students. Such course sections could allow focused case studies from within the organization to be used in the courses at the discretion of the instructors, could foster specific discussion about issues that are internal to the organization and would otherwise be unavailable for discussion in public sections of the courses, and could serve as a form of executive education targeted at the improvement of knowledge and skills in the area of Global Enterprise Technology. Such a cohort program would be subject to all requirements of the standard public CAS in GET, but could build upon the unique advantages of a homogeneous group of students with a common professional environment.

\* Additional Course Descriptions:

IST 654 Information Systems Analysis: 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.

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## Certificate Of Advanced Study In Information Innovation

### Certificate of Advanced Study in Information Innovation

Contact Anthony Rotolo, Social Media Strategist or Blythe Bennett, LIS Program Manager, 343 Hinds Hall, 315-443-2911, [igrad@syr.edu](mailto:igrad@syr.edu); <http://ischool.syr.edu/future/cas/infoinnovation.aspx>

The information field is in rapid flux with new emergent technologies, applications, and behaviors arising seemingly weekly. Social media, digital libraries, Internet search, the semantic web, and virtual organizations are only a few high-impact examples of information science innovation. While these areas may seem very different, they have at their core the notion of expanding human capability through information and technology. As such they share common core expertise in users, technology, information, and systems.

Innovation in the information field has long been a staple of the iSchool's curriculum. This 15-credit certificate makes this expertise available to those seeking graduate level education without the full master's degree. It also introduces an innovative system of managing the rapidly evolving areas of expertise in the information field and thus avoids dating the degree.

This is a 15 credit hour program that leads to a Certificate of Advanced Study in Information Innovation.

#### Prerequisites:

All candidates should have a bachelors degree or equivalent.

#### Curriculum

Required Gateway: Advanced Topics and Readings Course (3 Credits)

IST 620 Advanced Topics in Information Innovation

Each CAS student will be required to take an advanced topics and readings course. The core topics and materials for the class will consist of:

Aspects of the information field and concepts of information.

Aspects of innovation.

Materials related to the emergent technology under consideration.

Within the course students will work together across innovation topics, and in their subgroups (see "Faculty Process" below), with the course materials augmented and regularly reviewed with different innovations.

Required Course in Change Management (3 Credits)

IST 683 Managing Info. Technology-Enabled Change

Electives (6 Credits)

The following electives have been identified as relating to information innovation. They involve core information technologies and relate to the management of projects and organizations wrestling with emergent technologies and information phenomena. Students must take two.

IST 523 Graphic Design for the Web

IST 553 Information Architecture for Internet Services

IST 627 What's the Big Idea: Technology Innovation

IST 645 Managing Information Systems Projects

IST 649 Human Interaction with Computers

IST 657 Basics of Information Retrieval Systems

IST 659 Data Admin. Concepts and Database Mgmt.

IST 676	Foundations of Digital Data
IST 677	Creating, Managing, and Preserving Digital Assets
IST 681	Metadata
IST 685	Social Networks in Libraries
IST 686	Social Media in the Enterprise
IST 688	Social Web Technologies

### Exit Experience (3 Credits)

IST 971 Internship in Information Studies or an Independent Study

At the end of the program each student completing the CAS must identify a project for the internship and a project supervisor on the faculty. The project might include implementation of a given technology, developing an implementation plan at an organization, or a related intellectual endeavor (such as writing a paper for publication). Each student must also find an additional supervisor in the field to provide input and mentoring.

## M.S. In Information Management

### M.S. in Information Management

Contact: Art Thomas, Program Director, 343 Hinds Hall, 315-443-2911, [igrad@syr.edu](mailto:igrad@syr.edu); <https://ischool.syr.edu/future/grad/im.aspx>

Information has a fundamental effect on the structure, process and success of all organizations. Those who can manage the tools of information acquisition, use, retention and transfer can enable their organizations to develop and leverage strategic advantages based upon information. Along with these advantages comes also the responsibility to set forth and manage policies for the use and protection of information resources at all levels across the enterprise.

The Master of Science in Information Management (IM) is designed to prepare students to respond to four basic challenges confronting organizations today:

- increasing the effectiveness of managers and executives who work with information resources;
- designing and managing mission-critical information technologies within organizations;
- developing corporate and government policies to maximize the benefits resulting from the widespread use of these technologies; and
- leveraging information resources to achieve strategic advantage for business, government, and nonprofit organizations.

The iSchool at Syracuse University is a leading center for defining both the theory and the practice of information management. Like the school itself, the IM program is interdisciplinary in focus, combining expertise in the strategic management of information resources, organizational psychology, human-computer interaction, information economics, information policy, e-business, information technology, as well as data management.

### Professional Values and Competencies

IM graduates acquire skills in management and organizational change, solution analysis and design, communication and collaboration, business process improvement, and applied information technology. Our graduates learn to approach challenges with strategic vision, while ensuring that technology solutions integrate with enterprise goals.

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 Requirements** 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. Some requirements can be waived on the basis of the student's professional full-time work experience (see Waiver Policy below). 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.

The program includes three components:

(1) Primary core (10 credits)

IST 601 and IST 621 must be taken in the first semester of the student's program (gateway courses)

IST 601 Information and Information Environments (1 credit gateway course)

IST 614 Management Principles for Information Professionals

IST 618 Information Policy

IST 621 Introduction to Information Management (gateway course)

(2) Secondary Core (15 credits)

Management Approaches and Strategies Track (6 credits)

IST 619 Applied Economics for Information Managers

IST 645 Managing Information Systems Projects

IST 654 Information Systems Analysis\*

Technological Infrastructure Track (6 credits)

IST 639 Enterprise Technologies

IST 653 Telecommunications and Enterprise Network Management I

IST 659 Data Administration Concepts and Database Management

User Information Needs Track (3 credits)

IST 553 Information Architecture for Internet Services

IST 617 Motivational Aspects of Information Use

IST 626 Business Information Resources and Strategic Intelligence

IST 631 Theory of Classification and Subject Representation

IST 641 User-Based Design

IST 649 Human Interaction with Computers

IST 656 Telecommunications and Enterprise Network Management II

IST 662 Instructional Strategies and Techniques for Information Professionals

(3) Electives (8 to 14 credits)

All iSchool courses are acceptable electives. In addition, with the approval of their academic advisors, students are allowed to take certain courses from other schools at Syracuse University (such as the Whitman School of Management and the L.C. Smith College of Engineering and Computer Science) as electives toward their MS/IM program, up to 6 credits in other SU schools.

(4) Exit Requirement (3 to 9 credits)

IST 755 Strategic Management of Information Resources (capstone course):

- IST 755 is the capstone course and must be taken after the completion of IST 614 and at least 24 credits in the degree program.

IST 971 Internship (3-6 credits)

- For students with little or no appropriate experience as information professionals, students must register for at least 3 credits and no more than 6 credits of internship or cooperative education credits.
- Waiver Policy: Students with more than one year of full-time professional IT experience in the information technology field may waive the internship requirement (Experience may be audited.) This waiver will not reduce the total credits required for the IM degree but will allow the student to take other course electives to fulfill the credit requirements for the degree.

## Executive Track

<https://ischool.syr.edu/future/grad/imExec.aspx>

- Our Executive IM program will confer a Master's of Science in Information Management on your diploma.

Students with six or more years of appropriate full-time professional management experience in the information management field and who demonstrate appropriate professional qualifications may apply to the Master of Science in Information Management Executive Program. Those accepted into the

program may waive the internship requirement, and reduce the number of credits required for the degree to 30.

This degree program can be completed on campus, online, or through a combination of both options. Students take the same classes and learn 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 qualify for this program, applicants must demonstrate through both the extent and quality of their professional experience that they are strong candidates for leadership roles in the IM field. Applications will be evaluated on four dimensions to assess leadership potential and qualification for the executive program:

**Years of professional experience** A minimum of six years is necessary to be considered for the executive degree program. In some cases more than six years of experience may be necessary to demonstrate the qualifications required for admission to the executive degree program.

**Appropriate job responsibilities** The applicant's professional experience must be in one or more domains that are central to the IM field. (Examples are application development, database management, information security, network management, system integration, systems analysis, business process analysis, enterprise architecture, software engineering. Note that this list is not exhaustive.)

**Continually increasing responsibility** The candidate must be able to demonstrate that his or her career shows a steady progression through increasingly responsible positions.

**Curriculum Requirements** The 30-credit curriculum for these students will be determined in collaboration with an academic advisor, and will include 9-credit Primary Core, 9-credit Secondary Core, 9-credit Electives, and 3-credit Exit Requirement. With the advisor's approval, qualified students may substitute advanced courses for introductory primary and secondary core courses.

#### I. Primary Core: 9 credits

##### Management and Financial Track

IST 585 Knowledge Management  
IST 619 Applied Economics for Information Managers  
IST 625 Enterprise Risk Management  
IST 645 Managing Information Systems Projects  
IST 673 Strategic Planning in an Information-Based Organization  
IST 683 Managing Information Technology-Enabled Change  
IST 745 IT Project Portfolio and Program Management  
IST 726 Enterprise Architecture  
IST 727 IT Capital Planning  
IST 775 Information Industry Strategies

##### Policy Track

IST 686 Social Media in the Enterprise  
IST 618 Information Policy  
IST 711 E-Government  
IST 728 Information Security Policies  
IST 735 Copyright for Information Professionals

#### II. Secondary Core: 9 credits

##### Systems Solution Track

IST 654 Information Systems Analysis\*  
IST 585 Knowledge Management  
IST 625 Enterprise Risk Management  
IST 642 Electronic Commerce  
IST 645 Managing Information Systems Projects  
IST 679 E-Commerce Technologies  
IST 683 Managing Information Technology-Enabled Change  
IST 711 E-Government  
IST 726 Enterprise Architecture  
IST 745 IT Project Portfolio and Program Management

##### Technological Infrastructure Track

IST 522 Applied Information Security  
IST 558 Technologies in Web Content Management  
IST 565 Data Mining  
IST 623 Introduction to Information Security

IST 634 Security in Networked Environments  
IST 639 Enterprise Technologies  
IST 656 Telecommunication and Enterprise Network Management II  
IST 659 Data Administration Concepts and Database Management  
IST 679 Electronic Commerce Technologies  
IST 700 Leading and Securing Cyber Organizations  
IST 722 Data Warehouse\*  
IST 724 Database Security  
IST 769 Advanced Data Administration Concepts and Database Management

#### User Information Needs Track

IST 553 Information Architecture for Internet Services  
IST 617 Motivational Aspects of Information Use  
IST 626 Business Information Resources and Strategic Intelligence  
IST 629 Organizational Informational Security  
IST 631 Theory of Classification and Subject Representation  
IST 634 Security in Networked Environments  
IST 641 User-Based Design  
IST 649 Human Interaction with Computers  
IST 662 Instructional Strategies and Techniques for Information Professionals

IST 683 Managing Information Technology - Enabled Change

IST 800 Information Studies Seminar

#### III. Electives: 9 credits

Students have a broad range of electives to choose from, including those available for students in the school's other masters degree programs. In addition to formal courses, students may fashion an independent study by collaborating with a faculty member.

#### IV. Exit Requirement: 3 credits

IST 755 Strategic Management of Information Resources

#### \* Additional Course Descriptions:

IST 654 Information Systems Analysis: 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 722 Data Warehouse: Introduction to concepts of business intelligence (BI) and the practice/techniques in building a BI solution. Focuses are on how to use data warehouses as a BI solution to make better organizational decisions.

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## Professional Doctorate In Information Management

Contact: Lee W McKnight, 228 Hinds Hall, 315-278-4392, [lmcknigh@syr.edu](mailto:lmcknigh@syr.edu), [ischool.syr.edu/dps](http://ischool.syr.edu/dps)

The Doctorate of Professional Studies in Information Management (DPS-IM) is a 51-credit, part-time executive degree program for working professionals interested in applied research in the information field. This 36-42 month doctoral degree program prepares executives to be the catalyst for positive change within their organizations.

The professional doctorate serves mid-career information professionals. Our diverse curriculum will prepare you for advanced placement opportunities in executive and senior information management positions in the public, private, defense, academic, and non-profit sectors. Whether the goal is contributions and advancement within an organization or a shift in specialization within the information professions, a doctoral degree can open a world of new possibilities for a thriving career in a rapidly changing profession.

In particular, the Doctorate of Professional Studies in Information Management will be of interest to those who consume, create, supervise, or evaluate research as part of larger problem solving or information management.

#### Distinctive Features

- Limited residency, distance-learning format

Online, hybrid, and brief residency course formats provide flexibility for professionals while encouraging opportunities for interaction among students and

with faculty.

- **Applied focus**

The program enriches students' understanding of the role of information in the knowledge economy and teaches how to apply this expertise to enhance the effectiveness of information-based organizations in the public and private sectors. Students add to their breadth and depth of information and understanding, while building a solid foundation for advanced levels of information research, and develop competencies in program evaluation, data interpretation and applied problem solving.

- **Doctoral level research**

The program is completed with a rigorous and original thesis. The structured thesis research process through which students develop in-depth knowledge in a topic of their choice is a hallmark of the program. The creation of a quality thesis can lead to graduates' recognition in their field through the production of a book, white papers, articles, and other publications.

- **A strong peer network**

Students take many of their classes with the same student cohort in order to promote peer learning and support throughout the course of study. Campus seminars encourage collaboration and sharing and professional networking across cohorts at different stages in their program of study.

- **Interaction with Ph.D. in Information Science and Technology students**

Ph.D. and professional doctorate students may share blended learning environments in methods courses, fostering an overlap of intellectual domain and opportunities for resource sharing in classes, writing groups, research, and editorial support.

- **Areas of study**

Concentrations and fields of research can focus on any of the school's many disciplines, including cybersecurity, data science, digital libraries, electronic commerce, global networking, government information policy, human-computer interaction, information literacy, information seeking and classification, information management, knowledge management, policy, and technology planning, among others. (Our School web site includes profiles of faculty and current doctoral students.)

- **Faculty engagement**

Students work closely with their advisor and with their committee faculty, over the course of their 36- 42 months of study. Independent studies may complement courses by mutual consent and alignment of student and faculty research interests.

## 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:

- Six intensive residential seminars (6 credit hours),
- Three methods courses and three methods workshops (12 credits hours total)
- Four online doctoral seminars, advanced content, or independent study courses (12 credits hours)
- Two practical courses (6 credits hours) selected from our graduate curricula in Library Science, Information Management, or Telecommunications and Network Management.
- Five thesis courses (15 credits hours)

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.

This opening residency leads into the Summer Doctoral Gateway course, an online introduction to the breadth of research and issues in the information field.

During each of the first two regular academic semesters, (fall, spring) students take one research methods course and one doctoral seminar offered in an online format. Students will also return to campus in early fall for their second residential Intensive Seminar and Methods Workshop, and have the opportunity to interact with their course faculty, advisors, and fellow doctoral students.

After completing spring semester courses, the second summer of the program of study begins with the third residential Intensive Seminar and Methods Workshop. Students also use the summer semester to pursue an online course chosen from the curriculum of our professional master's programs; or they may negotiate an independent study course supervised by their advisor or another faculty member.

Early in the fall semester of the second year of study, students will return to campus for their fourth residential Intensive Seminar, continuing their face-to-face interaction with faculty, advisors, and fellow doctoral students. Course work in the fall semester will include their final methods course and an online course. Course work in the spring semester of the second year includes an independent study focusing on preparation of a thesis prospectus, for oral defense at the upcoming May Residency. Students also receive three thesis credits for preparatory research for their area of study.

The third summer semester begins with the fifth residency Intensive Seminar during which the students defend their thesis prospectus. Summer work includes preparation of the thesis proposal that will be defended in the fall. Students register for thesis credits.

During the final year of the program, students complete their final residential Intensive Seminar, as well as the remainder of their thesis credits. During this

final year, students may also visit campus to defend their thesis proposal and a final time to defend their completed thesis. These may coincide with the Residencies or be scheduled independently, at the discretion of the student with the consent of their advisor. These may be scheduled flexibly with their thesis committee to suit their progress and professional demands. The Thesis Proposal Defense may occur online. The final Thesis Defense occurs with the student on campus.

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.

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## Ph.D. In Information Science And Technology

Contacts:

Ms. Jennifer Barclay, Program Manager, 223 Hinds Hall, jbarcla@syr.edu

Dr. Steve Sawyer, 344 Director, Hinds Hall, 315-443-6147, ssawyer@syr.edu

<http://ischool.syr.edu/future/doctoral/phd.aspx>

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
- Information Technology: emerging technologies, wireless networks, natural language processing, middleware, information visualization.
- Information Organization and Access: data science and massive data sets, metadata, representation, knowledge discovery, information retrieval, image retrieval
- Networked Information: digital libraries, distribution of public information, digital reference
- Information and Education: digital literacy, e-learning, school library media, asynchronous learning networks

Since the program began in 1969, over 110 students have earned their Ph.D.

- More than half of these graduates pursue careers in academic and research institutions.
- About 25% of the PhD program's graduates pursue successful careers in information-related industries as entrepreneurs, consultants and policy experts.
- About 25% of the PhD program graduates enter governmental organizations in policy, technology and organizational leadership roles.

We are delighted that so many remain in contact with the faculty, the iSchool and other PhD program graduates.

Admission requirements include a bachelor's degree from an accredited institution in a broadly relevant area; GRE scores of 150 for Math and 162 for Verbal (equivalent to 600s on the old scoring scale) and an analytic writing score of at least four (4); TOEFL scores above 600 for students whose first language is not English; academic transcripts, three letters of recommendations from people who can evaluate the research potentials of the applicants; at least one writing sample; a current CV or resume; and a personal statement of research interests. Although not a requirement, most admitted students also have a master's degree. In making decisions about admission, the committee considers an applicant's career goals, motivation, research interests and potential fit to the faculty's expertise, prior education and work experiences, evidence of research preparation and experiences, and oral and written communication skills. Applications are considered for the fall semester only. The deadline for receipt of the completed application is early January.

The PhD in Information Science and Technology is a full-time, residential program. Students will need to commit to moving to Syracuse for at least four

years (and often five). The program of study is designed to maximize informal interaction and the apprentice-style of learning that is the hallmark of excellent PhD programs. The goal of the faculty of the School of Information Studies is to develop future peers through the PhD program, to advance knowledge for society through impactful research, to train the next generation of scholars, and to ensure that the graduates of this PhD program excel at what they choose to pursue!

#### Learning Outcomes:

Successful Ph.D. graduates will have the following set of skills and knowledge in:

1. 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).
2. Expertise with Research Design, Data Collection and Data Analysis methods: Demonstrate the ability to independently plan, design, execute, and report a scholarly research project.
3. 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.
4. Prepared for Professional Practices: Demonstrate knowledge of the professional norms, practices, and ethical standards of a defined scholarly field.
5. 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 these credits are devoted to the PhD thesis – the culminating and critical component of the Ph.D. in Information Science and Technology.

IST 999 Dissertation

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

IST 777 Statistical Methods in Information Science and Technology

IST 790 Advanced Topics in Information Organization

IST 820 Seminar in Research Methods

IST 830 Seminar in Information Systems

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

IST 840 Practicum in Teaching

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.

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## Certificate Of Advanced Study In Information Security Management

### Certificate of Advanced Study in Information Security Management

Contact: Art Thomas, Program Director, 343 Hinds Hall, 315-443-2911, [igrad@syr.edu](mailto:igrad@syr.edu); <https://ischool.syr.edu/future/cas/infosecurity.aspx>

Information is a critical asset within an organization. Lives and livelihoods depend on the continuation of information systems and their correct operation. With the increasing complexities 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 skills that manage a high degree of complex 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.

### Federal Designation in Information Assurance Education

The National Security Agency (NSA) and the Department of Homeland Security (DHS) jointly designate and sponsor the National Centers of Academic Excellence in IA Education (CAE/IAE) and CAE-Research (CAE-R) programs. The goal of these programs is to reduce vulnerability in the nation's information infrastructure by promoting higher education and research in information assurance, and by producing a growing number of professionals with information assurance expertise in various disciplines. CAE/IAEs and CAE-Rs receive formal recognition from the U.S. government as well as opportunities for prestige and publicity for their role in securing the nation's information systems.

Syracuse University originally received its CAE/IAE designation in 2001 and was re-designated in 2004, 2007, and 2012.

Students attending these designated schools are eligible to apply for scholarships and grants through the Department of Defense Information Assurance Scholarship Program (IASP) and the Federal Cyber Service Scholarship for Service Program.

### Curriculum

The certificate requires 15 graduate credits. All courses are 3 graduate credits unless specified otherwise.

Students are required to take the following courses:

1. Required Core: IST 623 (Introduction to Information Security)
2. At least one 3-credit course from the Management Security course list
3. At least one 3-credit course from the Technology Security course list
4. An additional 6 credit hours from the Management Security, Technology Security, or Information Studies course lists.

### Required Core:

IST 623 Introduction to Information Security

Management Security: at least 3 credits required

IST 600 Digital Forensics  
IST 600 Critical Infrastructure Protection  
IST 625 Enterprise Risk Management  
IST 629 Organizational Information Security  
IST 725 IT Security Architecture  
IST 728 Information Security Policy

Technology Security: at least 3 credits required

IST 522 Applied Information Security  
IST 634 Security in Networked Environments  
IST 724 Database Security  
CIS/CSE 643 Computer Security

CIS/CSE 644 Internet Security  
CIS/CSE 774 Principles of Distributed Access Control

Information Studies: an additional 6 credits are required from the above course lists or the following list:

IST 618 Information Policy  
IST 639 Enterprise Technologies  
IST 642 Electronic Commerce  
IST 645 Managing Information Systems Projects  
IST 656 Telecommunication and Enterprise Network Management II  
IST 659 Data Administration Concepts and Database Management  
IST 679 Electronic Commerce Technologies  
IST 690 Independent Study  
IST 971 Internship

### Scholarship Opportunities

The U.S. federal government has instituted several scholarship opportunities for citizens interested in completing the CAS in Information Security Management at Syracuse University. Learn more about these opportunities.

### 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 or 36-credit Master of Science in Telecommunications and Network Management. Selective credits may be applied to the 36-credit Master of Science in Library and Information Science.

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## Certificate Of Advanced Study In Information Systems And Telecommunications Management

### [Certificate of Advanced Study in Information Systems and Telecommunications Management](#)

Contact Art Thomas, Program Director, 343 Hinds Hall, 315-443-2911, [igrad@syr.edu](mailto:igrad@syr.edu); <http://ischool.syr.edu/future/cas/infoltel.aspx>

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&TM) 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 information systems and telecommunications management (IS&TM) 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
- web site design and management, including information architecture
- state-of-the-art applications in computer, telecommunications, and information technologies

**Curriculum** To earn the IS&TM certificate, you must complete 15 graduate credits.

**Certificate Core** All students must take IST 601 and either IST 621 or IST 653.

IST 601 Information and Information Environments (1 credit) and  
IST 621 Introduction to Information Management or  
IST 653 Introduction to Telecommunications and Network Management

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.

**Certificate Electives** (11 to 12 credits)

IST 553 Information Architecture for Internet Services  
IST 645 Managing Information Systems Projects

IST 654	Information Systems Analysis*
IST 656	Telecommunication and Enterprise Network Management II
IST 659	Database Administration Concepts and Database Management
IST 673	Strategic Planning in an Information-Based Organization
IST 683	Managing Information Technology-Enabled Change
IST 775	Information Industry Strategies

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 or 36-credit Master of Science in Telecommunications Management. Selective credits may be applied to the 36-credit Master of Science in Library and Information Science.

#### \* Additional Course Descriptions:

IST 654 Information Systems Analysis: 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.

## J.D./Master Of Science In Library And Information Science

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.

For further information, please contact the College of Law Admissions Office, 315-443-1962, [admissions@law.syr.edu](mailto: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](mailto:studentlife@law.syr.edu).

## M.S. In Library And Information Science

### M.S. in Library and Information Science

Contact Jill Hurst-Wahl, Program Director/ Blythe Bennett, Program Manager, 114M Hinds Hall, 315-443-5445, [igrad@syr.edu](mailto:igrad@syr.edu); <http://ischool.syr.edu/future/grad/lis.aspx>

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 Requirements:** The 37-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.

**Core Knowledge and Skills:** 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 (gateway course)
- IST 601 Information and Information Environments (1 credit)

Information Resources Core (9 credits)

- IST 605 Reference and Information Literacy Services
- IST 613 Library Planning, Marketing, and Assessment
- IST 616 Information Resources: Organization and Access

Management and Policy Core (6 credits)

- IST 614 Management Principles for Information Professionals (Note: not required for school media students)
- IST 618 Survey of Telecommunications and Information Policy

Electives:

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 advisory 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 553 Information Architecture for Internet Services
- IST 556 Wireless Interactive Communications
- IST 558 Technologies in Web Content Management
- IST 565 Data Mining
- IST 585 Knowledge Management
- IST 604 Cataloging of Information Resources
- IST 606 Legal Information Resources and Services
- IST 609 Biomedical Information Services and Sources
- IST 611 Information Technologies in Educational Organizations
- IST 612 Youth Services and Libraries and Information Centers
- IST 617 Motivational Aspects of Information Use
- IST 619 Applied Economics for Information Managers
- IST 625 Enterprise Risk Management
- IST 626 Business Information Resources and Strategic Intelligence
- IST 631 Theory of Classification and Subject Representation
- IST 632 Management and Organization of Special Collections
- IST 635 Collection Development and Access
- IST 637 Digital Information Retrieval Services
- IST 639 Enterprise Technologies
- IST 641 User-Based Design
- IST 642 Electronic Commerce
- IST 645 Managing Information Systems Projects
- IST 649 Human Interaction with Computers
- IST 653 Telecommunications and Enterprise Network Management I
- IST 656 Telecommunications and Enterprise Network Management II
- IST 657 Basics of Information Retrieval Systems
- IST 659 Data Administration Concepts and Database Management
- IST 661 Information Management in Schools
- IST 662 Instructional Strategies and Techniques for Info. Professionals
- IST 664 Natural Language Processing
- IST 667 Information Technology for Libraries and Information Centers
- IST 668 Literacy Through School Libraries
- IST 673 Strategic Planning in Information-Based Organizations
- IST 676 Digital Libraries
- IST 677 Creating, Managing, and Preserving Digital Assets
- IST 679 Electronic Commerce Technologies
- IST 717 Advanced Library Management
- IST 735 Copyright for Information Professionals
- IST 753 Telecommunications and Enterprise Network Management III
- IST 759 Planning and Designing Digital Library Strategies

Exit Requirement: The exit requirement for the LIS degree is a three-credit internship or independent study.

(1) Internship (IST 971): 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 supervisor, and his or her academic advisor. An internship may be paid or unpaid.

(2) 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.

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## Library And Information Science: School Media

Contact Blythe Bennett, Program Manager, 343 Hinds Hall, 315-443-2911, [igrad@syr.edu](mailto:igrad@syr.edu); <http://ischool.syr.edu/future/grad/lisSchoolMedia.aspx>.

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. In conjunction with the area of Instructional Design, Development, and Evaluation at the School of Education, the School of Information Studies has developed a competency-based academic program, accredited by the state of New York and leading to New York State certification as a school library media specialist.

The program requires the demonstration of competency in a number of specific tasks that are grouped into the following functional areas:

- Administration
- Design, development, and delivery of instruction
- Selection of media and information provision
- Organization and logistics
- Production and utilization of media
- Research
- Communication and leadership

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

- 1.1 Knowledge of learners and learning
- 1.2 Effective and knowledgeable teacher
- 1.3 Instructional partner
- 1.4 Integration of twenty-first century skills and learning standards

## Standard 2: Literacy and Reading

- 2.1 Literature
- 2.2 Reading promotion
- 2.3 Respect for diversity
- 2.4 Literacy strategies

## Standard 3: Information and Knowledge

- 3.1 Efficient and ethical information-seeking behavior
- 3.2 Access to information
- 3.3 Information technology
- 3.4 Research and knowledge creation

## Standard 4: Advocacy and Leadership

- 4.1. Networking with the library community
- 4.2 Professional development
- 4.3 Leadership
- 4.4 Advocacy

## Standard 5: Program Management and Administration

- 5.1 Collections
- 5.2 Professional Ethics
- 5.3 Personnel, Funding, and Facilities
- 5.4 Strategic Planning and Assessment

## Curriculum Requirements

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.

### Introductory Courses (4 credits)

- IST 511 Introduction to the Library and Information Profession (gateway course)
  - IST 601 Information and Information Environments (1 credit)
- (IST 511 and 601 are required in the first semester of matriculation.)

### Information Resources Courses (9 credits)

- IST 605 Reference and Information Literacy Services
- IST 613 Library Planning, Marketing, and Assessment
- IST 616 Information Resources: Organization and Access

### Management and Policy Courses (6 credits)

- IST 618 Information Policy
- IST 661 Management of School Libraries

### Other Required Coursework (15 credits)

- IST 564 Library and Information Services to Students with Disabilities
- IST 611 Information Technologies in Educational Organizations
- IST 612 Youth Services and Resources
- IST 663 Motivating 21st Century Learning in School Libraries
- IST 668 Literacy Through School Libraries

### 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 a student with special needs.

## IST 972 School Media Practicum (3 credits)

Fully supervised and evaluated school-based library experiences at the elementary and secondary levels. (120 hours each). Includes mandatory online seminar.

### 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 practicum placement.

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; and (4) 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.

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## Certificate Of Advanced Study In School Media

### Certificate of Advanced Study in School Media

Contact Blythe Bennett, Program Manager, 343 Hinds Hall, 315-443-2911, [igrad@syr.edu](mailto:igrad@syr.edu); <http://ischool.syr.edu/future/cas/schoolmedia.aspx>

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.

#### 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 and Information Services to Students with Disabilities
- IST 611 Information Technologies in Educational Organizations
- IST 612 Youth Services and Resources
- IST 661 Management of School Libraries
- IST 663 Motivating 21st Century Learning in School Libraries
- IST 668 Literacy Through School Libraries

#### 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.

#### Practicum (3 credits)

Students must complete two 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

### 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 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),

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 or 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.

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## M.S. In Telecommunications And Network Management

Contact Art Thomas, Program Director, 343 Hinds Hall, 315-443-2911, [igrad@syr.edu](mailto:igrad@syr.edu); <http://ischool.syr.edu/future/grad/tnm.aspx>

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 dynamics and an aptitude for effective project and technology management. With connectivity comes vulnerability, and this requires specialists who can not only build a network, but who can also secure it.

The M.S. in Telecommunications and Network Management (TNM) is designed to meet these needs. It offers students a comprehensive and applied overview of networking technologies. Students get a hands on and forward-looking knowledge of wired, wireless, and unified communications approaches. Students learn how to apply this knowledge to develop effective solutions that can achieve the strategic goals of the enterprise. Our faculty are familiar with the central connectivity and capacity issues that face large businesses, government entities, carriers, and network equipment providers. They have had practical experience in working with standards, government policies, laws, and regulations regarding networks of all kinds. Our faculty have also consulted with diverse organizations in both public and private sectors on infrastructure security approaches. The TNM program incorporates this experience into learning opportunities that can provide students a practical perspective on how to analyze, design, evaluate and manage the total context of networking technology.

Courses give students flexibility to design a program that fits the students career goals. There are classes in technology, management, industry and policy. Students are also encouraged to develop study plans with consideration for obtaining a Certificate of Advanced Study in such areas as Information Security Management, Information Innovation, or Data Science. The economic and policy aspects of the program stress the international environment as well as national and local markets. To complement their program, students may take courses in the L.C. Smith College of Engineering and Computer Science, the Whitman School of Management, or the Maxwell School of Citizenship and Public Affairs.

Graduates of the TNM program fill an increasing demand for networking technology professionals who can keep up with this rapidly changing field without losing sight of market needs and the strategic value of information. Our graduates have positioned themselves in careers such as:

- Network and infrastructure engineers and managers
- Technical and marketing support specialists
- Industry and policy consultants
- IT auditors
- Information security specialists
- Entrepreneurs in the telecommunications and network industry
- Chief Technology Officers (CTOs)
- Chief Information Officers (CIOs)

### Learning Outcomes

By the time students complete the TNM program, they will be able to demonstrate:

1. Leadership in technology management
2. Strategic awareness of the industrial, legal and political environment
3. Technical knowledge and experience

Leadership in Technology Management means that students will be able to:

1. Integrate knowledge of communication technologies with appropriate policy, financial and management issues
2. Apply critical thinking skills and creativity to managerial problems
3. Generate solutions to human and/or technological problems using relevant technologies, theories, and concepts; to model, analyze and critique them; and to make recommendations
4. 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:

1. Articulate the basic issues of telecommunication and information policy, and the key governmental and regulatory processes affecting them, from a global perspective
2. Describe the political, economic and social forces shaping information and communication technologies
3. Analyze industry trends and evaluate their implications for stakeholders

Technical Knowledge and Experience means that students will be able to:

1. Demonstrate broad knowledge of the fundamental principles and technical standards underlying telecommunication, networking and information technologies.
2. Architect and implement networked information systems
3. Continuously improve their technology knowledge and communication skills
4. 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 orients 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)
- IST 614 Management Principles for Information Professionals
- IST 618 Information Policy
- IST 653 Telecommunications and Enterprise Network Management I (gateway course)
- IST 656 Telecommunications and Enterprise Network Management II
- IST 753 Telecommunications and Enterprise Network Management III
- IST 623 Introduction to Information Security

### II. Electives: (14 credits)

Additional courses not in this list can count as electives but require advisor approval.

- IST 776 Research Methods in IST
- IST 522 Applied Information Security
- IST 654 Information Systems Analysis\*\*
- IST 553 Information Architecture for Internet Services
- IST 556 Mobile Network Services
- IST 688 Social Web Technologies
- IST 600 Mobile Application Design & Development
- IST 600 Scripting Foundations
- IST 600 Open Source Operating Systems and Applications
- IST 686 Social Media in the Enterprise
- IST 619 Applied Economics for Information Managers
- IST 625 Enterprise Risk Management
- IST 627 What's the Big Idea: Technology Innovation
- IST 634 Security in Networked Environments
- IST 639 Enterprise Technologies
- IST 641 User-Based Design
- IST 645 Managing Information Systems Projects
- IST 648 Enterprise Wireless Network Technologies
- IST 654 Information Systems Analysis
- IST 659 Data Administration Concepts and Database Management
- IST 679 E-Commerce Technologies
- IST 683 Managing Information Technology Enabled Change
- IST 687 Applied Data Science
- IST 686 Social Media in the Enterprise
- IST 745 Project Portfolio and Program Management
- IST 747 Complex Issues in IT Project Management
- IST 755 Strategic Management of Information Resources
- IST 775 Information Industry Strategies
- ELE 658 Data Networks, Design, and Performance\*

\* Programming Electives from LC Smith can enhance studies. 6 total credits of electives can be taken in other SU schools.

### IV. Exit Requirement: (3 credit hours)

IST 754 Capstone Course: can only be taken after the completion of IST 601, 653, 614, 618, and at least 18 credits. This capstone course gives students an opportunity to synthesize what they have learned through the course of their studies.

**\*\* Additional Course Descriptions:**

IST 654 Information Systems Analysis: 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.

# Courses

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## Global Enterprise Technology

### GET 500 Selected Topics 1-3 SI

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

### GET 600 Selected Topics 1-3 SI

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

### GET 602 Global Financial Systems Architecture 3 Y

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 1.5 Y

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 1.5 Y

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 in, and for, large enterprises.

### GET 662 Enterprise Systems Strategies and Architectures 1.5 Y

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 1.5

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 1.5 Y

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 3

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 1.5 Y

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 687 Euro Tech 3 Y

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 690 Independent Study 1-6 R

## Information Studies

### IST 500 Selected Topics 1-3 SI

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

### IST 502 New Directions in Academic Libraries 1-3 SI

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 1 SI

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

### IST 511 Introduction to the Library and Information Profession 3 Y

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 3 SI

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 639 OR (IST 233 AND 346).

### IST 523 Graphic Design for the Web 3 Y

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 3 Y

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 3 Y

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 3 SI

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 3 Y

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 3 SI

Introduction to data mining techniques, familiarity with particular real-world applications, challenges involved in these applications, and future directions of the field.

packets.

Optional hands-on experience with commercially available software packages.

IST 585 Knowledge Management 3 SI  
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 1-3 SI  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

IST 601 Information and Information Environments 1 Y  
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 604 Cataloging of Information Resources 3 SI  
Cataloging rules, standards, and metadata schemes; bibliographic utilities; formats of print and nonprint materials; cataloging software; management issues.

IST 605 Reference and Information Literacy Services 3 Y  
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 3 SI  
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 3 SI  
Development of medical libraries and information services. Bibliography of medicine and the allied health field. Development of computerized databases. Hands-on searching experience.

IST 611 Information Technologies in Educational Organizations 3 SI  
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 3 Y  
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 3 Y  
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 3 S  
Basic ideas, concepts and perspectives of management as they apply to the information professions. Students learn to understand and apply basic principles of organization theory and behavior and managerial techniques needed to improve organizational effectiveness.

IST 616 Information Resources: Organization and Access 3 Y  
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.  
PREREQ: IST 511.

IST 617 Motivational Aspects of Information Use 3 SI  
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 3 S  
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 3 Y  
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 3 Y  
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 3 Y  
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 3 Y  
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 3 S  
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 3 Y  
Introduction to preserving library and archival collections, including paper, audio-visual, and digital objects.

IST 625 Enterprise Risk Management 3 Y  
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 Business Information Resources and Strategic Intelligence 3 SI  
Content and structure of bibliographic and other information resources pertaining to business and strategic intelligence activities. Developing search strategies; understanding the information needs and uses of executives and managers working in business strategy and policy.

IST 627 What's the Big Idea: Technology Innovation 3 Y  
Double Numbered with: IST 427  
Innovation in information technology. Learn how to develop, grow and vet ideas and build teams ready to create a product, serve or business. Additional work required of graduate students.

**IST 628 Organization/Management of Archival Collections 3 Y**

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 3 SI**

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 3 IR**

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 3 IR**

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 3 SI**

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 3 SI**

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 3 SI**

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 3 SI**

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 3 SI**

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 3 Y**

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 3 Y**

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 642 Electronic Commerce 3 SI**

Current developments in information systems and networks for electronic business transactions. Includes electronic data interchange, secure financial transactions, and evolving marketplace mechanisms. Social impacts and opportunities are discussed.

**IST 645 Managing Information Systems Projects 3 Y**

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 3 IR**

Storytelling for all ages. Special application in education, librarianship, religion, and gerontology. Experiences in various techniques. Program development.

**IST 648 Enterprise Wireless Network Technologies 3 Y**

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 3 SI**

Human performance characteristics, user/system communication design alternatives, user behavior research methods, information system organizational impact.

**IST 653 Telecommunications and Enterprise Network Management I 3 Y**

A survey of telecommunications and network management issues that focuses on technological foundations, applications, and managerial issues in corporate telecommunications systems and networks.

**IST 656 Telecommunications and Enterprise Network Management II 3 Y**

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 3 SI**

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 3 Y**

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 3 Y**

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 3 SI

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 3 Y  
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 3 SI  
Crosslisted with: CIS 668  
Linguistic and computational aspect of natural language processing technologies. Lectures, readings, and projects in the computational techniques required to perform all levels of linguistic processing of text. Additional work required of graduate students.

IST 667 Information Technology for Libraries and Information Centers 3 SI  
Introduction to computerized technology and its applications in libraries and information centers; management issues of the automation processes; and new directions in the use of technology in information-based settings.

IST 668 Literacy Through School Libraries 3 Y  
Introduction to methods that support and reinforce classroom instruction in developmental reading and language acquisition processes and skills. Development of programs and services that foster self-expression, promote literature appreciation, and encourage information-seeking behaviors.

IST 673 Strategic Planning in an Information-Based Organization 3 Y  
Linking information needs and technology support to organizational goals as a critical skill for professionals. How to develop a strategic planning process for information resources, identify strategic issues, link strategic planning with organizational mandates and mission, write a strategic plan with appropriate performance measures, implement the strategic planning process, and evaluate the planning system and outcomes.

IST 676 Foundations of Digital Data 1-3 Y  
Representation of information in digital libraries; mechanisms for retrieval; digital intermediation; sociopolitical environment for digital libraries.

IST 677 Creating, Managing, and Preserving Digital Assets 3 Y  
Issues and trends in transferring analog and paper-based collections (including manuscripts, photographs, videos, and films) into digital collections.

IST 679 Electronic Commerce Technologies 3 S  
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 681 Metadata 3 SI  
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 3 SI  
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 3 Y  
Double Numbered with: IST 484  
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 3 Y  
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 3 Y  
Introduction to the use and management of social media technology with an organization, including strategies for use in an enterprise organization, creation of original content and exploration of policy concerns.

IST 687 Applied Data Science 3 Y  
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 3 Y  
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 710 Advanced Topics in Information Management Approaches and Strategies 3 IR  
Critical and emerging issues in the management of information and other information resources. May include specialized information resources management approaches; advanced coverage of planning, budgeting, and procurement; mapping techniques for information services, sources, and systems; professional and ethical development of information resources management. R

IST 711 e-Government 3 Y  
Explores current concepts and practices in Electronic Government at the international, national, state, and local levels. E-Government plays a central role in citizen government interaction, the provision of information and delivery of services.

IST 715 LAMS: Libraries, Archives, Museums 3 Y  
A study of libraries, archives, museums, and national parks as cultural institutions; their missions and operating structures; involvement in joint ventures, both physical and electronic; panelists from and site visits to nearby venues.

IST 717 Advanced Library Management 3 SI  
Management of academic, public, and special libraries. Relationship between library and its parent institution; internal organization and operation; library information policies; library financing; legislation affecting libraries.  
PREREQ: IST 614.

IST 718 Advanced Information Analytics 3 Y  
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 3 Y**  
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 724 Database Security 3 SI**  
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 3 Y**  
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 3 Y**  
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 3 SI**  
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 3 SI**  
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 3 Y**  
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 3 Y**  
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 3 Y**  
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 3 Y**  
Double Numbered with: IST 447  
Complex issues that confront IT project managers. Case studies to explore problems, solutions and best practices. Application of key concepts to diverse industry settings. Additional work required of graduate students.  
PREREQ: IST 445 OR 645.

**IST 753 Telecommunications and Enterprise Network Management III 3 Y**  
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 754 Final Project in Telecommunications Systems 3 Y**  
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 614 AND 618 AND 653 AND 656.

**IST 755 Strategic Management of Information Resources 3 Y**  
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 759 Planning and Designing Digital Library Services 3 SI**  
Hands-on clinical experience planning and designing digital library services.  
PREREQ: IST 676 AND 677.

**IST 769 Advanced Database Administration Concepts and Database Management 3 SI**  
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 770 Advanced Topics in Research Methods 1-3 IR**  
Research methods used in information studies. May include designs for survey, experimental or historical research; data collection. Statistical methods, content analysis, computer simulation, model simulation, and model building. R

**IST 775 Information Industry Strategies 3 SI**  
Issues in converging information industry sectors such as hardware, software, telecommunications, information services, and content.

**IST 776 Research Methods in Information Science and Technology 3 Y**  
Philosophies, approaches, and practices of research in information transfer. Statistics as a tool and as a framework for understanding the research process.

**IST 777 Statistical Methods in Information Science and Technology 3 Y**  
Classical statistical procedures used in information transfer research. 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 3 SI**  
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 1-3 SI**  
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. R

IST 800 Information Studies Seminar 1-3  
SI  
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. R

IST 810 Practicum in Research 2 S  
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. R

IST 820 Seminar in Research Methods 3  
SI  
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. R

IST 830 Seminar in Information Systems 3  
SI  
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. R

IST 840 Practicum in Teaching 1-2  
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. R7, 8 credits maximum

IST 880 Intensive Seminar 1 SI  
Residential seminar for Doctorate of Professional Studies distance students. Skill building and mentoring for doctoral coursework and dissertation preparation. Portfolio evaluation of work accumulated during the semester. R5, 6 credits maximum

IST 970 Internship 1-6 S  
Participation in a supervised and evaluated field experience. Requires contract approved by advisor, faculty supervisor, and field agency before registration. R

IST 971 Internship in Information Studies 1-6 S  
Fully supervised internship experience. Prereq: IST master's students only. Must meet GPA requirements and complete a learning agreement with site supervisor. R1, 6 credits maximum

IST 972 School Media Practicum 1-6 S  
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. R

IST 997 Thesis 1-6 SI

IST 999 Dissertation 1-15 SI  
R

# Faculty

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Marilyn P. Arnone, Associate Research Professor

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, Assistant Professor of Practice

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  
Ph.D., University of Illinois at Urbana-Champaign, 1983

Image retrieval systems, bibliometrics, linguistic applications in information retrieval

Carlos E.E. Caicedo Bastidas, Assistant Professor

Ph.D., University of Pittsburgh, 2009  
Security, wireless networks, software development, telecommunications management

Derrick L. Cogburn, Associate Professor  
Ph.D., Howard University, 1997

International information and communication technology policy, multistakeholder participation in global governance

Kevin Crowston, Professor

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, 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, 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, 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, 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, Associate Provost for Entrepreneurship and Innovation

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 MacInnes, Associate Professor  
Ph.D., University of Southern California, 1998

Information industry strategy, electronic commerce compatibility standards, international business, convergence, telecommunications

Nancy McCracken, Research Associate Professor

Ph.D., Syracuse University, 1979  
Natural language processing, information extraction, question answering, knowledge representation, and machine learning

Lee W. McKnight, Associate Professor  
Ph.D., Massachusetts Institute of Technology, 1989

Wireless grids, nomadicity, convergence of the Internet and telecommunications industries, Internet economics and policy, national and international technology policy

David Molta, Associate Professor of Practice  
M.P.A., University of North Texas, 1982

Mobile and wireless information systems, technology education, network systems design and management

Paul Morarescu, Assistant Professor

Milton L. Mueller, Professor  
Ph.D., University of Pennsylvania, 1989  
Telecommunications industry liberalization, Internet governance, domain names and trademarks, broadband regulation, globalization and trade in telecom and audiovisual services, telephone numbering resources, international institutions governing communication and information



- Scott R. Nicholson, Associate Professor  
Ph.D., University of North Texas, 2000  
Data warehousing, data mining, bibliomining  
process, web search tools, new methods for  
distance education
- Michael S. Nilan, Associate Professor  
Ph.D., University of Washington  
Virtual communities, user-based system design,  
cognitive behavior, information seeking and  
use, knowledge management, intranets as  
collaborative virtual environments, functional  
linguistic structures for data organizations
- Deborah Nosky, Assistant Professor of  
Practice  
Evolution and assessment of information  
services; theories, methods, and assessment of  
user education; information literacy  
frameworks and instruction; information  
services in academic libraries
- Megan Oakleaf, Assistant Professor,  
Director of Instructional Quality  
Ph.D., University of North Carolina-Chapel  
Hill, 2006  
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
- 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, Associate 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
- Anthony Rotolo, Assistant Professor of  
Practice  
M.S. in Information Management  
Social media, e-government, online safety,  
privacy, augmented reality
- 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, 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
- Ruth V. Small, Meredith Professor  
Ph.D., Syracuse University, 1986  
Motivation, information literacy, distance  
learning
- Marcene Sonneborn, Assistant Professor of  
Practice  
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, Assistant 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  
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

# College Of Law

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Hannah R. Arterian, Dean  
446 College of Law  
[law.syr.edu/](http://law.syr.edu/)

## About The College Of Law

Message from Dean Arterian

Why study law? Each law student undertakes an exciting and rigorous journey. This journey expands analytical skills, knowledge in a professional discipline that informs all aspects of society-locally, nationally and globally. Law graduates are distinctly capable of engaging the issues most critical to any community. More than ever in our history every area of endeavor has some legal overlay-the law informs every issue. The law and the policies it drives interconnect with the environment, technology, media, foreign policy, architecture, the family, human rights and medicine. In fact, the list is as long as your imagination takes you. These limitless connections make a legal education so compelling and so important. The agenda you create, the path you take, the intellectual interests you bring with you and the ones you generate throughout your life, will be profoundly enhanced by an outstanding legal education. It would be difficult to find something the law doesn't influence. Legal education prepares you for meeting the challenge of an increasingly complex world. A law degree has value whether you choose to practice law or to join the foreign service; whether you start your own company or serve as counsel to a college or university; whether you work in the technology industry or in a hospital; whether you write a novel or edit a newspaper; serve as a public defender or work in the justice department. You name the career and law applies.

Syracuse University College of Law provides every opportunity you need to create your future. Our website will give you a preview of what you can anticipate as a law student here. Read about our outstanding faculty, the wide range of courses and the excellent programs, clinics and joint degree opportunities designed to provide you with the skills you need to make full use of your education. We start with a firm grounding in courses you need to build on, and then you choose your direction, with the advice and assistance of faculty and staff who really care. All of this on the campus of a great University with all it has to offer, at a law school with a long history and an eye on the future.

No introduction can give you more than a taste of our community and what we have to offer. I hope you will think seriously about pursuing your legal education here at Syracuse. I encourage you to contact us with questions and to keep an eye on our website because new things happen all the time and I hope they will interest you.

Hannah R. Arterian  
Dean and Professor of Law

## Admission

Applicants to the College of Law are not required to present college credit in specialized subjects. A broad general education is better preparation for law study than specialized study in related subjects. Above all, prospective law students should be able to use language effectively; that is, they should have the ability to communicate ideas orally and in writing with precision, clarity, and style. Thus, any undergraduate or graduate program that enhances this ability should be actively pursued.

In reviewing applications, the Admissions Committee considers Law School Admission Test (LSAT) scores and writing samples, records of prior academic performance, academic letters of recommendation, and any other documentation submitted by applicants indicating likely success in the demanding law school curriculum and legal profession.

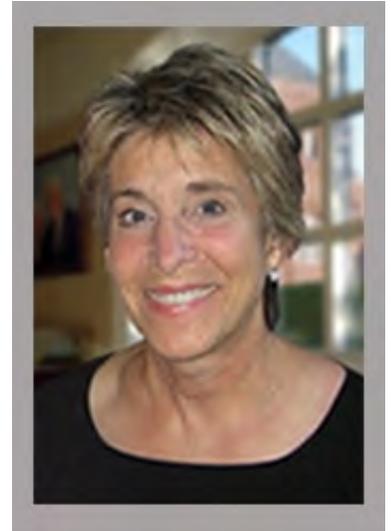
The College of Law recognizes the racial and gender imbalance existing in the legal profession and the public interest in augmenting the number of lawyers from groups that have been traditionally underrepresented in the profession. Therefore, the College of Law encourages qualified members of these groups to apply for admission.

For further information, contact the Office of Admissions and Financial Aid, Suite 340, Syracuse University College of Law, Syracuse NY 13244-1030; 315-443-1962. The College of Law's web site is located at <http://law.syr.edu/>

## Academic Rules & Regulations

<http://law.syr.edu/assets/documents/academics/academic-handbook-class-2012-2013.pdf>

## 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 Senior Assistant Dean for Student Life. Matriculated Main Campus graduate students wishing to take law courses should follow the below procedures.

1. Meet with an academic advisor in the Office of Student Life at the College of Law, Suite 444, prior to registration to complete the necessary forms.
2. If space is available, get permission and signature from the law professor to enroll in the course.
3. The approved forms will be submitted to the College of Law Office of Student Administration and Registrar for processing and to receive a permission number.

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.

## 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. 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. Most students apply for admission to their joint degree program during the first year of law school. However, applicants may be admitted to joint degree candidacy before beginning the first year of law study. In those instances, students postpone the start of the other graduate degree until the first year of law school is completed.

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. 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.

A student interested in a particular law-related discipline may seek admission as a candidate for a joint degree. Admission to joint degree candidacy is made upon petition and must be approved by the College of Law.

Current College of Law students: please contact the College of Law Office of Student Life, Suite 444, Syracuse University College of Law, Syracuse NY 13244-1030; 315-443-1146, <http://law.syr.edu/student-life/index.aspx>

For admissions information, please contact the College of Law Admissions Office, 315-443-1962, <http://law.syr.edu/admissions>

### 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 also may 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 Keri Foster, Associate Director for Student Life, Suite 444 College of Law (443-1146, [kdfoster@law.syr.edu](mailto:kdfoster@law.syr.edu)).

### J.D./M.S. In Computer Science

The Juris Doctor and Master's 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 Keri Foster, Associate Director for Student Life, Suite 444 College of Law (443-1146, [kdfoster@law.syr.edu](mailto:kdfoster@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 Keri Foster, Associate Director for Student Life, Suite 444 College of Law (443-1146, [kdfoster@law.syr.edu](mailto:kdfoster@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 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 Keri Foster, Associate Director for Student Life, Suite 444 College of Law (443-1146, [kdfoster@law.syr.edu](mailto:kdfoster@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'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 Keri Foster, Associate Director for Student Life, Suite 444 College of Law (443-1146, [kdfoster@law.syr.edu](mailto:kdfoster@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.

### 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 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 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; [pcgrad@syr.edu](mailto:pcgrad@syr.edu)) or visit [newhousemasters.syr.edu](http://newhousemasters.syr.edu). Students with general questions and inquiries concerning procedures regarding joint degrees should contact Keri Foster, Associate Director for Student Life, Suite 444 College of Law (443-1146, [kdfoster@law.syr.edu](mailto:kdfoster@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, (dgmorgan@maxwell.syr.edu). Students with general questions and inquiries concerning procedures regarding joint degrees should contact Keri Foster, Associate Director for Student Life, Suite 444 College of Law (443-1146, kdfoster@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 (226 MacNaughton 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 Keri Foster, Associate Director for Student Life, Suite 444 College of Law (443-1146, kdfoster@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. 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 Paul Hagenloh, Associate Professor of History and Director of Graduate Studies, Department of History, 145 Eggers Hall, 443-4144 phagenlo@syr.edu. Students with general questions and inquiries concerning procedures regarding joint degrees should contact Keri Foster, Associate Director for Student Life, Suite 444 College of LAW, 443-1146, kdfoster@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 International Relations program and the College of Law. 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 Global Markets, Negotiation and Conflict Resolution, Global Development Policy, Global Security, Transnational Organizations and Leadership, and Foreign Policy.

Questions and inquiries may be addressed to Nell Bartkowiak, Associate Director of Graduate Studies, International Relations, 225 Eggers Hall, Maxwell School of Citizenship and Public Affairs (443-9340; nsbartko@maxwell.syr.edu). Students with general questions and inquiries concerning procedures regarding joint degrees should contact Keri Foster, Associate Director for Student Life, Suite 444 College of Law (443-1146, kdfoster@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; tjmckay@syr.edu). Students with questions and inquiries concerning procedures regarding joint degrees should contact Keri Foster, Associate Director for Student Life, Suite 444 College of Law (443-1146, kdfoster@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 SocialWork. 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 Renfro, LMSW, Coordinator of Graduate Admissions, 419 Sims Hall (443-1443; alrenfro@syr.edu). Students with general questions and inquiries concerning procedures regarding joint degrees should contact Keri Foster, Associate Director for Student Life, College of Law, Suite 444 (443-1146; kdfoster@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 program designed to offer students with a foreign (non-U.S.) 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 new 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 the belief in value of the international exchange of ideas, we are 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 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.

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](mailto:aabramov@law.syr.edu)

## Master Of Public Health

Contact: Thomas H. Dennison, Ph.D., Associate Director  
426 Eggers Hall; 315-443-9060; [thdennis@maxwell.syr.edu](mailto:thdennis@maxwell.syr.edu)

[www.upstate.edu/cnymph](http://www.upstate.edu/cnymph)

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.

#### 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](http://www.upstate.edu/cnymph/academic/mph_degree/how_to_apply.php)

## Law In London

### 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.

[Click here to learn more about the Law in London summer program.](#)

#### 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](mailto:ccday@law.syr.edu) or Associate Dean for International Initiatives Aviva Abramovsky at [aabramov@law.syr.edu](mailto:aabramov@law.syr.edu).

[Law in London Application](#)



## Academic Offerings

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### Law

#### Syracuse University College Of Law J.D. Program

Syracuse University College of Law awards the Juris Doctor degree to students who successfully complete a minimum of 87 credits of prescribed and elective coursework taken during a period in residence equivalent to six full-time academic semesters. 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, please contact the College of Law Admissions Office, 315-443-1962, [admissions@law.syr.edu](mailto:admissions@law.syr.edu)

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### LL.M.

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#### 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 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.

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## Law/Advertising

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 Keri Foster, Associate Director for Student Life, Suite 444 College of Law (443-1146, kdfoster@law.syr.edu).

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## Law And Arts Journalism

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.

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## Law/Computer Science

The Juris Doctor and Master's 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.

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## J.D./Cultural Foundations Of Education M.S. Joint Degree Program

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.

Current College of Law Students: please contact the College of Law Office of Student Life, 315-443-1146, studentlife@law.syr.edu

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## Law/Documentary Film & History

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 Keri Foster, Associate Director for Student Life, Suite 444 College of Law (443-1146, kdfoster@law.syr.edu).

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## 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.

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## Law/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. 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 Paul Hagenloh, Associate Professor of History and Director of Graduate Studies, Department of History, 145 Eggers Hall, 443-4144 phagenlo@syr.edu. Students with general questions and inquiries concerning procedures regarding joint degrees should contact Keri Foster, Associate Director for Student Life, Suite 444 College of Law, 443-1146, kdfoster@law.syr.edu.

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## Law/International Relations

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.

Questions and inquiries may be addressed to Nell Bartkowiak, Associate Director of Graduate Studies, International Relations, 225 Eggers Hall, Maxwell School of Citizenship and Public Affairs (443-9340; nsbartko@maxwell.syr.edu). Students with general questions and inquiries concerning procedures regarding joint degrees should contact Keri Foster, Associate Director for Student Life, Suite 444 College of Law (443-1146, kdfoster@law.syr.edu)

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## J.D./Master Of Science In Library And Information Science

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.

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.

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## Law/Magazine, Newspaper & Online Journalism

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](mailto:pcgrad@syr.edu)) or visit [newhousemasters.syr.edu](http://newhousemasters.syr.edu). Students with general questions and inquiries concerning procedures regarding joint degrees should contact Keri Foster, Associate Director for Student Life, Suite 444 College of Law (443-1146, [kdfoster@law.syr.edu](mailto:kdfoster@law.syr.edu)).

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## JD/MBA & JD/MBA 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. 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.

For further information, please contact the College of Law Admissions Office, 315-443-1962, [admissions@law.syr.edu](mailto: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](mailto:studentlife@law.syr.edu)

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## Law/Media Management

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](mailto:pcgrad@syr.edu)) or visit [newhousemasters.syr.edu](http://newhousemasters.syr.edu). Students with general questions and inquiries concerning procedures regarding joint degrees should contact Keri Foster, Associate Director for Student Life, Suite 444 College of Law (443-1146, [kdfoster@law.syr.edu](mailto:kdfoster@law.syr.edu)).

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## Law/Media Studies

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](mailto:pcgrad@syr.edu)) or visit [newhousemasters.syr.edu](http://newhousemasters.syr.edu). Students with general questions and inquiries concerning procedures regarding joint degrees should contact Keri Foster, Associate Director for Student Life, Suite 444 College of Law (443-1146, [kdfoster@law.syr.edu](mailto:kdfoster@law.syr.edu)).

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## 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; [tjmckay@syr.edu](mailto:tjmckay@syr.edu)). Students with questions and inquiries concerning procedures regarding joint degrees should contact Keri Foster, Associate Director for Student Life, Suite 444 College of Law (443-1146, [kdfoster@law.syr.edu](mailto:kdfoster@law.syr.edu))

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## Law/Photography

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](mailto:pcgrad@syr.edu)) or visit [newhousemasters.syr.edu](http://newhousemasters.syr.edu). Students with general questions and inquiries concerning procedures regarding joint degrees should contact Keri Foster, Associate Director for Student Life, Suite 444 College of Law (443-1146, [kdfoster@law.syr.edu](mailto:kdfoster@law.syr.edu)).

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## Law/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 should be directed to Professor Glyn Morgan, Director of Graduate Studies, ([dgmorgan@maxwell.syr.edu](mailto:dgmorgan@maxwell.syr.edu)). Students with general questions and inquiries concerning procedures regarding joint degrees should contact Keri Foster, Associate Director for Student Life, Suite 444 College of Law (443-1146, [kdfoster@law.syr.edu](mailto:kdfoster@law.syr.edu)).

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## Program Overview

### Law/Public Administration

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 can prepare for a career that rests on 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).

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## Law/Public Relations

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](mailto:pcgrad@syr.edu)) or visit [newhousemasters.syr.edu](http://newhousemasters.syr.edu). Students with general questions and inquiries concerning procedures regarding joint degrees should contact Keri Foster, Associate Director for Student Life, Suite 444 College of Law (443-1146, [kdfoster@law.syr.edu](mailto:kdfoster@law.syr.edu)).

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## Law/Social Work (Licensed Clinical)

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 Renfro, LMSW, Coordinator of Graduate Admissions, 419 Sims Hall (443-1443; [alrenfro@syr.edu](mailto:alrenfro@syr.edu)). Students with general questions and inquiries concerning procedures regarding joint degrees should contact Keri Foster, Associate Director for Student Life, College of Law, Suite 444 (443-1146; [kdfoster@syr.edu](mailto:kdfoster@syr.edu)).

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## J.D./Master Of Science In Social Work

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 MSW 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](mailto: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](mailto:studentlife@law.syr.edu)

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## Law/Television, Radio & Film

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](mailto:pcgrad@syr.edu)) or visit [newhousemasters.syr.edu](http://newhousemasters.syr.edu). Students with general questions and inquiries concerning procedures regarding joint degrees should contact Keri Foster, Associate Director for Student Life, Suite 444 College of Law (443-1146, [kdfoster@law.syr.edu](mailto:kdfoster@law.syr.edu)).

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## Postconflict Reconstruction Certificate Overview

Director, William C. Banks, 402 McNaughton Hall, 315-443-2284

Administered by the Institute for National Security and Counterterrorism (INSCT), the Certificate of Advanced Study in Postconflict Reconstruction combines interdisciplinary courses, seminars, and internship opportunities to offer graduate and law students the unique opportunity to prepare themselves for a career in a wide range of postconflict stabilization, reconstruction, and peace-building professions. Participating students must complete 12 credits—three courses and a capstone project, internship, or similar. Classes are offered in the Maxwell School, the College of Law, the Newhouse School of Public Communications, and the Whitman School of Management.

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## Master Of Public Health (CNYMPH) Program Overview

Contact: Thomas H. Dennison, Ph.D., Associate Director

426 Eggers Hall; 315-443-9060; [thdennis@maxwell.syr.edu](mailto:thdennis@maxwell.syr.edu)

[www.upstate.edu/cnymph](http://www.upstate.edu/cnymph)

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, L.C. Smith 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.

A certificate of Advanced Study in Public Health (CASPH) a 5 course (15-credit hour) program of study, is also offered. 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.

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](http://www.upstate.edu/cnymph/academic/mph_degree/how_to_apply.php)

# Courses

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## Law

### LAW 500 Selected Topics 1-3 IR

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

### LAW 601 Civil Procedure 4 Y

Procedural processes that guide the adjudication of civil actions in American courts. Allocation of judicial power between federal and state courts, focusing on the Federal Rules of Civil Procedure. Fundamental policies underlying particular procedural rules.

### LAW 602 Constitutional Law 3 Y

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 5 Y

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 3 Y

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 5 Y

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 5 Y

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 2 S

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. R

### LAW 610 Legislation & Policy 3 Y

Students will be able to choose from among several specialized first-year elective courses including disability law, employment discrimination law, family law, health law, Indian law, sentencing law, special education law, voting rights, and violence against women. In each of these courses, students will explore the institutions and processes of public law making, including an examination of statutory interpretation and legislative and administrative process, as applied to the particular substantive area of law. R1, 3 credits maximum

### LAW 690 Legal Communications & Research III 2 S

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 3 Y

A continuation of Constitutional Law I (LAW 602) for second-year law students. Must be taken fall semester of 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 3 Y

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 2 IR

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

### LAW 702 Administrative Law 3 Y

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 2 IR

Tax and other consequences of various plans of deferred compensation for executives and other employees.

### LAW 704 Commercial Transactions 4 Y

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 706 Conflict of Laws 3 IR

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 3 Y  
Constitutional and statutory requirement for investigative procedures in criminal cases. Topics include searches, seizures, lineups, confessions, and electronic surveillances.

### LAW 710 Sexual Orientation & the Law 3 IR

Legal issues as they affect the lives of lesbians, gays, and bisexuals in the United States. Constitutional law, employment law, family law, property law, criminal law, and estate planning will be the areas of primary focus.

### LAW 711 Land Use and Zoning Law 3 IR

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.

accounting.

#### LAW 712 Business Associations 4 Y

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 3 Y

Law governing interstate succession; execution, and revocation of wills; inter vivos will substitutes; the creation, nature, and revocation of trusts.

#### LAW 716 Environmental Law 3 IR

Pollution control and toxic substance regulation; the ends and means of environmental protection; the institutional responsibilities of legislatures, agencies, and courts.

#### LAW 717 Estate & Gift Taxation 3-4 Y

Taxation of transfers during life and at death. Planning and alternative modes of disposition.

#### LAW 718 Evidence 4 Y

Procedural and substantive rules of evidence. Judicial notice, presumptions and burdens of proof, rules governing the receipt of oral and documentary evidence, impeachment, direct and cross-examination, competency, hearsay, privileges, and the best evidence rules.

#### LAW 719 Law and Psychology 3 IR

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 in 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 3 Y

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 3 Y

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 3-4 Y

Law and policy regarding the taxation of income of the individual taxpayer, including characteristics of income, personal and business deductions, principles of income splitting and tax accounting, dispositions of property, capital gains.

#### LAW 723 Federal Income Tax II: Taxation

##### of Business Transactions 3 IR

Income tax problems of the corporation and its shareholders, emphasizing corporate organization, distributions, redemptions, liquidations, reorganizations, collapsible corporations, and S corporations. PREREQ: LAW 722.

#### LAW 726 Intellectual Property 3 Y

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 3 IR

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 proscribing 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 3 Y

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 2-3 IR

Organization and representation of employees, union collective action; collective bargaining, including the administration and enforcement of collective agreements.

#### LAW 732 Federal Government Contracts 3 IR

Overview of government contracts. Course will cover pre-contract activity leading to contract award, contract types, and the contractual document with specific emphasis on the Federal Acquisition Regulations. Irregular course offering.

#### LAW 735 Federal Criminal Law 3 IR

Examines substantive Federal criminal law, including the following topics: The Federal Role in Enforcement Against Crime, The Consequences of Jurisdictional Overlap, Fraud and Political Corruption, Mail Fraud, The Hobbs Act, Official Bribery and Gratuities, Drug Trafficking and Money Laundering, Currency Reporting Offenses, Group and Organizational Crime (including RICO), Anti-Terrorism Enforcement, The Criminal Civil Rights Statutes, The Federal False Statement Statutes, Obstruction of Justice, Sentencing Guidelines, and Forfeiture.

**LAW 736 The Law and Literature 3 IR**  
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, Glaspell, 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 3 IR**  
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 3 IR**  
Will simulate actual entertainment law practice and will emphasize the process by which contracts are developed and entered into so 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 3 Y**  
Civil practice law and rules and interpretive cases and other aspects of civil litigation in New York.

**LAW 746 Professional Responsibility 3 S**  
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 3 Y**  
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 3 IR**  
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 2 IR**  
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 3 IR**  
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 2 IR**  
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 3 S**  
Courtroom techniques and tactics drawing on substantive and procedural law and evidence courses. Students prepare and conduct trial exercises under direction of instructor.  
COREQ: LAW 718. R

**LAW 755 Trademarks and Unfair Competition 3 IR**  
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 3 Y**  
**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:** Drafting 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 757 Mergers & Acquisitions 2-3 IR**  
This course is for students with a strong interest in capital markets, public corporations, and modern corporate practice. Topics covered include source of gains in business combinations, duties and risks of sellers, buyers' risks in acquisitions, and securities laws.

### LAW 759 Computer Crimes 3 IR

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 3 IR

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.

### LAW 761 Appellate Advocacy Skills 3 Y

Development of skills used in the appellate process, including postjudgment practice, creation of the record, finding error, brief writing, and oral argument structure, emphasizing written skills. Required for second-year students seeking Moot Court Board membership.

### LAW 763 Disability Law 3 Y

This class deals with federal laws prohibiting discrimination against people with disabilities, with particular emphasis on the American Disabilities Act of 1990. The goal of the course is to provide you with a legal, conceptual, and practical understanding of people with disabilities, forms of discrimination that occur on the basis of disability, and the protections against such discrimination that currently exist.

### LAW 764 Bankruptcy Law: Creditors Rights and Debtors Protection 4 IR

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.

### LAW 765 Patents and Trade Secrets 3 Y

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 767 International Trade Law 3 IR

Intergovernmental trade regulation through the General Agreement on Tariffs and Trade/World Trade Organization and regulation of unfair trade practices under U.S. law.

### LAW 768 Copyright-Literary and Artistic Works 3 Y

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 2 S

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 772 Alternative Dispute Resolutions 3 IR

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 775 Internet Law 3 IR

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 777 Elder Law 3 IR

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 778 International Human Rights 3 IR

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 779 Prosecuting Terrorists 3 IR

This course will no longer examine only the law and procedure in Article III courts but will now include a comparative examination of the policy, investigative and substantive law, procedures, and experience with prosecuting terrorists in Article III courts, courts martial, military commissions, international tribunals, or a new national security court. Students will be encouraged to develop a principled method for determining the best forum for prosecuting terrorists under various conditions.

LAW 782 New York Criminal Procedure 3 IR

This course will supplement existing courses in Constitutional Criminal Procedure and complement the applied learning course in Advanced (NY) Criminal Procedure. The course is desirable: (1) as a vehicle for students to learn differences between Federal and New York Constitutional Criminal Procedure; (2) as a vehicle for students to learn procedural rules which are important despite the lack of constitutional status; and (3) as a vehicle for students to prepare for the New York bar exam and/or practice of criminal law in New York.

PREREQ: LAW 708.

LAW 783 Law and Popular Culture 2 IR

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--unabashedly 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 784 Employment Law 3 IR

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 785 Advanced Torts 3 IR

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 788 Immigration Law 3 IR

Immigration and Nationality Act of 1965, exclusion and deportation, and nonimmigrant status.

LAW 790 Counterterrorism and the Law 3 IR

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 Secured Transactions 3 IR

This course deals in depth with the creation and perfection of security interests in personal property, priority claims, and remedies upon debtor's default under Article 9 of the Uniform Commercial Code. Additionally, some consideration is given to related concepts under the Federal Bankruptcy Code.

LAW 794 Regulatory Law & Policy 3 Y

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 795 Canadian Law 3 IR

The course is intended to provide students with an overview of the law and legal systems of Canada. It will explore Canada's historical development, legal structure, and place within the common law world. Covering topics such as Federalism, Responsible Government, the Charter of Rights, Family Law, Conflicts of Law, Criminal Law and Procedure, First Nations, Hate Speech, and Business Law the course will concentrate on both the similarities and differences with U.S. law and the probable reasons for the differences. Some attention will be devoted to the law of Quebec and the duality of its legal system. At least one week will be spent on conducting legal research in Canadian Law, but the course is not a research course.

LAW 796 Constitutional Criminal

Procedure - Adjudicative 3 Y

Constitutional and statutory requirements for adjudicative procedures in criminal cases. Topics include accus-atory 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 2 Y

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 2-3 IR

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 804 The Law of Genocide Seminar 3**  
This seminar examines the historical, philosophical and political origins of statutes that outlaw crimes against humanity and genocide. It then focuses on aspects of the first post-World War II trial of the SS personnel at the Nazi concentration camps of Bergen-Belsen and Auschwitz, followed by the International Military Tribunal at Nuremberg; the Eichmann Trial in Jerusalem; the trial in Tel Aviv of the head of the Jewish police of a Polish ghetto; the trial of former Serbian and Yugoslav president Slobodan Milosevic before the International Criminal Tribunal for the Former Yugoslavia, and related proceedings; as well as certain prosecutions before the International Criminal Tribunal for Rwanda, in particular those relating to incitement to genocide on the part of newspapers and radio broadcasters. It will compare and contrast aspects of these trials. Also discussed is the impact of the Convention on the Prevention and Punishment of the Crime of Genocide, and consideration of the development of the law relating to genocide and crimes against humanity over the course of the past 70 years and its contemporary implications. The goal of the seminar is to provide the students with a broad awareness of the jurisprudential, historical, political, and social dimensions that underlie the ongoing efforts to criminalize and prosecute ethnically, religiously or racially motivated mass murder and related atrocities.

**LAW 808 Courts, Community and Injustice: An Introduction to the Adversarial System 2 IR**  
This seminar will confront the legal and social conditions that promote injustice and the ways diverse communities yield to the judicial system's failings. Our inquiry will identify how the problem of injustice is situated at the local and national levels. Foundational legal doctrines will be mined, including the historical shift from lawyer-free to lawyer-driven trials, right to counsel, burden of proof, and the development of plea bargaining. We will then turn to the shapers of justice and examine the problem from the perspective of the prosecutor, police, defense attorney, and judge. In the end, a view of how the system works, and does not work, will emerge. And finally, we will ask what social forces perpetuate the misdiagnosis of this state of affairs.

**LAW 809 Advanced Disability Law and Policy 3 IR**  
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 3 IR**  
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 Client Counseling 2 IR**  
Client Counseling is a course offered to help students develop techniques for effective client interviews and appropriate counseling techniques in a variety of professional settings. The course is intended to assist upper level students provide professional advice to clients so that they can guide their clients to make informed and prudent decisions in business, litigation and other formats. Participants will act as lawyers and as clients, but ultimately the final grade will be based upon a participant's role as a counselor rather than as a client.

**LAW 813 The Rule of Law in Post Conflict Reconstruction Seminar 3 IR**  
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 3 Y**  
The classroom component offered in coordination with the Technology Transfer Research Center which includes extensive readings on law, technology and business topics, case study problems, software simulations, and lectures and discussions based upon assigned work. R

**LAW 815 Technology Commercialization Research Center 3 Y**  
Will operate in conjunction with CASE Technology-Transfer Research Center. Interns work in the CTRC and attend a series of classes devoted to technology transfer subjects.  
COREQ: LAW 814.

**LAW 816 Commercial Real Estate Practice 2 IR**  
This applied learning course will build on the fundamentals of the Real Estate Transactions I 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 2 IR**  
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 819 Family Law Mediation and Collaborative Law 3 IR

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 821 Domestic Violence 3 IR

This course will analyze case law as well as other text and articles applicable to domestic violence cases. One of the objectives of this course will be to expose, through class discussions, some of the misconceptions regarding domestic violence and its victims. Students will have the opportunity to participate in simulated exercises designed to develop interviewing and information gathering techniques necessary for the thorough representation of the domestic violence victim in court. Visits to the class by guest speakers are also planned. The course will delve into all of the possible issues that need to be addressed in representing the domestic violence victim.

LAW 822 National Security & Counter Terrorism Research Center 3 IR

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. Other faculty within Syracuse University and experts outside the University may also participate in the development and implementation of research projects. 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. Research projects may be pursuant to contract arrangements with sources external to Syracuse University, while others may be developed from within the College of Law or the University.  
COREQ: LAW 700 AND 790.

LAW 824 Negotiations, Mediation & Arbitration as Alternative Methods of Dispute Resolution 3 IR

This course is designed to enable 2L and 3L students the opportunity to improve their negotiation skills and utilize those skills ethically during various stages of negotiations whether in the business setting, pre-litigation or during the litigation process. The course is also designed to assist 2L and 3L students enhance their advocacy skills in order to conduct successful mediations and/or arbitration hearings. Participants in this class will be required to read either *Bargaining for Advantage* by G. Richard Shell or *Effective Legal Negotiation and Settlement* (Fifth Edition) by Charles B. Cravortz, a text on successful negotiation practices and to participate in a mock negotiation, mediation and arbitration exercises. Students in this class will have the opportunity to improve their advocacy skills in these important alternative dispute resolution settings.

LAW 827 Corporate Finance Seminar 2 IR

This course teaches corporate finance by guiding students through all aspects and phases of a syndicated commercial loan transaction. Students will examine the design, negotiation, finance, and implementation of a real-world deal, from both a law and business perspective. In addition to teaching the substantive law and principles of finance, the course also teaches essential deal skills and provides students with practical insights (from an experienced senior lawyer) that will enable them to be effective transactional lawyers and bankers. This course is cross-listed with the Whitman School of Management and will contain a combination of JD and MBA students.  
COREQ: LAW 712.

LAW 828 Advanced Criminal Evidence 3 IR

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 830 Advanced Civil Trial Advocacy 3 IR

This course provides the opportunity for upper level students to expand upon the fundamental trial advocacy skills learned in the Basic Trial Advocacy course and/or as a member of the SUCOL Trial Team. This course is premised on the "learning by doing" approach and is designed to enhance trial skills through a civil trial simulation developed for the Cozen O'Connor Trial Academy. Each week, students will be paired together and will be responsible for different trial components from pre-trial motion practice through closing arguments. Each week, students will alternate in the representation of plaintiff and defendant, and each student will ultimately have the opportunity to perform every element of a trial for both the plaintiff and the defendant. At the conclusion of the course, each student will participate in a complete trial from pre-trial motions through closing arguments.

LAW 831 Refugee and Asylum Law 3 IR

This course will provide an overview of refugee and asylum law from an international, comparative, and domestic perspective. It will begin with an introduction to the history and theory of refugee protection in international law, reviewing the development of international legal protections for refugees from World War I to the present. The focus of the course will then shift to U.S. refugee law, exploring how the Constitution, treaties, statutes, federal regulations, and federal and administrative case law interact to define, protect, and exclude refugees and other categories of protected migrants. Topics for discussion will include the nature of U.S. legal protections for refugees, the (a)symmetry between U.S. legal standards and international standards, the evolving grounds of persecution in federal jurisprudence, the administrative process through which asylum claims are adjudicated, the evidentiary difficulties in determining refugee status, and the ongoing debates about resettlement and other forms of protection for asylum seekers. The course will also explore the limits of refugee protection under U.S. law, including domestic extradition and extraordinary rendition practices, as well as the availability of temporary protected status for victims of human trafficking and violent crime.

### LAW 832 Cyber Security Law and Policy 3 IR

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 833 Administrative Practice 3 IR**  
Administrative agencies serve a vital role in our government. Agencies establish legislative policy by interpreting statutes and promulgating rules which have the force and effect of law. The purpose of this course is to familiarize students with regulatory procedures and to introduce upper class students to the ways in which to practice before administration agencies at the local, state and federal levels. Practical coursework includes: drafting memoranda explaining the background and status of their client's case, attending a public hearing and presenting testimony relating to that hearing to the class. The principal writing assignment for the semester will be to prepare an Administrative Hearing Brief for a case which each student will try at the conclusion of the course.

### LAW 834 Social Deviance and the Law 3 IR

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 836 Complex Litigation: Class Action 3 IR

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, interpleader, intervention, consolidation, transfers, and bankruptcy. It is also an excellent opportunity to review civil procedure concepts.

### LAW 837 European Union Policy: Human Rights and Security 3

This course is an introduction to European Union Law. The course contains four thematic units. Part 1 introduces the European Union and its main institutions. Students will familiarize themselves with the evolution of the EU legal doctrines. Part 2 explores the development of European Human Rights Law and how the EU has approached human rights. Part 3 explores the way the EU deals with security, within the EU and in EU relations with the international community. Specific issues such as the challenge of European integration, the institutions of the EU, human rights in the post-9/11 period, counter-terrorism, and privacy in an era of security will be examined. The final part looks at the EU's foreign relations (EU-US and EU-Africa).

### LAW 838 Binary Economics & Property Rights Seminar 3 IR

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 3 IR  
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 2-3 IR  
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. R

LAW 841 Real Estate Planning Seminar 3 IR  
Through the use of case studies, basic financial analysis, and preparation and simulated negotiation of documents, this course will address selected topics in commercial real estate transactions, and will focus on the development of business knowledge and legal skills related to commercial real estate acquisition, financing and investment.  
COREQ: LAW 747.

LAW 843 Tax Policy and Politics: How Should We Pay for Civilized Society 3 IR  
Justice Oliver Wendell Holmes said, "Taxes are what we pay for civilized society." The price of civilized society depends not only on the amount of revenue raised, but on the way it is done. How progressive should the tax system be? Should the tax system reward good behavior and punish bad? Should it provide subsidies to achieve social objectives, such as decent childcare, affordable housing, or access to health care? How should married couples and families be taxed? Should death be a taxable event? Should we tax the amount people earn or the amount people spend? How much complexity can people tolerate in furtherance of social or other tax policy objectives? How should the tax burden be distributed among generations? The objectives of this course are: (1) to understand how the tax system got the way it is today; (2) to understand the major tax policy issues that drive the current political debate; and (3) to understand the implications of alternative tax policy choices for the future.

LAW 846 History of the Regulation of Trade and Business 2-3 IR  
This experimental course will explore the legal and moral principles of business and trade regulation over 5,000 years. Students will learn about ancient regulation of prices, for which violators were executed; usury laws; licensing and other concepts as they evolved into our current system. Understanding the history of regulation will help lawyers, business owners and executives navigate regulatory regimes.

LAW 847 An Introduction to American Legal Thought 2 IR  
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 legal 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 854 Law & Social Sciences 3 IR  
Legal study is increasingly interdisciplinary, making use of various other fields to challenge, inform, and assist legal theory and doctrine. This seminar will cover a number of social sciences - e.g. psychology, economics, sociology, political science, and anthropology - to examine the connections between law and other disciplines. Topics to which these social science approaches will be applied may include capital punishment, juries, race, gender, paternalism, media violence, obscenity, expert witnesses, judicial decision-making, and others based on students' interest.

LAW 857 Jessup Mini-Course 1-2  
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 858 Property Law in the 21st Century: Advanced Topics in Property Law 2-3 IR  
This seminar will examine current important issues in property law and theory, topics to which students may have been introduced during their first year, but that warrant investigation in further detail. The course will first review different notions of what property actually is, using historical and modern analyses both from political theory and from law. We will then consider the extent to which property concepts can be usefully employed to resolve an array of current social issues, such as the enforcement of surrogacy (parenting) contracts, the sale or other control of body parts, the fate of human embryos, eminent domain and takings, an individual's control of personal information, employment rights, and environmental rights. Students will be exposed to and discuss the relevant law, where it exists, but will also pursue in more depth the conceptual and policy-based arguments that shape and underlie the public debates currently underway. A final paper will be required, designed to meet the college's writing requirement.

**LAW 860 Business Valuation Law 3 IR**  
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. R

**LAW 862 Public Health Law Seminar 3 IR**  
This course deals with the law which empowers, tailors and limits federal, state and local governmental efforts to enhance and protect the health of the general population. It will make use of case studies of government educational and regulatory efforts in several areas of historic and very current controversy to examine issues which commonly arise with that law. The course will introduce students to the constitutional foundations and limits on the essential power of national, state and local governments and their officials to protect the health of individuals in areas where such protection may conflict with other important rights, such as with abortion, immoral behavior, religious practices and beliefs, and with seat belts, ferrets and fluoridation. It will examine the use of peculiarly public-health-protective techniques such as quarantine and other liberty-restricting methods in the context of traditional diseases such as tuberculosis, newer diseases such as HIV/AIDS, and more recent threats of pandemic (including the H1N1 flu) and biological terrorism. Recognizing the public health system's needs for accurate information in fashioning government responses and programs, the course will look at the law related to public health surveillance the law about the effective collection and maintenance of information and its use in biomedical research. In examining case studies about contagious diseases, environmentally-related cancers and DNA-banking, students will be exposed to tensions between the public health system's need for information and the privacy rights of individuals about whom such information is gathered.

**LAW 864 Estate Planning 3 IR**  
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 717. R

**LAW 865 Natural Resources Law 3 IR**  
This course examines the law governing the use and conservation of natural resources, primarily (but not exclusively) on federally owned land. Natural Resources Law addresses wilderness preservation, forestry, mineral extraction, protection of wildlife, environment impact analysis, and water allocation.

**LAW 866 Banking Law 3 IR**  
Federal and state laws and regulations affecting banks in the United States.

**LAW 867 Property and Tax from Ancient Athens to America 3 IR**  
This is an experimental course on the ancient roots of modern law. Students will learn how the ancients developed concepts of private property and tax, adjudicated disputes, and developed concepts that influence the law today. Understanding the development of legal theory will help lawyers, business owners and executives understand the theory underneath the practical application of the law, giving them insights into the principles.

**LAW 869 War Crimes Trials 3 IR**  
This seminar will examine legal and ethical issues raised in these and other trials of Nazi war criminals and individuals accused of collaborating with the Nazis in perpetrating crimes against humanity, including the Eichmann Trial in Jerusalem, the Auschwitz Trial of former SS officials and guards held in Frankfurt-am-Main, Germany in 1963-65, the 1963-64 Tel Aviv trial of Hersz Barenblat, the head of the Jewish police in the ghetto of Bedzin, Poland, and the trials of Klaus Barbie (1987), Paul Touvier (1994) and Maurice Papon (1997-98) in France.

**LAW 872 International Criminal/Civil Practice and Procedure Seminar 2**  
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 studied as well. The student written work product and presentations will form the basis of the grade at the end of the course.

**LAW 882 Judicial Decision Making 3 IR**  
To understand what the law actually is in practice, and to understand how it evolves over time, it is necessary to understand how judges decide cases. Understanding judicial decision-making also helps policy-makers develop beneficial policies regarding the courts, including selecting judges who may or may not be influenced by politics or ideology, and developing educational opportunities for judges. Insight into the "judicial mind" also helps attorneys craft persuasive arguments. Thus, in this seminar we survey the legal, political science, and empirical literature on how judges make decisions. Topics to be studied, both from a theoretical and practical perspective, include: theories of judicial decision-making; judicial election and appointment; constraints under which judges operate; the impact of court structure on the decision-making process; judicial writing; clerks' role in the decision-making process; the relationship between the media and the courts; judicial education; and the influence of public perceptions of the court. Class attendance and participation are required. Brief weekly responses and a final research paper are required; the paper will satisfy the College of Law Writing Requirement. The seminar complements other courses at the College of Law (e.g., LCR III: Judicial Writing or Law, Politics, and the Media), as well as opportunities at the Maxwell School and with the Institute for the Study of the Judiciary, Politics, and the Media.

**LAW 883 Central Challenges in National Security Law and Policy 3 IR**

COREQ: LAW 700.

#### LAW 886 Animal Law 2 IR

This course addresses the status and treatment of nonhuman animals in numerous areas of law, as well as the history and theory of advocacy on behalf of non human animals.

#### LAW 889 International Human Rights and Disability Law 3 IR

In this course, students will explore recent developments in international human rights and comparative disability law, including recent efforts by the United Nations to draft a treaty on the rights of people with disabilities. Students will explore the role of people with disabilities within different legal systems, who are often vulnerable to human rights violations, and will learn about the United Nations' current and ongoing efforts to draft a treaty on the rights of people with disabilities. Professor Kanter and some of her former students have been involved in working with the UN on this treaty for the past five years. If enacted, this treaty will be the first binding international instrument designed specifically to protect the rights of people with disabilities to equal opportunities in all aspects of life.

#### LAW 890 Child Health Policy 3 IR

Child Health Policy is a 3-credit, interdisciplinary course that will address how policy affects child health and influences parental decision-making over their children's health, as well as how policy influences, and is influenced by, child-serving systems (e.g., public health, education, juvenile justice). The course will cover how child health policy is developed, implemented, evaluated, and influenced as well as the myriad of ways health policy may impact seemingly unrelated policy discussions and decisions. As an interdisciplinary course, students will study how law and medicine (specifically, child health) intersect, hearing from a variety of perspectives on this intersection from experts, as broadly defined (lawyers, advocates, case workers, health professionals, academics, and families themselves). Further, with the expectation that lecturers will discuss the interrelation between law, medicine, and advocacy in their respective fields, so too will it be expected that students reflect on at least two of these (law, medicine, advocacy) in their work (i.e., discussion, journals, presentations, papers). The course's multi-disciplinary approach, and student enrollment, will contribute to a fuller view of child health policy: students gain the perspective of varied disciplines and how expertise from these disciplines might be joined to enhance effectiveness of health policy.

#### LAW 891 Climate Change: Science, Perception & Policy 3 IR

Climate change (global warming) is rapidly becoming one of the most pressing issues of the twenty-first century. This course introduces students to the challenges posed by climate change through a unique multidisciplinary exploration of the scientific, economic, policy, communicative, and even philosophical dimensions of the issue. The course will cover topics such as the current state of scientific knowledge about climate change, the role of the media in shaping public opinion on the issue, competing discourses of climate change, risk and uncertainty in decision-making, costs and benefits of different types of policies, the Kyoto protocol and other policy initiatives, actions being taken to address the issue, and the ethical dimensions of the choices facing humanity. Faculty from SU and ESF in law, economics/public administration, earth science, and environmental studies will co-teach this course and bring to students a unique dialog that crosses traditional disciplinary boundaries. Moreover, emphasis will be placed on drawing out the general lessons obtained from a multidisciplinary approach to climate change: many of the insights will be applicable to other complex, highly technical environmental problems. This course is intended to bring together students from a diverse range of backgrounds and does not have specific prerequisites.

#### LAW 892 Capital Punishment Seminar 1-2 IR

The death penalty is society's ultimate legal sanction, meant to be used for the worst of the worst. Given the finality and enormity of the State's deliberate taking of a human life, the United States Supreme Court has developed a complex jurisprudence in an attempt to ensure that the death penalty is administered fairly and reliably. In this seminar, we will study this jurisprudence and evaluate its effectiveness. We will also explore issues concerning the actual administration of the death penalty, such as methods and timing of executions, conditions on death row, women on death row, mental illness and competence to be executed, the sentencing of innocent persons to death, and clemency. In addition to traditional Casebook materials, we will use documentaries and case studies to get a fuller understanding of capital punishment.

#### LAW 895 Problems in Case Analysis and Appellate Advocacy Skills 2 IR

Legal reasoning through practice in developing written and oral arguments and reaching solutions to legal questions taken from actual cases. The emphasis will be on analysis and reasoning, not on learning legal rules. Many of the problems will be modeled on cases in the New York Court of Appeals which resulted in four to three decisions where there is no "right answer." A discussion of some of these cases will inevitably entail arguments concerning social policy and legal philosophy.

#### LAW 898 Environmental Law and Policy 3 IR

Introduction to the approaches used in US environmental law. Analysis of common law and statutory designs and strategies used to address environmental problems. Critically analyzes common law environmental remedies, Clean Air Act, Clean Water Act, Endangered Species Act, hazardous waste, and other environmental laws.

#### LAW 899 Atrocity Law and Policy: Practicing before International Criminal Tribunals 2 IR

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 903 Criminal Defense Law Clinic 6 S

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

COREQ: LAW 746.

LAW 909 Bankruptcy Clinic 0-1

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 be representing 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 any 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 6 SS

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. R

LAW 912 Elder Law Clinic 6 S

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.

LAW 914 Low Income Taxpayer Clinic 3 S

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.

PREREQ: LAW 722; COREQ: LAW 746.

LAW 920 Externship Program 2 S

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.

LAW 921 Externship Placement 2-3 S

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 6 S

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. R1

LAW 923 Disability Rights Clinic 6 S

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 955 Community Development Law Clinic 6 S

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 Clinical Legal Experience Program. Since 1989, Associate Professor Deborah Kenn has directed the Community Development Law Clinic, which upon the conclusion of the United States Department of Education grant in 1992, has been funded in full by the College of Law.

COREQ: LAW 746.

LAW 957 Childrens Rights & Family Law  
Clinic 6 S

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. R

LAW 959 Advanced Legal Research 3 IR  
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 972 Topics in Foreign, Comparative & Int'l Law Research 3 IR  
The purpose of this course is to offer students a working knowledge of legal bibliography and research methods, both in traditional print sources and in electronic formats, for conducting research in the laws of foreign countries, international law, and comparative law.

### Master Of Laws

LLM 900 American Legal System 3 Y  
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 2 Y  
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 1

# The Martin J. Whitman School Of Management

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Ken Kavajecz, Dean  
721 University Avenue Suite 215  
whitman.syr.edu



## About The School

Welcome to the Whitman School of Management, a top-ranked business school with a diverse faculty and strong focus on leadership building and community engagement. At the Whitman School, students develop a strong business sense across all aspects of management, providing them with the skills, opportunities, and motivation necessary to compete in a global environment.

The Whitman School is a state-of-the-art business school in both programming and facility, reflecting both Syracuse University's commitment and history of innovative business education and the Whitman School's role as a cutting-edge, experiential learning environment. The Whitman School continues to expand its technological resources with secure wireless broadband for students, dedicated HD TVs in computer labs, student loaner laptops, and an enhanced video archive. Students enrolled at Whitman get the best of both worlds, enjoying the intimate and interconnected community of the Whitman School with all the resources and opportunities of a world-class research university.

The Whitman School of Management continues to be ranked among the nation's top business programs. U.S. News and World Report ranked both Whitman's undergraduate and graduate programs among the best in the nation. The Whitman part-time MBA program, the iMBA, was identified among the top AACSB-accredited online graduate programs by the U.S. News and by the Financial Times. Whitman's entrepreneurship program has been ranked nationwide by the United States Association for Small Business and Entrepreneurship; Entrepreneur Magazine/The Princeton Review; Fortune Small Business; and U.S. News & World Report. Many of Whitman's specialty programs have been highly ranked by Bloomberg BusinessWeek, including accounting, corporate strategy, entrepreneurship, operations management, sustainability, business law, marketing management, and ethics.

## Accreditation Information

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

## Educational Mission

The Whitman School of Management is dedicated to:

- Fostering a diverse, supportive learning community focused on developing entrepreneurial managers who will become leaders in an era of global competitiveness and technological advancements;
- Advancing the theory and practice of management by discovering and disseminating relevant knowledge and contributing perspectives on frontline business issues;
- Providing students and faculty select educational experiences that promote intellectual engagement, personal and professional growth, and lifelong scholarship.

## 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, and Finance along with distance learning programs in Accounting, Business Administration (MBA) and Supply Chain.

### 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.

### iMBA (DISTANCE LEARNING)

iMBA is a limited-residency distance learning MBA program for executives offered by the Whitman School of Management at Syracuse University. For more than 30 years the Whitman School has delivered an MBA through a uniquely flexible format combining in-person residency and distance learning. Residencies are held on the SU campus and in other sites in the U.S. and abroad. Learning between residencies is supported by the full-time faculty and a Web-based course management system.

The iMBA program features the same curricular content, faculty, and degree as the full-time MBA program at the Whitman School. iMBA students also enjoy the same opportunities to engage in extracurricular activities and connect with the Whitman community.

The degree awarded to iMBA program graduates is accredited by the AACSB International and is identical to the MBA degree awarded other Whitman School MBA graduates.

## 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, strategic cost analysis, 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.

## iMS ACCOUNTING (DISTANCE LEARNING)

The iMS in Accounting is the Whitman School of Management at Syracuse University's limited-residency distance learning program for accounting professionals. The iMS program features the same curriculum and faculty as the full-time MS in Accounting program at Whitman and the degree awarded is the same. Prospective students must possess a qualified undergraduate degree in accounting.

The accounting profession offers tremendous career opportunities today—in public, corporate, and not-for-profit sectors. In most states, becoming a CPA involves earning a total of 150 credit hours of collegiate training—30 hours beyond the typical undergraduate program. This requirement is already in effect in most states, and will become effective in New York in 2009.

That's why a number of accounting graduates are choosing to pursue the MS degree in the Whitman School of Management at Syracuse University through the iMS in Accounting program. The iMS allows accounting professionals the opportunity to earn their MS degree in a flexible format while working full-time. The iMS blends three weeks of residency on the SU campus annually with longer periods of distance learning.

## MS ENTREPRENEURSHIP

The 30-credit hour Whitman MS in Entrepreneurship program provides a rigorous immersion into the nature of entrepreneurship and the entrepreneurial process. Combining core content with a strong commitment to experiential learning, the program is targeted to students with a passion for entrepreneurship in for-profit, non-profit, and public sector contexts.

The MS in Entrepreneurship program is designed for students interested in creating growth-oriented for-profit or non-profit ventures. Special emphasis is placed on students from professional disciplines.

## MS FINANCE

The MS in Finance program in the Whitman School of Management at Syracuse University is a rigorous, one year curriculum that prepares students to be leaders in the dynamic, fast-paced, and intellectually challenging world of finance. The program's core courses explore the nature of capital markets as they relate to organizational goals and provide an understanding of how broad principles of finance and quantitative methods can be applied to create investment strategies.

The MS in Finance program is flexible and allows students to customize their degree by taking elective courses in any of the following areas: statistics, accounting, economics, 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 certification terminals and Factset terminals through Whitman's Ballentine Investment Institute.

## iMS SUPPLY CHAIN (DISTANCE LEARNING)

The Whitman's School is home to the first supply chain program in the country, established in 1919. 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. 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.

The Whitman iMS in Supply Chain Management is a distance learning program, with coursework being completed online and independently with three mandatory residencies each year on the Syracuse University campus.

The Whitman School is happy to work with any organization who wishes to send large groups of students or to customize the program to fit specific needs.

## Graduate Admissions & Financial Aid

### ADMISSION

Candidates with bachelor's degrees from an accredited college or university are eligible for admission. Full-time M.B.A., M.S. Entrepreneurship and M.S. Finance candidates may apply for the fall term admission only. M.S. Accounting candidates may apply for fall or spring admission. iMBA and iM.S. in Accounting candidates may apply for fall, spring, and summer admission.

Although no specific undergraduate majors are required for admission, the transition to the rigors 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

The Whitman School of Management awards full-time graduate management students one a number of scholarships on a merit basis. 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. There are no scholarships available for M.S. Entrepreneurship candidates.

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 admissions requirements, programs, courses, facilities, costs, financial aid, student activities, and services can be found online at [whitman.syr.edu](http://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 sets 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 our 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)

## Academic Offerings

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### MS Accounting

Contact - William J. Walsh, Director, Joseph I. Lubin School of Accounting, 616 Whitman School of Management, 315-443-3589, [wwalsh@syr.edu](mailto:wwalsh@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.

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 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 725 - Financial Statement Analysis

ACC 736 - Strategic Cost Analysis

ACC 747 - Advanced Auditing

ACC 757 - Taxes and Business Strategy

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.

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## Aerospace Engineering/Business Administration (3-2 Program)

Contact - Danielle Goodroe, Assistant Director, Graduate Recruitment, Whitman School of Management, Suite 315, 315-443-3006, degoodro@syr.edu

Can Isik, Associate Dean, LC Smith College of Engineering & Computer Science, 223 E Link Hall, 315-443-3604, cisik@syr.edu

**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 L.C. Smith College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

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

**Admission** - Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

**Degree Requirements** - Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

3+2 program requirements:

Students will complete 128 credits for the Aerospace Engineering degree and an additional 54 credits for the MBA degree.

Year 1 & 2: Enrollment in required undergraduate coursework

Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework

Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework

Year 5: Completion of BS and MBA coursework

**Transfer Credit** - Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

**Satisfactory Progress** - Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

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## Bioengineering/Business Administration

Contact - Danielle Goodroe, Assistant Director, Graduate Recruitment, Whitman School of Management, Suite 315, 315-443-3006, degoodro@syr.edu

Can Isik, Associate Dean, LC Smith College of Engineering & Computer Science, 223 E Link Hall, 315-443-3604, cisik@syr.edu

**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 L.C. Smith College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

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

**Admission** - Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

**Degree Requirements** - Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

3+2 program requirements:

Students will complete 130 credits for the Bioengineering degree and an additional 54 credits for the MBA degree.

Year 1 & 2: Enrollment in required undergraduate coursework

Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework

Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework

Year 5: Completion of BS and MBA coursework

**Transfer Credit** - Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

**Satisfactory Progress** - Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

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# Master In Business Administration

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.

The M.B.A. curriculum is designed as a 54-credit program and normally requires two years or four academic semesters to complete on a full-time basis. It consists of two elements: 36 credits of required core courses and 18 credits of electives. Students are required to complete at least 6 credits of experiential credit. A minimum of 9 credits of electives selected in one area may form a concentration. M.B.A. students may choose a concentration in accounting, entrepreneurship, finance, marketing or supply chain management. Students may select electives from other graduate programs in the University.

## Core Courses and Credits

MBC 600 Managerial Skills (1.5)  
MBC 601 Economic Foundation of Business (1.5)  
MBC 602 Economics of International Business (1.5)  
MBC 603 Creating Customer Value (1.5)  
MBC 604 Managing the Marketing Mix (1.5)  
MBC 606 IT for Decision Support (1.5)  
MBC 607 Understanding Financial Statements (1.5)  
MBC 608 Creating Financial Statements (1.5)  
MBC 609 Accounting for Managerial Decisions (1.5)  
MBC 610 Opportunity Recognition and Ideation (1.5)  
MBC 616 Operations Management (1.5)  
MBC 617 Supply Chain Management (1.5)  
MBC 618 Competitive Strategy (1.5)  
MBC 619 Corporate Strategy (1.5)  
MBC 627 Financial Markets & Institutions (1.5)  
MBC 628 Fundamentals of Financial Management (1.5)  
MBC 629 Legal & Ethical Aspects of Management (1.5)  
MBC 630 Behavior in Organizations (1.5)  
MBC 638 Data Analysis & Decision Making (3)  
MBC 647 Global Entrepreneurial Management (3)  
SCM 656 Project Management or (3)  
Selective requirement (3)

## Free Electives 18

Students are required to complete 6 approved experiential elective credits through at least two distinct 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

Contact - William J. Walsh, Director, Joseph I. Lubin School of Accounting, 616 Whitman School of Management, 315-443-3589, wiwalsh@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

Michel Benaroch, Area Coordinator; 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 - Tom Lumpkin, The Chris J. Witting Chair in Entrepreneurship; 536 Whitman School of Management, 315-443-3164, lumpkin@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, international entrepreneurship student exchanges, work with small businesses in completing an entrepreneurial audit, 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. 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

Chair - Yildiray Yildirim, 615 Whitman School of Management, 315-443-4885, yildiray@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.

### Management

Chair - Dennis Gillen, 538 Whitman School of Management, 315-443-3432 dgillen@syr.edu

To be successful, organizations must be able to excel in complex and global business environments, and managers must be able to lead within diverse and dynamic workplaces. The Management Department at Whitman offers courses on how organizations, employees, and managers can succeed in meeting

today's internal and external business challenges. The Management Department is composed of two areas: strategy and human resources and law and public policy. The faculty of the Management Department teaches courses and conducts research in the areas of strategy, organizational theory, law and public policy, organizational behavior, ethics, leadership, and human resources. The rapidly changing business environment and the growing complexity of organizations, coupled with increased competitive pressures across industries and countries, has made courses from this department important for many careers. The faculty of the Management Department strive to provide the highest-quality classroom experience and have won several teaching awards.

## Marketing

Chair - Frances Gaither Tucker, 637 Whitman School of Management, 315-443-3442.

The Marketing Department houses two MBA concentrations: Marketing Management and Supply Chain Management. All students of the department are expected to appreciate the interrelatedness of the perspectives of consumers, intermediaries (e.g. retailers, distributors), and suppliers (e.g. 3PL's, OEMs, other product or service providers).

The marketing curriculum is flexible and can accommodate interdisciplinary interests. Students can pick and choose from a wide menu of elective courses to build expertise in traditional areas of marketing (product management, marketing communication, and marketing research) and in channel and supply chain management.

### Marketing Management Concentration

The marketing management program in the Whitman School is designed for students to encounter all the basic challenges in the industry: how a company decides what to sell, the customers and markets to target, and the best means of reaching them. In many courses, students work in project teams—just as professionals do—to create strategies for product development, pricing, promotion, and distribution. Students learn to respond to the demands of competitors, the government, and larger social issues.

Marketing graduates are prepared for broad and promising career options, including advertising and promotion management, business-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 appraise situations faced by a business organization from a broad 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 MBA's will demonstrate the ability to manage in a global environment.

- Whitman MBA's 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.

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## Ph.D. In Business Administration

Contact - Eunky Lee, Director of Ph.D. Program, Whitman School of Management, 721 University Avenue, 315-443-3429, elee06@syr.edu

Program Description - The program of study leading to the doctor of philosophy degree in business administration prepares outstanding candidates for academic careers in higher education and research positions in industry and government.

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. In addition, research methods coursework 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 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.

Information can be found on the Internet at [whitman.syr.edu/phd](http://whitman.syr.edu/phd)

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## Chemical Engineering/Business Administration (3-2 Program)

Contact - Danielle Goodroe, Assistant Director, Graduate Recruitment, Whitman School of Management, Suite 315, 315-443-3006, [degoodro@syr.edu](mailto:degoodro@syr.edu)

Can Isik, Associate Dean, LC Smith College of Engineering & Computer Science, 223 E Link Hall, 315-443-3604, [cisik@syr.edu](mailto:cisik@syr.edu)

**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 L.C. Smith College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

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

**Admission** - Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

**Degree Requirements** - Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

3+2 program requirements:

Students will complete 128 credits for the Chemical Engineering degree and an additional 54 credits for the MBA degree.

Year 1 & 2: Enrollment in required undergraduate coursework

Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework

Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework

Year 5: Completion of BS and MBA coursework

**Transfer Credit** - Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

**Satisfactory Progress** - Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

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## Civil Engineering/Business Administration (3-2 Program)

Contact: Danielle Goodroe, Assistant Director, Graduate Recruitment, Whitman School of Management, Suite 315, 315-443-3006, [degoodro@syr.edu](mailto:degoodro@syr.edu)

Can Isik, Associate Dean, LC Smith College of Engineering & Computer Science, 223 E Link Hall, 315-443-3604, [cisik@syr.edu](mailto:cisik@syr.edu)

**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 L.C. Smith College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

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

**Admission:** Students in the engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

**Degree Requirements:** Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

3+2 program requirements:

- Students will complete 128 credits for the civil engineering degree and an additional 54 credits for the MBA degree.
- Year 1 & 2: Enrollment in required undergraduate coursework
- Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework
- Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework
- Year 5: Completion of BS and MBA coursework

**Transfer Credit:** Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

**Satisfactory Progress:** Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

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## Computer Engineering/Business Administration (3-2 Program)

Contact - Danielle Goodroe, Assistant Director, Graduate Recruitment, Whitman School of Management, Suite 315, 315-443-3006, degoodro@syr.edu

Can Isik, Associate Dean, LC Smith College of Engineering & Computer Science, 223 E Link Hall, 315-443-3604, cisik@syr.edu

**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 L.C. Smith College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

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

**Admission** - Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

**Degree Requirements** - Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

3+2 program requirements:

Students will complete 129 credits for the Computer Engineering degree and an additional 54 credits for the MBA degree.

Year 1 & 2: Enrollment in required undergraduate coursework

Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework

Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework

Year 5: Completion of BS and MBA coursework

**Transfer Credit** - Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

**Satisfactory Progress** - Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

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## Computer Science/Business Administration (3-2 Program)

Contact - Josh LaFave, Director of Recruiting and Graduate Distance Education, Whitman School of Management Suite 315, 315-443-3497, jjlafave@syr.edu

Can Isik, Associate Dean, LC Smith College of Engineering & Computer Science, 223 E Link Hall, 315-443-3604, cisik@syr.edu

**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 L.C. Smith College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

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

**Admission** - Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

**Degree Requirements** - Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

3+2 program requirements:

Students will complete 124 credits for the Computer Science degree and an additional 54 credits for the MBA degree.

Year 1 & 2: Enrollment in required undergraduate coursework

Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework

Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework

Year 5: Completion of BS and MBA coursework

**Transfer Credit** - Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

## Defense Comptrollership Program

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

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

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

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

**First Quarter--Summer (12 credits)**

- MBC 601 -- Economic Foundation of Business (1½)
- MBC 602 -- Economics of International Business (1½)
- MBC 603 -- Creating Customer Value (1½)
- MBC 604 -- Managing the Marketing Mix (1½)
- MBC 638 -- Data Analysis (3)
- PPA730 -- Dispute Resolution for Public Managers (3)

**Second Quarter--Fall (15 credits)**

- PAI 897 -- Policy Analysis (3)
- MBC 606 -- IT for Decision Making (1½)
- MBC 607 -- Understanding Financial Statements (1½)
- MBC 608 -- Creating Financial Statements (1½)
- MBC 610 -- Ideation (1½)
- SMC 656 -- Project Management (3)
- PAI 895 -- Mid-Career Seminar: Managerial Leadership or PAI Elective Choice (3)

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

- PAI 742 -- Public Administration and Law or PAI Elective Choice (3) (Winter)
- FIN600 -- Bank Management (1½)
- MBC 609 -- Accounting for Managerial Decisions (1½)
- MBC 616 -- Operations Management (1½)
- MBC 617 -- Supply Chain Management (1½)
- MBC 618 -- Competitive Strategy (1½)
- MBC 619 -- Corporate Strategy (1½)
- MBC 627 -- Financial Markets and Institutions (1½)
- MBC 628 -- Fundamentals of Financial Management (1½)
- PAI 895 -- Mid-Career Seminar: Managerial Leadership or PAI Elective Choice (3)

**Fourth Quarter--Summer (15 credits)**

- One week visit to Washington, DC
- ACC 760 -- Fraud Examination (3)
- BUA 600 -- Seminar in Resource Management (3)
- BUA 786 -- Seminar in Comptrollership and CDFM (3)
- MBC 647 -- Consulting Project (3)
- PAI 996 -- Master's Project (3)

\* 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.

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## Electrical Engineering/Business Administration (3-2 Program)

Contact - Danielle Goodroe, Assistant Director, Graduate Recruitment, Whitman School of Management, Suite 315, 315-443-3006, degoodro@syr.edu

Can Isik, Associate Dean, LC Smith College of Engineering & Computer Science, 223 E Link Hall, 315-443-3604, cisik@syr.edu

**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 L.C. Smith College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

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

**Admission** - Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

**Degree Requirements** - Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

3+2 program requirements:

Students will complete 132 credits for the Electrical Engineering degree and an additional 54 credits for the MBA degree.

Year 1 & 2: Enrollment in required undergraduate coursework

Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework

Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework

Year 5: Completion of BS and MBA coursework

**Transfer Credit** - Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

**Satisfactory Progress** - Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

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## MS In Entrepreneurship & Emerging Enterprises

Contact - Tom Lumpkin, The Chris J. Witting Chair in Entrepreneurship, 536 Whitman School of Management, 315-443-3164, lumpkin@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 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 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 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 credits)

MBC 603 Creating Customer Value

MBC 607 Understanding Financial Statements

MBC 609 Accounting for Managerial Decisions

MBC 610 Opportunity Recognition and Ideation  
MBC 618 Competitive Strategy  
MBC 627 Financial Markets & Institutions  
MBC 628 Fundamentals of Financial Management  
MBC 630 Behavior in Organizations

Entrepreneurial Core - 4 Additional Courses (12 Credit Hours)

Number Course Title - All 3 Credits each

EEE 621 Corporate Entrepreneurship  
EEE 625 Venture Capital  
EEE 630 Entrepreneurship in Engineering and Science  
EEE 640 Social Entrepreneurship  
EEE 643 Emerging Enterprise Consulting  
EEE 644 Dilemmas and Debates in Entrepreneurship  
EEE 682 Entrepreneurial Marketing  
MAR 752 Introduction to Innovation Management  
MAR 752 Introduction to Innovation Management  
MAR 757 Managing Product Development  
MAR 761 Marketing Strategies for Innovations  
LAW 814/815 Technology Transfer and Commercialization\*

Required Entrepreneurship Field Experience

Number Course Title

EEE 670 Entrepreneurship Field Experience (3 credits)

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.

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Environmental Engineering/Business Administration (3-2 Program)

Contact: Danielle Goodroe, Assistant Director, Graduate Recruitment, Whitman School of Management, Suite 315, 315-443-3006, degoodro@syr.edu

Can Isik, Associate Dean, LC Smith College of Engineering & Computer Science, 223 E Link Hall, 315-443-3604, cisik@syr.edu

**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 L.C. Smith College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

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

**Admission:** Students in the engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

**Degree Requirements:** Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

3+2 program requirements:

- Students will complete 129 credits for the environmental engineering degree and an additional 54 credits for the MBA degree.
- Year 1 & 2: Enrollment in required undergraduate coursework
- Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework
- Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework
- Year 5: Completion of BS and MBA coursework

**Transfer Credit:** Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

**Satisfactory Progress:** Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

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## MS Finance

Contact - Yildirim Yildirim, 615 Whitman School of Management, 315-443-4885, yildiray@syr.edu

**Program Description -** The Master of Science 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 M.S. 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 (typically 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 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, 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 -** 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 (statistics, accounting, economics, and international business). Available electives include International Financial Management, Emerging Markets, Fixed Income Securities, Portfolio Analysis, Options and Futures Markets, Distress Investing, Value Investing, and Securities Markets.

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 and Strategy

FIN 756 Investment Analysis

FIN 855 Financial Management

Additional Finance (9-12 credits)

FIN 665 Securities Markets

FIN 657 International Finance

FIN 659 Derivatives

FIN 666 Distress/Value Investing

FIN 741 Credit Risk Management

FIN 742 Operational Risk Management

FIN 758 Portfolio Analysis

FIN 761 Financial Modeling

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 analyses.

- 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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## Independent Study MBA (IMBA)

Contact - Pam Suzadail, Associate Director of External programs, Whitman School of Management Suite 315, 315-443-8384, pjsuzada@syr.edu

Program Description - The iMBA is the Whitman School's uniquely flexible executive M.B.A. program for executives. Syracuse University has offered an M.B.A. program via distance learning since 1977. As with the full-time M.B.A. program, the iMBA is accredited by AACSB—the Association to Advance Collegiate Schools of Business. In the iMBA, students from 34 states and 10 countries have participated in the M.B.A. All students participate in one-week residencies on the Syracuse University campus each January and August. Optional residencies in selected international locations are also offered. During a

residency, students meet their new faculty and classmates, complete initial assignments, form teams, and obtain all the information they need to progress smoothly in their coursework for that semester that is delivered virtually. Between residencies, coursework is supported by the full-time faculty using a web-based course management system. Final exams for each semester's courses are usually taken on campus at the start of the next residency. This program allows students to complete the M.B.A. degree in about three years (with up to seven allowed) without interrupting their professional commitments.

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) work experience..

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 - This is a 54 credit program leading to a Master in Business Administration degree.

All 3 credits each

ISM615 Microeconomics

MBC 631 Financial Accounting

MBC 632 Managerial Accounting

MBC 633 Managerial Finance

MBC 635 Operations Management

MBC 636 Marketing Management

MBC 638 Data Analysis & Decision Making

MBC 639 Leadership in Organizations

MBC 645 Strategic Management

MBC 647 Project in Entrepreneurship

LPP requirement

MIS requirement

18 credits of electives

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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## JD/MBA & JD/MBA 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. 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.

For further information, please contact the College of Law Admissions Office, 315-443-1962, [admissions@law.syr.edu](mailto: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](mailto:studentlife@law.syr.edu)

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## Mechanical Engineering/Business Administration (3-2 Program)

Contact - Danielle Goodroe, Assistant Director, Graduate Recruitment, Whitman School of Management, Suite 315, 315-443-3006, [degoodro@syr.edu](mailto:degoodro@syr.edu)

Can Isik, Associate Dean, LC Smith College of Engineering & Computer Science, 223 E Link Hall, 315-443-3604, [cisik@syr.edu](mailto:cisik@syr.edu)

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 L.C. Smith College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

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

Admission - Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

Degree Requirements - Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

3+2 program requirements:

Students will complete 128 credits for the Mechanical Engineering degree and an additional 54 credits for the MBA degree.

Year 1 & 2: Enrollment in required undergraduate coursework

Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework

Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework

Year 5: Completion of BS and MBA coursework

Transfer Credit - Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of “B” or higher is needed to transfer in the credits. The grade itself does not transfer.

Satisfactory Progress - Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

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## New Media Management (M.S.)

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.

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. Courses are three-credits unless otherwise noted.

### Requirements Of The Newhouse School Of Public Communications

#### Required Courses

COM 698 Media Law or  
TRF 637 Telecommunications Law and Policy  
ICC 606 Applied Research in Content Management  
ICC 617 Issues in Media Management  
ICC 625 New Media Business  
ICC 683 Case Studies in Media Management or  
TRF 683 Communications Industry Frontiers

#### Capstone

ICC 689 New Media Management Capstone (6 credits)

### Requirements Of The Martin J. Whitman School Of Management

#### Required Courses

EEE 643 Emerging Enterprise Consulting or  
MAR 745 Strategic Brand Management  
MBC 603 Creating Customer Value (1.5 crs)  
MBC 604 Managing the Market Mix (1.5 crs)  
MBC 607 Understanding Financial Statements (1.5 crs)  
MBC 609 Accounting for Managerial Decisions (1.5 crs)  
MBC 618 Competitive Strategy (1.5 crs)  
MBC 619 Corporate Strategy (1.5 crs)  
MBC 639 Leadership in Organizations

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

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## IMS In Accounting

Contact - William J. Walsh, Director, Joseph I. Lubin School of Accounting, 616 Whitman School of Management, 315-443-3589, wwalsh@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

ACC 736 - Strategic Cost Analysis

ACC 747 - Advanced Auditing

ACC 757 - Taxes and Business Strategy

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.

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## IMS In Supply Change Management

Contact - Fran Tucker, Chair & Associate Professor of Marketing & Supply Chain, 637 Whitman School of Management, 315-443-3442, fgtucker@syr.edu

**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 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 - 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 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 (or equivalent; MBC 607/608)

MBC 633: Managerial Finance (or equivalent; MBC 627/628)

MBC 636: Marketing Management (or equivalent; MBC 603/604)

Supply Chain Core (15 credit hours, required)

MBC 635: Introduction to Operations & Supply Chain Management (or equivalent; MBC 616/617)

MBC 638: Data Analysis

SCM 701: Supply Chain and Logistics Management

SCM 702: Principles of Management Science

SCM 741: Strategic Sourcing

Selectives\* -- choose 1 course (3 credit hours) from

SCM 656: Project Management

SCM 655: Customer Relationship Management

SCM 721: Supply Chain Systems

SCM 777: Global Supply Chain Strategy

Relevant course(s) approved by the SCM faculty

Culminating Experience – choose 1 course (3 credit hours) from

SCM 690 Independent Study (Applied Project)

\* Students who have satisfactorily completed any of the management foundation courses before entering the program may substitute course(s) from the list of approved selective courses.

Learning Goal 1: Our graduates will understand how to effectively manage organizational resources.

- Our graduates 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 graduates will be able to measure, organize and allocate resources in order to meet organizational objectives in an effective, ethical, and sustainable manner.
- Our graduates will be able to evaluate, prioritize and plan the acquisition of resources that are aligned with organizational objectives.

Learning Goal 2: Our graduates will demonstrate skills in inquiry, critical thinking and problem solving, supported by appropriate analytical and quantitative techniques.

- Our graduates will be able to gather, manipulate, and analyze data for purposes of understanding business problems and designing solutions for them.

- Our graduates will be able to apply industry-standard tools and technologies to facilitate the problem solving process.
- Our graduates will be able to generate original and innovative solutions to new and existing business problems.

Learning Goal 3: Our graduates will demonstrate the ability to think strategically about business issues.

- Our graduates will be able to identify strategic issues and differentiate them from tactical issues.
- Our graduates will be able to explain and apply concepts, models and tools of strategic analysis.
- Our graduates will be able to identify and evaluate the short-term and long-term implications of business decisions for an organization's stakeholders.
- Our graduates will be able to appraise situations faced by a business organization from a broad perspective that considers economic, legal, ethical, and social factors.

Learning Goal 4: Our graduates will demonstrate the ability to apply supply chain concepts in a variety of practical situations to gain insights into how to improve supply chain performance, and use those insights to communicate, persuade, and motivate change.

- Our graduates will be able to communicate using industry terminology.
- Our graduates will be able to structure problems and perform logical analyses by translating descriptions of a variety of business situations into formal models and analyzing those models in an organized fashion.
- Our graduates will be able to employ negotiation skills which to acquire resources and reduce the cost structure of the supply chain.

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

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## Certificate Of Advance Study In Sustainable Enterprise (CASSE)

Contact - Tom Lumpkin, The Chris J. Witting Chair for Entrepreneurship, 536 Whitman School of Management, 315-443-3164, lumpkin@syr.edu

Program Description - The Certificate of Advanced Study in Sustainable Enterprise (CASSE) is offered collaboratively by the Whitman School of Management, the L.C. Smith 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, 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.

Certificate Requirements - Students must complete 15 credits for the certificate.

BUA 650 Managing Sustainability  
 BUA 651 Strategic Management & the Natural Environment  
 BUA 759 Sustainability Driven Enterprise  
 6 credits of electives

Admission - Students must be matriculated into a graduate program at Syracuse University or SUNY ESF to be considered for admission to the program.

# Courses

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## Accounting

### ACC 601 Intermediate Financial Accounting I 3 S

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 3 S

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 1.5 Y

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 3 S

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 632.

### ACC 677 International Reporting and Analysis 3 Y

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 3 S

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 632.

### ACC 725 Financial Statement Analysis 3 Y

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 3 S

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 3 Y

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 747 Advanced Auditing 3 Y

Double Numbered with: ACC 482  
Seminar discussion of advanced auditing research and cases. Topics include the market for assurance services, auditor decision making, audit risk, and information systems auditing. Extra work required of graduate students.

PREREQ: ACC 726 OR 476.

### ACC 756 Advanced Financial Accounting 3 S

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 3 Y

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 3 Y

Double Numbered with: ACC 460  
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 3 Y

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 3 IR

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 3 SI

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 3 IR

Current developments in financial and managerial accounting theory. Research studies and pronouncements by authoritative accounting organizations. Areas of controversy. Papers on selected topics required.

ACC 860 Research in Accounting 3 IR  
Directed readings and individual research into controversial and special areas of accounting. Papers presented on selected topics. R1, 6 credits maximum

ACC 960 Doctoral Seminar 3 Y  
R

### Business Administration

BUA 600 Selected Topics 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

BUA 650 Managing Sustainability: Purpose, Principles, and Practice 3 Y  
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 3 Y  
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/ECS 650.

BUA 670 Experience Credit 1-6 S  
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. R

BUA 690 Independent Study 1-6 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 or instructors and the department. R

BUA 759 Sustainability-Driven Enterprise 3 Y  
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/ECS 650 AND BUA/ECS 651.

BUA 786 Sem/Army Comptrollership 3 Y  
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 3 Y  
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 3 S  
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 3 Y  
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 analysis and survival analysis.

BUA 997 Masters Thesis 0-6 Y  
R

BUA 999 Dissertation 0-15 Y  
R

### Entrepreneurship And Emerging Enterprises

EEE 620 Foundations of Entrepreneurship 3 Y  
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.

EEE 621 Corporate Entrepreneurship 3 Y  
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.

EEE 625 Venture Capital 3 Y  
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.

EEE 630 Entrepreneurship in Engineering and Science 3 Y  
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.

EEE 640 Social Entrepreneurship 3 Y  
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.

EEE 643 Emerging Enterprise Consulting 3 Y

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.

EEE 644 Dilemmas and Debates in Entrepreneurship 3 Y

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.

EEE 652 International Entrepreneurship 3 Y

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.

EEE 664 Entrepreneurial Empowerment 3 SS

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.

EEE 670 Experience Credit 1-6 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. R

EEE 682 Entrepreneurial Marketing 3 Y

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.

PREREQ: MBC 636.

EEE 930 Theoretical Foundations of Entrepreneurship 3 Y

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 Management is required.

### Finance

FIN 653 New and Emerging Markets 3 Y

Crosslisted with: INB 653  
Analysis of the business, economic, and financial environment of emerging markets. Portfolio investment analysis and corporate financial policy and strategies in emerging markets.

FIN 657 International Financial Management 3 IR

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 3 Y

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 3 Y

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 3 Y

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 665 The Securities Market 3 Y

Double Numbered with: FIN 465

Role and nature of securities markets in our economy and the needs they serve. Market concept; criteria for studying the effectiveness of securities markets.

PREREQ: MBC 633.

FIN 666 Value Investing 3 S

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 3 IR

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 3 SS

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 3 Y

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 3 Y

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 1.5 IR

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 1.5 IR**  
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 743 Real Estate Capital Markets 3 Y**  
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.  
PREREQ: FIN 751 OR FIN 756.

**FIN 751 Corporate Financial Policy & Strategy 3 Y**  
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 3 IR**  
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 3 Y**  
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 3 IR**  
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 3 Y**  
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 855 Financial Management 3 Y**  
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 3 IR**  
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.

**FIN 960 Grad Seminar in Finance 3 Y**  
Readings, discussions, and reports for doctoral candidates. R

### International Business

**INB 651 Management in a Cross-cultural Environment 3 IR**  
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.  
PREREQ: SOM 354.

**INB 652 International Entrepreneurship 3 Y**  
Crosslisted with: EEE 652; Double Numbered with: INB 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.

**INB 653 New and Emerging Markets 3 Y**  
Crosslisted with: FIN 653  
Analysis of the business, economic, and financial environment of emerging markets. Portfolio investment analysis and corporate financial policy and strategies in emerging markets.

**INB 657 International Financial Management 3 IR**  
Crosslisted with: FIN 657  
Major financial decisions of international firms in context of special risks and opportunities. Foreign direct investment theory.  
PREREQ: MBC 633.

**INB 677 International Reporting and Analysis 3 Y**  
Crosslisted with: ACC 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: MBC 631.

**INB 759 The Law of Global Business 3 Y**  
Crosslisted with: LPP 759  
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.

**INB 769 International Business Management 3 Y**  
Strategic decision-making in the international environment. Critical factors in growth and stability, profitability, market share, and return on investment. Relationship between the enterprise and its legal, economic, political, and cultural environments.

### Law And Public Policy

**LPP 755 Law of Business Organizations 3 IR**  
Double Numbered with: LPP 455  
Legal aspects of organizations formed to carry on business enterprises: agencies, partnerships, and corporations.  
PREREQ: LPP 255 OR MBC 643.

**LPP 756 Land Development Law 3 IR**  
Double Numbered with: LPP 456  
Regulations pertaining to land development. Nuisances, eminent domain, regulatory takings, zoning, growth, management controls, environmental impact analysis, and protection of sensitive land areas.  
PREREQ: LPP 255 OR MBC 643.

LPP 757 Law of Commercial Transactions  
3 Y

Double Numbered with: LPP 457  
Legal aspects of commercial transactions.  
Contracts, sale of goods, commercial paper,  
and secured transactions.  
PREREQ: LPP 255 OR MBC 643.

LPP 758 Environmental Law and Public  
Policy 3 IR

Double Numbered with: LPP 458  
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 3 Y  
Crosslisted with: INB 759

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 3  
IR

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 3 IR

Topics in business-government relations,  
including regulation of competition, trade  
practices, securities, communications, utilities,  
and employment. Joint business-government  
ventures. Governmental promotion of business  
activity. Government purchasing and  
contracting.

LPP 767 Management and Ethics 3 IR  
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 655 Customer Relationship  
Management with Systems Applications  
and Products 3

Crosslisted with: MIS 655, SCM 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.

MAR 721 Marketing and the Internet 3 Y

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, 604) OR 636.

MAR 741 Marketing Community and  
Public Service Agencies 3 IR

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 3  
Y

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 636I.

MAR 751 Environmental Influences on  
Innovation 3 IR

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 3 Y

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 3 IR

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 3 Y

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, 638.

MAR 755 Marketing Communications  
Strategy 3 Y

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 3 IR

Application of analytical and quantitative  
techniques to market measurement. Product-  
market strategy.  
PREREQ: MBC 636 AND 638.

MAR 757 Managing Innovative Products  
and New Ventures 3 Y

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 3 IR

Selected topics in marketing. Current issues  
and problems in marketing.  
PREREQ: MBC 636.

MAR 761 Marketing Strategies for  
Innovations 3 Y

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 3 Y

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, 638.

MAR 930 Seminar in Marketing Theory 3 IR

Current marketing theory as developed by contemporary writers.

PREREQ: MBC 636. R

MAR 960 Doctoral Seminar in Marketing 3 IR

R

MAR 962 Marketing and Supply Chain Models 3 IR

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 3 IR

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.

MAS 723 Nonparametric Statistics 3 IR  
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 OR MAS 653.

MAS 765 Sample Survey Methods and Theory 3 IR

Simple random, stratified, systematic, cluster, and multistage sampling methods. Cost and precision. Methods of estimation; simple, unbiased, ratio, regression, and composite methods of measuring and controlling nonsampling errors.

PREREQ: MBC 638.

MAS 766 Linear Statistical Models I: Regression Models 3 Y

General regression model, estimation methods, general linear hypothesis tests, residual analysis, indicator variables, multicollinearity, autoregressive model, weighted least squares, variable-screening procedures.

MAS 767 Linear Statistical Models II: Variance 3 IR

Single and multiclassification analysis of variance for fixed, random, and mixed effects models, simultaneous estimation method implementation of ANOVA models, analysis of covariance.

PREREQ: MAS 766.

MAS 777 Time Series Modeling and Analysis 3 Y

Fundamental concepts and procedures for forecasting discrete time series for planning and control. Regression analysis, ARIMA methods, econometric modeling, transfer functions, intervention analysis, Kalman filters, univariate and multivariate methods.

PREREQ: MBC 638.

MAS 788 Causal Modeling and Analysis 3 IR

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, confirmator, factor analysis, measurement error and latent variable models, and structural equations.

PREREQ: MBC 638.

### Master Of Business Core

MBC 600 Selected Topics 1-3 IR

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

MBC 601 Economic Foundations of Business 1.5 Y

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 1.5 Y

The global business and economic environment and its implications for managerial decision making. Global markets, industrial structure in the global economy, multinationals, foreign direct investment, and international trade. Global risks and management.

PREREQ: MBC 601.

MBC 603 Creating Customer Value 1.5 Y

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 1.5 Y

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 1.5 Y

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.

MBC 607 Understanding Financial Statements 1.5 Y

Financial statement information and related disclosures. Interpretation of financial information to assess and evaluate firm performance.

MBC 608 Creating Financial Statements 1.5 Y

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 1.5 Y

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 1.5 Y**

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.

**MBC 616 Operations Management 1.5 Y**  
Management of the operations function of an organization and its relationship to other functional areas and a firm's strategy.

**MBC 617 Supply Chain Management 1.5 Y**

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 618 Competitive Strategy 1.5 Y**

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 1.5 Y**

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 1.5 Y**

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, 602, 607, 608, AND 638.

**MBC 628 Fundamentals of Financial Management 1.5 Y**

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 1.5 Y**

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 1.5 Y**

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 3 Y**

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 3 Y**

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 3 Y**

Language and tools of finance. Modern theory and practice of corporate finance. Enhances 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 3 Y**

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 3 Y**

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 3 Y**

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 3 Y**

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 3 S**

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 3 Y**

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 3 IR**

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 3 Y**

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 3 Y**

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 1.5-3 S**

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. R5, 9 credits maximum

## Management Information Systems

### MIS 625 Information Systems Analysis for Management 3 IR

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 635 The MIS Data Base 3 Y

Data base concepts and methods that enhance managerial decision making. Machine-user interface, data base model modularity, and integration. Criteria for file organization and data base management system selection.

PREREQ: MIS 625/ISM 741.

### MIS 645 Implementing a Web-enabled Enterprise 3 IR

Double Numbered with: MIS 445

Identify a business opportunity, develop an e-business strategy, and design the web store. Gain hands-on experience in setting up a fully functional web store.

### MIS 646 Issues in Management Information Systems 3 IR

Issues and success factors in planning, design, development, evaluation, and use of computer based systems. Technical, managerial, and human factors influencing effective development and use of management information systems in organizations.

PREREQ: MBC 634.

### MIS 655 Customer Relationship Management with Systems Applications and Products 3 Y

Crosslisted with: MAR 655, SCM 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.

### MIS 741 Information Systems Analysis for Management 3

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.

### MIS 745 Decision Support Technologies 3 IR

Conventional and innovative technologies for designing and implementing decision-making models. Advanced spreadsheet capabilities and add-on tools for genetic algorithms, neural networks, induced decision trees, and data mining.

### MIS 746 Management Information Systems Synthesis 3 IR

Use of cases to facilitate integration of topics in management information systems, blending practical subjective considerations using systems methodology while stressing critical success factors.

PREREQ: MIS 625/ISM 741.

### MIS 930 Doctoral Seminar in Management Information Systems 3 IR

Advanced topics and current research areas in management information systems. R

## Management Of Technology

### MOT 711 Innovation and Technology Management 3 S

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 1-3 SI

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

### RES 631 Real Estate Principles 3 Y

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 3 Y

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 662 Real Estate Finance and Investment 3 Y

Real estate investment, finance, and valuation. Different measures of investment performance, impact of the financing decision, and various real estate financing techniques.

### RES 672 Case Studies in Real Estate Investment and Finance 3 Y

Crosslisted with: FIN 672; Double Numbered with: RES 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.

## Supply Chain Management

### SCM 655 Customer Relationship Management with Systems Applications and Products 3

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 3 S

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 1-6 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. R

### SCM 701 Supply Chain and Logistics Management 3 S

Quantitative and qualitative analysis of global supply chains, channels of distribution, and logistics networks. Extensive use of cases. PREREQ: MBC 635, 636, AND 638.

### SCM 702 Principles of Management Science 3 Y

Concepts and development of analytical model building as used in global supply chain decision. PREREQ: MBC 617 OR MBC 635 AND 638.

SCM 721 Supply Chain Systems 3 Y  
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 3 Y  
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 'word class' purchasing departments.  
PREREQ: MBC 635..

SCM 755 Lean Six Sigma 3 Y  
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 3 Y  
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, 638.

SCM 960 Doctoral Seminar in Supply Chain Management 3 IR  
R

SCM 962 Marketing and Supply Chain Models 3 IR  
Crosslisted with: MAR 962  
Statistical/econometric and management science modeling approaches to marketing/supply chain management problem solving.

SCM 999 Dissertation 0-15 Y

## Strategy And Human Resources

SHR 656 Human Resource Management 3 IR  
Explores human resource management issues facing managers. Recruitment, selection and placement. Performance appraisal. Career planning, training and development. Compensation. Labor-management relations.

SHR 701 Women in Management 3 Y  
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.

SHR 702 Transformational Management 3 Y  
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.  
PREREQ: SHR 763 AND SHR 703.

SHR 703 Organizational Process Consultation Skills 3 Y  
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.  
PREREQ: SHR 763.

SHR 704 Job Satisfaction, Motivation, and Work Behavior 3 IR  
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.

SHR 705 Organizational Theory and Design 3 IR  
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.

SHR 709 Business Policy 3 IR  
Interdepartmental approach to policy-making and administration from a top-management point of view. Thinking about business problems from an overall point of view.

SHR 710 Administrative Policy 3 IR  
Applies the principles and techniques of management to the life-cycle management process through the use of a computerized management simulation problem. Includes consideration of policy-making issues from the top management point of view. R

SHR 754 Compensation Administration 3 IR  
Double Numbered with: SHR 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.  
PREREQ: SHR 355, 656.

SHR 755 Collective Bargaining 3 IR  
History and development of collective bargaining in the United States. Structure, processes, and institutional framework of collective bargaining within the industrial relations systems.

SHR 756 Human Resource Assessment and Staffing 3 IR  
Concepts, problems, and research related to the assessment of individual qualifications for employment and performance when recruiting, staff planning, and allocating staff resources.  
PREREQ: SHR 355, 656.

SHR 757 Career Planning, Training, and Development 3 IR  
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.

SHR 758 Labor Arbitration and Dispute Resolution 3 IR  
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.

SHR 761 Strategic Planning and  
Corporate Forecasting for Innovative  
Organizations 3 IR

Focuses on innovative growth organizations  
continually subject to technological and  
economic uncertainties.

SHR 762 Leadership and Organization  
Change 3 IR

Double Numbered with: SHR 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.

SHR 763 Authority and Power Dynamics  
in Organizations 3 IR

Explores the psychodynamics of authority and  
power within and between small work groups  
in the context of an evolving, fluid learning  
organization. Participants develop skills  
identifying, interpreting and expressing the  
emotions of leadership within groups.

SHR 764 Strategic Change and  
Organizational Innovation 3 IR

Focuses on managing required system-wide  
changes through an understanding of the  
technical, political and cultural subsystems and  
their interrelationships.

SHR 855 Seminar in Organization and  
Management 3 IR

Results of supervised readings and independent  
study presented by participants for group  
discussion and evaluation. History, direction,  
and substance of developments in the fields of  
organization and management.

# Faculty

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Susan Albring, Associate Professor of Accounting  
Ph.D., University of Arizona, 2003

Alejandro Amezcua, Assistant Professor of Entrepreneurship  
Ph.D., Syracuse University, 2011

Amber Anand, Associate Professor of Finance  
Ph.D., Baruch College, 2001

Kofi Appiah Okyere, Assistant Professor of Accounting  
Ph.D., University of Wisconsin-Madison, 2005

Natarajan Balasubramanian, Associate Professor of Management  
Ph.D., University of California, Los Angeles, 2007

Tom Barkley, Assistant Professor of Finance  
Ph.D., University of Florida, 2007

Amiya Basu, Professor of Marketing  
Ph.D., Stanford University, 1984

Michel Benaroch, Associate Dean for Research, Professor of Management Information Systems  
Ph.D., New York University, 1992

Pamela Brandes, Associate Professor of Management  
Ph.D., University of Cincinnati, 1997

George R. Burman, Professor of Entrepreneurship  
Ph.D., University of Chicago, 1973

Kristin Byron, Associate Professor of Management  
Ph.D., Georgia State University, 2003

Donald Cardarelli, Assistant Professor of Management  
M.B.A., Syracuse University, 1989; Ph.D. (honorary), Nazareth College, 1997

Anna Chernobai, Assistant Professor of Finance  
Ph.D., University of California at Santa Barbara, 2006

Major Coleman IV, Assistant Professor of Finance  
Ph.D., University of California, Irvine, 2012

Joseph Comprix, Associate Professor of Accounting  
Ph.D., University of Illinois, 2000

Linda M. Cushman, Associate Professor of Retail Management  
Ph.D., University of Tennessee-Knoxville, 1995

Ravi Dharwadkar, Professor of Management  
Ph.D., University of Cincinnati, 1997

Fernando Diz, Martin J. Whitman Professor of Finance, Director of Ballentine Investment Institute  
Ph.D., Cornell University, 1989

Frederick Easton, Professor of Supply Chain Management, Director of the Robert H. Brethen Operations Management Institute  
Ph.D., University of Washington, 1986

Gerald Edmonds, Adjunct Professor, Marketing  
Ph.D., Syracuse University, 1997

Randal Elder, Professor of Accounting  
Ph.D., Michigan State University, 1993

Scott Fay, Associate Professor of Marketing  
Ph.D., University of Michigan, 2001

Mitchell Franklin, Assistant Professor of Accounting Practice  
Ph.D., Walden University, 2009

Yitzhak Fried, Professor of Management  
Ph.D., University of Illinois at Urbana-Champaign, 1985

Dinesh Gauri, Associate Professor of Marketing  
Ph.D., State University of New York at Buffalo, 2007

Will Geoghegan, Visiting Assistant Professor of Management  
Ph.D., National University of Ireland, Galway, 2009

Dennis J. Gillen, Chair and Associate Professor of Management  
Ph.D., University of Maryland, 1981

Denis Grégoire, Assistant Professor of Entrepreneurship  
Ph.D., University of Colorado at Boulder, 2005

David Harris, Professor of Accounting, Director of Bennett Center for Tax Research  
Ph.D., University of Michigan, 1994

Jeffrey Harris, Dean's Professor of Finance  
Ph.D., Ohio State University, 1995

Donald Harter, Associate Dean for Masters Programs, Associate Professor of Management Information Systems  
Ph.D., Carnegie Mellon University, 2000

J. Michael Haynie, Barnes Professor of Entrepreneurship  
Ph.D., University of Colorado at Boulder, 2005

Badr Ismail, Professor Emeritus of Accounting  
Ph.D., University of Illinois, 1974

Kenneth A. Kavajecz, Dean of the Martin J. Whitman School of Management  
Ph.D., Northwestern University, 1997

Burak Kazaz, Associate Professor of Supply Chain  
Ph.D., Purdue University, 1997

Bruce Kingma, Professor of Entrepreneurship and Emerging Enterprises, Professor of Information Studies  
Ph.D., University of Rochester, 1989

Lisa Knych, Assistant Professor of Law and Public Policy  
J.D., Syracuse University, 1985

Roger Koppl, Professor of Finance  
Ph.D., Auburn University, 1988

Alexandra Kostakis, Assistant Professor of Entrepreneurial Practice  
M.B.A., New York University, 1995

Peter E. Koveos, Walter and Olivia Kiebach Chair in International Business, Professor of Finance, Senior Director of International Programs  
Ph.D., Pennsylvania State University, 1977

Gary LaPoint, Assistant Professor of Supply Chain Practice  
M.B.A., Syracuse University, 1987

E. Scott Lathrop, Professor of Marketing Practice  
Ph.D., Cornell University, 1994

Eunkyu Lee, Professor of Marketing, Director of PhD Program  
Ph.D., Duke University, 1993

Lihong Liang, Assistant Professor of Accounting  
Ph.D., Pennsylvania State University, 2002

Susan Long, Associate Professor of Managerial Statistics, Co-Director of Transactional Records Access Clearinghouse  
Ph.D., University of Washington, 1980

G. Thomas Lumpkin, The Chris J. Witting  
Chair in Entrepreneurship  
Ph.D., University of Texas at Arlington, 1996

Catherine Maritan, Associate Professor of  
Management  
Ph.D., Purdue University, 1998

Stephen Matyas, Assistant Dean of  
Undergraduate Programs  
M.B.A., Syracuse University, 1997

Tridib Mazumdar, Howard R. Gendal  
Professor of Marketing  
Ph.D., Virginia Polytechnical Institute, 1987

Alexander McKelvie, Associate Professor of  
Entrepreneurship  
Ph.D., Jönköping International Business  
School, 2007

Maria Minniti, Bantle Chair in  
Entrepreneurship and Public Policy  
Ph.D., New York University, 1997

MaryAnn Monforte, Clinical Assistant  
Professor of Accounting  
M.B.A., Syracuse University, 1995

D. Craig Nichols, Assistant Professor of  
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Ph.D., Indiana University, 2005

Amanda G. Nicholson, Professor of Retail  
Practice  
M.S., Syracuse University, 2001

Georgette Nicolaides, Clinical Assistant  
Professor of Statistics  
M.B.A., University of Texas at Arlington,  
2003

Julie Niederhoff, Assistant Professor of  
Supply Chain Management  
Ph.D., Washington University in St. Louis,  
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Patrick Penfield, Assistant Professor of  
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M.B.A., Le Moyne College, 1998

John Petosa, Professor of Accounting  
Practice  
J.D., Syracuse University, 1995

Milena Petrova, Assistant Professor of  
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Ph.D., University of Florida, 2006

S.P. Raj, Distinguished Professor of  
Marketing  
Ph.D., Carnegie Mellon University, 1980

Kira Reed, Associate Professor of  
Management  
Ph.D., University of Connecticut, 2000

Daniel Rice, Adjunct Professor, Law and  
Public Policy  
J.D., Syracuse University, 1990

Breagin Riley, Assistant Professor of  
Marketing  
Ph.D., Northwestern University, 2009

Minet Schindehutte, Associate Professor of  
Entrepreneurship  
Ph.D., University of South Africa, 1990

Peter Scott, Assistant Professor of  
Entrepreneurial Practice  
M.B.A., University of Michigan, 1994

Ravi Shukla, 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, Assistant Professor of  
Entrepreneurial Practice  
Ph.D., Northcentral University, 2004

Frances Gaither Tucker, Chair and  
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

Padmal Vitharana, Associate Professor of  
Management Information Systems  
Ph.D., University of Wisconsin-Milwaukee,  
2000

Mark Wademan, Adjunct Professor,  
Management Information Systems  
Ph.D., Syracuse University, 2006

Ginger Wagner, Assistant Professor of  
Accounting Practice  
M.B.A., Syracuse University, 2003

William J. Walsh, Assistant Professor of  
Accounting Practice, Director of Joseph I.  
Lubin School of Accounting  
M.B.A., Syracuse University, 1989

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

Raymond M. Wimer, Professor of Retail  
Practice  
M.S., Syracuse University, 1998

Yildiray Yildirim, Chair and Associate  
Professor of Finance  
Ph.D., Cornell University, 2001

Pierre Yourougou, Clinical Associate  
Professor of Finance  
Ph.D., New York University, 1996

Joyce Zadzilka, Assistant Professor of  
Accounting Practice  
M.B.A., Syracuse University, 1996

# Maxwell School Of Citizenship And Public Affairs

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James B. Steinberg, Dean  
200 Eggers Hall  
[www.maxwell.syr.edu/](http://www.maxwell.syr.edu/)

## About The School

James B. Steinberg, Dean  
200 Eggers Hall

The Maxwell School of Citizenship and Public Affairs was established in 1924 to develop public sector leaders who have strong social science backgrounds and the practical skills required to lead large public organizations. Today the School is the home to six social science academic disciplines, an interdisciplinary doctoral program in social sciences, and two graduate professional degree programs that train public leaders for careers here and abroad.

With its 157 faculty members, 105 staff, 850 graduate students and 1,800 undergraduate majors, Maxwell members produce a significant amount of new knowledge and educate a large number of students to pursue careers in the public and private sectors, as well as careers as researchers and scholars.

For its efforts, Maxwell programs rank highly among their peers because the School attracts talented faculty and students, produces high quality scholarship, and develops already able students into eminent thinkers and analysts.

For a complete listing of faculty associated with the Maxwell School, see the “Faculty” section of this catalog.

## 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 doctoral degrees in public administration and social science. In addition, four professional degrees are offered: the master of public administration (M.P.A.), the master of arts in international relations (M.A.I.R.), and, for mid-career executives, the executive master of public administration (E.M.P.A.) and the executive master of international relations (E.M.I.R.).

## Executive Education

Through its executive education program, Maxwell offers several executive degrees, certificates of advanced study, and training programs for students from a number of countries who may study here for a few weeks or up to a year. Maxwell hosts Humphrey Fellows from a large number of countries; and Civic Education Leadership Fellows, Leaders for Democracy Fellows, and Edward R. Murrow Fellows from the Middle East.

## 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 Program for the Advancement of Research on Conflict and Collaboration, the Center for Environmental Policy and Administration, the Center for Technology and Information Policy, the Center for Policy Research, 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.

Center for Environmental Policy and Administration (nondegree)  
Director Peter Wilcoxon, 419 Crouse-Hinds Hall, 315-443-1890.

Faculty Jacob Bendix, Steven R. Brechin, Stuart I. Bretschneider, A.H. Peter Castro, W. Henry Lambricht, Allan C. Mazur, John G. McPeak, Susan W. Millar, Rosemary O’Leary, Thomas Perreault, David C. Popp, Sarah B. Pralle, Jane M. Read, Robert M. Wilson

Staff M. Rizzo



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 close working relationships with the Center for Technology and Information Policy, 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 Science and Forestry (ESF). In addition, CEPA has strong links to the SU/ESF EnSPIRE initiative on interdisciplinary environmental research; to Maxwell's Environmental Finance Center; and to the Syracuse Center of Excellence in Environmental and Energy Systems. [cepa.maxwell.syr.edu/](http://cepa.maxwell.syr.edu/)

Center for Technology and Information Policy  
Director Stuart Bretschneider, 419 Crouse-Hinds Hall, 315-443-1890

The Maxwell School's Center for Technology & Information Policy (CTIP) is a multidisciplinary research program that provides institutional support and facilities for collaborative research on the technical dimension of public policy. The program is affiliated with Syracuse University's L.C. Smith College of Engineering and Computer Science and specializes in evaluation of technology and R&D policy; use of technical information and computers in public policy making and public management; computer-based technology for analysis forecasting, assessment, and technology transfer; and the role of technical information in policy making and public management.

The Technology & Information Management Policy Program of the Maxwell School's Department of Public Administration is the curriculum counterpart of the technology center's research apparatus. Masters and doctoral students in public administration are offered courses in Technology Development, Research and Development Policy, Science and Technology Policy, Environment and Resources Policy, Public Management Computer Information Systems, and a Research Workshop in Technology Policy. [ctip.maxwell.syr.edu/](http://ctip.maxwell.syr.edu/)

Center for Policy Research (nondegree)  
426 Eggers Hall, 315-443-3114  
Director Christine Himes  
Associate Director for Aging Studies Douglas Wolf  
Associate Director for Metropolitan Studies Program John Yinger  
Associate Director for Budget and Administration Margaret Austin

Faculty: Badi Baltagi, Robert Bifulco, Leonard Burman, Thomas Dennison, William Duncombe, Gary Engelhardt, Madonna Harrington Meyer, Christine Himes, William Horrace, Chihwa (Duke) Kao, Eric Kingson, Sharon Kioko, Thomas Kniesner, Jeffrey Kubik, Andrew London, Leonard Lopoo, Amy Lutz, Jerry Miner, Jan Ondrich, John Palmer, Eleonora Patacchini, David Popp, Gretchen Purser, Christopher Rohlfs, Stuart Rosenthal, Ross Rubenstein, Perry Singleton, Michael Wasylenko, Jeffrey Weinstein, Pete Wilcoxon, Janet Wilmoth, Douglas Wolf, John Yinger

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 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.

CPR accommodates over 65 faculty, staff, and graduate students on the fourth floor of Eggers Hall. Facilities include CPR's own UNIX computing facility. A full complement of support staff, including a computer consultant, editors, event coordinators, and a webmaster, provide extensive secretarial support and project assistance.

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 graduate study. Current activities take place around both thematic and regional foci. Thematic initiatives include the Transnational Non-Governmental Organization theme, which has as its focus defining what constitutes an effective civil society, understanding the challenges facing civil society organizations that work in a transnational context, integrating the various disciplinary perspectives on civil society, non-governmental organizations, and social movements, and not-for-profit organizations and determining what kinds of skills are needed to lead such endeavors; Transnational Mobility, which focuses on the causes and consequences of the transnational movement of ideas, people, capital, and information; and Transnational Human Security, which centers around issues related to what has been described as human or societal security in contrast to national security.

The Moynihan Institute is also host to six regional projects: the South Asia Center, the Center for European Studies, Maxwell's European Union Center, the program on Latin America and the Caribbean, the Upstate New York Consortium for Middle Eastern Studies, and the East Asia program. The regional centers provide the Syracuse University student body with chances 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](http://www.maxwell.syr.edu/moynihan.aspx)

#### Institute for National Security and Counterterrorism

Director, William C. Banks, 402 MacNaughton Hall, 315-443-2284

The Institute for National Security and Counterterrorism (INSCT) at Syracuse University was established at the College of Law in 2003 through the vision of Professor William C. Banks, with the support of Dean Hannah R. Arterian. Beginning in the 2004-2005 academic year, the Maxwell School of Citizenship & Public Affairs, with the support of Dean Mitchel B. Wallerstein, joined the College of Law in sponsoring the Institute. The Maxwell School and the College of Law support a systematic, interdisciplinary approach in addressing important questions of law and policy related to national and international security and counterterrorism.

INSCT is dedicated to interdisciplinary and innovative research, teaching, and public service. Drawing upon the expertise of affiliated faculty, INSCT's work addresses key national and international challenges pertaining to security, terrorism and counterterrorism, post-conflict reconstruction, and community resilience. INSCT's faculty and research fellows strive to deliver cutting-edge scholarship and a first-class educational experience for students and professionals. Through structured guidance and support, INSCT faculty and staff help advance student-based research and analytical proficiency. INSCT also promotes innovative educational programs and student engagement in advanced coursework by way of its Certificates of Advanced Studies (CAS), currently offered in the fields of security, counterterrorism, and post-conflict reconstruction.

INSCT places a special emphasis on forming partnerships with national and international academic and non-academic institutes, as well as private individuals, in order to advance common research and project goals. Research and other projects are also often conducted on behalf of or in consultation with governmental agencies, municipalities, and other public entities which help facilitate a direct public service. [www.insct.syr.edu/](http://www.insct.syr.edu/)

#### Program for the Advancement of Research on Conflict and Collaboration (nondegree)

Director Catherine Gerard, 400 Eggers Hall, 315-443-2367.

Faculty More than 35 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 health professions.

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?

Program associates are engaged in studies that relate to collaborative governance, collaborative public management, foreign policy decision making during crises, cultural aspects of conflict, geo-political ideologies, ethnic conflicts, nonviolent means of protest, gender and conflict, community organizing efforts, alternative dispute resolution methods, conflict transformation, interpersonal violence, prevention of disputes through increased public participation in environmental matters, and de-escalating initiatives and peacemaking in Arab-Israeli relations. Other activities of the program include a theory-building seminar, working groups organized around specific research topics, a conflict forum speaker series, and conferences focused on conflict related topics. PARCC is a base for graduate studies in collaborative governance, collaborative public management, conflict analysis and conflict resolution. Twelve-credit Certificates of Advanced Study (CAS) in conflict resolution are awarded to students who meet the established certificate requirements as they

complete a graduate degree from SU or the State University of New York College of Environmental Science and Forestry.

## Study Abroad

Most students pursuing the International Relations degree take advantage of the Global Program offerings. Many students choose to find internships abroad and may choose to study at one of several overseas centers.

## Financial Aid

Academic departments and programs each have an array of financial aid, including University Fellowships, graduate assistantships, tuition scholarships, and grants-in-aid. Graduate admissions officers in each graduate program allocate financial aid based largely on merit.

Doctoral students generally receive tuition, stipends and health insurance coverage in exchange for teaching or research services. Some students receive University Fellowships.

There is more limited funding for master's students. They are eligible for financial awards, including fellowships, assistantships (partial or full), partial tuition scholarships, and grants-in-aid.

## Academic Offerings

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### Anthropology M.A. Guidelines

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  
ANT 612 Ethnology  
ANT 631 Method and Theory in Biological Anthropology  
ANT 641 Anthropological Archaeology  
ANT 672 Language, Culture and Society  
ANT 711 Current Anthropological Theory  
ANT 741 Archaeological Theory

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" below for the writing requirements leading to a doctoral degree.

4. Tools and methods requirement:

Cultural students choose either:

ANT 781 Ethnographic Methods, or

ANT 684 Social Movement Research Methods

Archaeology students choose one of the following:

ANT 642 Methods in Archaeology, or

Archaeology students must also fulfill a field training course (ANT 643 Advanced Field Work in Archaeology) or complete an accredited archaeological field program.

5. Advisor and master's committee:

Students are expected to select an advisor by the end of their second term in residence. (The graduate director can serve as an interim advisor until one is selected.)

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## Anthropology Overview

209 Maxwell Hall  
315-443-2200

Chair John S. Burdick

Faculty Douglas V. Armstrong, Tom Brutsaert, Hans C. Buechler, John S. Burdick, A.H. Peter Castro, Christopher R. DeCorse, Gareth J. Fisher, Ann Grodzins Gold, Azra Hromadzic, William F. Kelleher Jr., Sandra Lane, Shannon A. Novak, Deborah Pellow, Rebecca Peters, Lars Rodseth, Robert A. Rubinstein, Maureen Trudelle Schwarz, Theresa A. Singleton, John Marshall Townsend, Cecilia Van Hollen, Susan S. Wadley

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 multiethnic 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 anthropology department 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.
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## Anthropology Ph.D. Guidelines

Ph.D. students must demonstrate, by earning a “Ph.D. Pass” on the Qualifying Examination, that they are qualified to carry out a significant body of anthropological research. Once their proposal 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 must fulfill all core courses and qualifying requirements (see M.A. guidelines). This may be accomplished through satisfactory completion of required coursework and/or the Qualifying Examination, or 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.

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 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.

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## Civil Society Organizations Certificate Overview

This certificate is designed for students aiming to prepare themselves as professionals in the expanding field of non-governmental organizations and for students whose research interests focus on the roles of non-state actors in global civil society.

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## Certificate Of Advanced Study In Conflict Resolution

The Program for the Advancement of Research in Conflict and Collaboration (PARCC) administers a 12-credit Certificate of Advanced Study in Conflict Resolution allows students to engage in 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 with the guidance of the PARCC Records Coordinator. Students may concentrate their classes in a specific area of interest (such as international conflict, collaborative practices, environmental, or social movements) or complete a more general program of study. 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.

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## Documentary Film And History (M.A.)

Contact: Richard Breyer, Co-Director  
315-443-9249, rlbreyer@syr.edu  
Scott Strickland, Co-Director  
315-443-5875, jsstrick@syr.edu

Faculty Subho Basu, Richard L. Breyer, Richard Dubin, Tula Goenka, Sharon R. Hollenback, Norman A. Kutcher, Patricia H. Longstaff, Gladys McCormick, James Roger Sharp, Evan Smith, John Scott Strickland, 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.

The program's curriculum stresses three general areas of study: writing and production, research, distribution and funding of documentaries and other non-fiction 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

DFH 610	Documentary Production Research (three 1-credit courses)
DFH/HST 693	Oral History Workshop
DFH/HST 695	Historical Narratives and Interpretation
DFH 670	Internship (2-credits)
HST elective	Various topics (HST 500-997)
HST elective	Various topics (HST 500-997)
HST 802	Modes of Analysis in History
TRF 611	Dramatic Writing for Television and Film
TRF 637	Telecommunications Law and Policy
TRF 650	Advanced Practice: Special Projects
TRF 655	Screenwriting and Production Workshop
TRF 659	Documentary Production
TRF elective	Various Topics (TRF 500-997)

TO TAL: 38 CREDITS

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## Econometrics Certificate Overview

### Econometrics

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.

To obtain the certificate a student must successfully complete ECN 621, ECN 622, ECN 720, MAT 651, and MAT 652.

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## Economics Department Overview

Chair William Horrace, 110 Eggers Hall, 315-443-3612

Faculty Elizabeth Ashby, Badi Baltagi, Kristina Buzard, Donald H. Dutkowsky, Gary V. Engelhardt, Jerry Evensky, Susan H. Gensemer, William Horrace, Chihwa (Duke) Kao, Jerry S. Kelly, Jeffrey D. Kubik, Derek Laing, Yoonseok Lee, Mary E. Lovely, Robin P. Malloy, Devashish Mitra, Piyusha Mutreja,

Inge O'Connor, Jan Ivar Ondrich, John L. Palmer, Eleonora Patacchini, Lourenço Paz, J. David Richardson, Stuart S. Rosenthal, Abdulaziz Shifa, Perry Singleton, A. Dale Tussing, Michael Wasylenko, Jeffrey Weinstein, Peter J. Wilcoxon, John M. Yinger

The economics department offers separate programs leading to the M.A. and the Ph.D. degrees. The department's faculty members have an orientation toward applied and policy-related economics that is built on a strong foundation of economic theory and statistical and econometric methods. The department teaches about 3,000 students per year, has approximately 40 doctoral students in residence, and enrolls 30-35 master's students at various stages of study.

The department chooses to be selective in its acceptance of students to its programs and as a result has a low graduate student -to-faculty ratio. The average number of students in an entering Ph.D. class ranges from 8 to 12 with a somewhat larger number entering the M.A. program. This small size allows for more interaction between faculty and students than is found in other programs with larger numbers of students. The department enjoys strong loyalty from its many distinguished alumni, who have positions in academia, business, and government.

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## Economics Ph.D. Overview

The Ph.D. in economics at Syracuse is a research-oriented degree, designed for those who want to do applied economics in higher 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 at the web site, [www.maxwell.syr.edu](http://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 February 15, 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 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 \$23,135 (2013-14) 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 \$17,000 for the 2013-2014 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: (1) completion 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 of Microeconomic Theory;  
ECN 611, ECN 612 Microeconomics I and II  
ECN 613, ECN 614: Macroeconomic Theory I and II  
ECN 605, ECN 620, ECN 621, ECN 622: Mathematics for Economists, Mathematical Statistics, and Econometrics I and II.  
ECN 820, ECN 821: Dissertation Workshop I and II

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.

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:

Summer 2013

ECN 605 Math for Economists  
ECN 620 Foundations of Econometrics

Fall 2013

ECN 601 Survey of Macroeconomic Theory  
ECN 621 Econometrics I  
ECN 613 Macro I

Spring 2014

ECN 611 Micro I  
ECN 622 Econometrics II  
ECN 614 Macro II

Summer 2014

Examinations in Micro and Econometrics

Fall 2014

ECN 612 Micro II  
ECN Field I, Course 1  
ECN Field II, Course 1

Spring 2015

ECN Field I, Course 2  
ECN Field II, Course 2

Summer 2015

Field Examination, Dissertation hours

Fall 2015

ECN 821 Dissertation Workshop II

ECN Breadth

ECN Breadth

Spring 2016

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.

**Transfer Credits** A student who has taken graduate coursework at other institutions and wishes to matriculate in our Ph.D. program can transfer course credits to Syracuse University. A student may transfer up to as many credits from another institution as the number of course credits that will be taken at Syracuse. For the typical student who will have 51 course credits and 21 dissertation hours to complete the Ph.D., he or she may transfer 24 credits of coursework from another institution. A graduate course is eligible for transfer credit if the grade in the course is 3.0 (on a 4.0 scale) or better. Students who transfer courses should review their programs of study with the director of graduate studies before they begin coursework at Syracuse, so that courses are not repeated.

**Fields** The department regularly offers five fields. These fields are public economics, labor economics, international economics, urban economics, and econometrics.

A student with a particularly strong interest may also apply to the director of graduate studies for a field in microeconomic theory or macroeconomic theory. The coursework for an economic theory field is selected in consultation with a professor who will assume responsibility for both the supervision of the field and the comprehensive examination in the field. A field in econometrics requires two different course offerings of ECN 720 Selected Topics in Econometrics (in addition to ECN 620, 621, 622).

A student whose interests and research goals would benefit from a deeper understanding of financial economics may be permitted to take a field in financial economics. Coursework and the comprehensive examination in this field are administered by the finance department in the School of Management.

The field can focus on either corporate finance or investment. Completion of the following courses with a grade of B or better is required in order to take a comprehensive exam in financial economics: FIN 751, 855, and 960 (Topics in Corporate Finance). FIN 756, 758, 960 (Topics in Investment) must be completed for a concentration in investment. The economics department can make no assurance as to the availability of these classes or to the timing of the examination. A student wishing to take a field in financial economics must receive the explicit approval of the graduate studies committee of the economics department and the chairperson of the Department of Finance.

**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 (601, 611) and Macroeconomic Theory (613, 614) and Econometrics (620, 621, 622). An average grade of B or better in these courses is normally required to take the qualifying examination, although the graduate studies committee can make exceptions for unusual cases. Students who do not pass the qualifying examinations may retake the examination later that same summer.

**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 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

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## Economics M.A. Overview

### Economics M.A. Overview

The economics department offers a variety of graduate courses toward the completion of a Master of Arts degree.

Applicants to the M.A. program are expected to submit scores from the Graduate Record Examinations and prior coursework that demonstrates an aptitude for graduate study in economics. Students often have strong undergraduate training in economics, but some students have a strong quantitative background and little training in economics. Students whose native language is not English are also required to take the TOEFL examination. Admission preference is given to students with TOEFL scores in the range of 600 and above or ITOTL scores of 100 and above. Graduate assistantships and

University Fellowships are generally not awarded to students studying for the M.A. degree.

Courses available on a regular basis include microeconomic and macroeconomic theory, mathematical economics, econometrics, public finance, economic development, international trade and finance, economic dimensions of global power and law and economics. A student with strong undergraduate training and a good grasp of English who is able to study full time will be able to complete the degree in one calendar year. Students whose first language is not English, or who have little background in economics, typically require three semesters plus a summer.

Degree Requirements: The M.A. degree requires 30 credits including 5 mandatory courses and 5 electives chosen in consultation with the MA degree director. Courses required for the M.A. degree include: ECN 601 (microeconomic theory), ECN 602, ECN 613, ECN 614 (macroeconomic theory) or ECN 610 (Economic Dimensions of Global Power), each with a grade of B- or better. Students must also take 6 credits of statistics and econometrics, normally satisfied by taking ECN 521 and ECN 522, but for students with exceptional undergraduate training may include ECN 620, 621 and 622. Finally, Mathematical Economics (ECN 505 or alternatively, ECN 605) is also required.

Students may take courses numbered between 500 and 599, but normally at least 15 credits must be at the 600 level or above. A student's program may include 6 credits taken outside 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.

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## Economics And International Relations Joint Program Overview

The Maxwell School offers a joint Economics and International Relations option which allows you to earn two MA degrees--in International Relations and in Economics--in only two years. You will be expected to complete challenging courses in economic theory and econometrics, as well as the core courses in International Relations.

Students will learn applied quantitative techniques that can be employed in a variety of careers in government, the private sector or with non-governmental organizations. Areas of concentration include econometrics, economic development, international economics, urban and regional economics, and finance.

This career field offers a unique opportunity to marry private-sector capital concerns with delicate political and social issues. As banks and business continue to globalize their services and emerging markets continue to influence developed financial markets, an understanding of how internationalization influences interest rates, currency and securities values, and local economies is crucial.

# Certificate Of Advance Study In E-Government Management And Leadership

Certificate of Advance Study in E-Government Management and Leadership

Contact: [igrad@syr.edu](mailto:igrad@syr.edu)

<http://ischool.syr.edu/future/cas/egov.aspx>

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: 1) leadership and management of information and communication technology applications found in public organization E-government systems, and 2) technical design aspects of E-government in public organizations. There are two required courses for this degree:

IST 711 Electronic Government, Concepts and Practice  
PAI 895 Executive Education Seminar

Through careful advisement, students will select two additional courses offered in either the iSchool or Maxwell School based on their prior education and experience as well as professional needs. The certificate program is intended to prepare students to lead and manage e-government applications in complex public and private sector organizations.

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## European Union & Contemporary Europe Certificate Overview

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](mailto: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/](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:

1. The choice of one of the required courses:

PSC 756 Politics of the European Union  
PSC 600 The EU and Beyond: Identity, Politics, and the New Europe\*  
ANT/HUM/SOC 670 The Culture and Politics of Reconciliation in Central Europe\*\*

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  
ANT 673/ PAI 730 Peace and Conflict in the Balkans  
ANT/PAI 701 Multilateral Peacekeeping  
FRE 600 Contemporary France in Literature & Film\*  
FRE 600 Selected Topics  
GER 600 Selected Topics  
HST 735 Readings and Research on European History

LAW 910 English Legal System\*\*\*  
PHI 640/REL 660 Continental Philosophy of Religion  
PAI 715 Issues in Global Economic and Financial Security\*\*\*\*  
PAI 715 International Economic Negotiations\*\*\*\*  
PA 715 Statecraft and Smart Power in the Digital Era\*\*\*\*  
PAI 727 Responding to the Proliferation of Weapons of Mass Destruction  
PAI 788 Transnational Crime, Drugs & Terrorism  
PAI 716/ECN 610 Economic Dimensions of Global Power  
PSC 769 Comparative Parties and Politics  
PSC 785 Comparative Civil-Military Relations  
PSC 786 Russian and Post-Soviet Politics  
PSC 788.001 Political Leadership  
PSC / PAI 700.003 Crisis Management  
PSC 600 European National and International Conflict: What Alternatives to Violence\*  
PSC 600 European Human Rights\*  
SPA 653 Women in Spanish Literature  
SPA 658 Narrative and Film in Spain

\*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.

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).

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## Executive Master Of International Relations Program Overview

Executive Master of International Relations (Executive MAIR)

219 Maxwell Hall  
315-443-3759

Director, Steve Lux  
Associate Director, Catherine M. Gerard  
Assistant Director, Student Programs - Margaret E. Lane, 315-443-8708

The Executive Master of International Relations (Executive MAIR) is open to individuals with substantial experience and managerial responsibility in the public, private, and nonprofit sectors (including NGOs). The typical candidate has seven or more years of management experience and holds a position beyond that of basic supervisor. The program is designed for mid-career managers who require updated information and skills in the field of international relations, and who anticipate promotion to a leadership position, or who plan to transition to the public or nonprofit sectors. Current students are drawn from international government ministries and NGOs; 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, PAI 996 Master's Project, and the choice either PSC 783: Comparative Foreign Policy Analysis 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.

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## Executive Master Of Public Administration Program Overview

Executive Master of Public Administration (Executive MPA)

219 Maxwell Hall  
315-443-3759

Director, Steve Lux  
Associate Director, Catherine M. Gerard  
Assistant Director, Student Programs - Margaret E. Lane, 315-443-8708

The Executive Master of Public Administration (Executive MPA) is open to individuals with substantial experience and managerial responsibility in the public, private, and nonprofit sectors (including NGOs). The typical candidate has seven or more years of management experience and holds a position beyond that of basic supervisor. The program is designed for mid-career managers who require updated information and skills, who anticipate promotion to a leadership position, or who plan to transition to the public or nonprofit sectors. Current students are drawn from international government ministries and NGOs; 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 encourages students to form a concentration in a policy or administrative area tailored to their professional needs. The degree consists of 10 courses, including three required courses: PAI 895 Executive Education Seminar, PAI 897 Fundamentals of Policy Analysis, and PAI 996 Master's Project. Four of the additional seven elective courses may be selected from another department of the Maxwell School or, with permission, from another college or school of the University.

The Executive Education Program also administers several certificate programs.

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## Geography Department Overview

### Geography

Chair Tod Rutherford, 144 Eggers Hall, 315-443-2605.

Faculty Jacob Bendix, Peng Gao, Matthew Huber, Natalie Koch, Susan W. Millar, Don Mitchell, Mark Monmonier, Anne E. Mosher, Thomas Perreault, Jane M. Read, David J. Robinson, Jonnell Robinson, Tod D. Rutherford, Farhana Sultana, John C. Western, Robert M. Wilson, Jamie L. Winders

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 Center for Environmental Policy and Administration and the Moynihan Institute for Global Affairs. Strong links also exist with earth sciences, civil and environmental engineering, the School of Architecture, and with the SUNY School 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 the Caribbean, Latin America, South Asia and Europe, as well as in the U.S. and Canada.

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 formation in cities and 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 social theory, to interrogate the production of urban spaces and experiences.

**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 newly renovated Physical Geography Research Laboratory, which is equipped for a variety of soil and sediment analyses, and includes a Sedigraph 5120 for particle size analysis.

**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.

**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. Faculty and graduate students conduct research on a range of key societal and environmental issues, with recent topics including geospatial surveillance technologies; modeling channel migration; applications of satellite remote sensing to studies of tropical forest structure, demography, and certified forestry; and GIS mapping of hunger and related issues in the City of Syracuse. Graduate students train and conduct research in both our Geographic Information and Analysis Laboratory and our new Integrated Spatial Analysis Laboratory, which was recently funded by a Major Research Instrumentation grant from NSF.

**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.

**Nature, Society, Sustainability:** Nature-society scholarship at Syracuse University includes land use and land cover change in tropical forests using remotely sensed data, environmental history of western North America, the political ecology of rural livelihoods in Andean South America, and the environmental impacts of the mining industry. Syracuse geographers also study sustainable development, nature conservation and protected areas, forest fire dynamics and management, environmental mapping and its societal impacts, media coverage of environmental issues, and human impacts on climate, vegetation and landform processes.

**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.

Within the framework of the principal clusters, students pursue individually designed programs, assisted by their 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, distinguished scholars and professionals are regularly brought to Syracuse for seminars, lectures, and symposia.

The department also participates in a variety of interdisciplinary programs in the Maxwell School and maintains strong links with other parts of the campus, including the State University of New York College of Environmental Science and Forestry. Normally the department has about 30 resident graduate students.

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.

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## Geography M.A. Degree

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 three special subfields of 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 (three to six credits) or two master's papers. The choice must be made by the end of the first year.

The M.A. program assumes a basic foundation in geography, including work in human, environmental, and physical geography, as well as in cartography and relevant methods. Students without such a background must do extra work, such as attending courses, auditing, or reading.

The student's advisor and committee approve the topic for and supervise the writing of the master's thesis, which must be completed by the end of the second year. Students electing to write two master's papers instead of a thesis must have each paper approved by two members of the geography faculty.

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## Geography Ph.D. Overview

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 average.

**Coursework** 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 as many as 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.

**Areas of Competence** Toward the end of the program, a Ph.D. student must demonstrate, through a written and oral qualifying examination, special competence in three topical fields. Each doctoral student must provide evidence of competence in those research skills to be used in the dissertation as outlined in the formal proposal.

**Dissertation** A formal dissertation proposal must be submitted and approved before the Ph.D. qualifying examination is taken. 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.

**Qualifying Examination** Before taking the qualifying exam a student must have completed all requirements except the dissertation itself. The exam has both written and oral parts covering the specific subfields identified by the student in consultation with the advisor.

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## Health Services Management And Policy Certificate Overview

The Certificate of Advanced Study in Health Services Management and Policy 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 independent of, or as part of, a master's or Ph.D. program. All courses may be applied to the Executive Master of Public Administration degree. For those pursuing the certificate independently of another degree program, the capstone does not earn additional credit.

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## Department Overview

145 Eggers Hall  
315-443-2210

Chair Carol Faulkner  
Director of Graduate Studies Susan Branson

Faculty Alan Allport, Subho Basu, David H. Bennett, Susan Branson, Craige B. Champion, Andrew W. Cohen, Albrecht Diem, Michael R. Ebner, Carol Faulkner, Jeffrey Gonda, Paul M. Hagenloh, Samantha Kahn Herrick, Amy Kallander, George Kallander, Ralph Ketcham, Osamah F. Khalil, Norman A. Kutcher, Chris Kyle, Elisabeth D. Lasch-Quinn, Andrew Lipman, Laurie Marhoefer, Gladys McCormick, Dennis Romano, Martin S. Shanguhya, James Roger Sharp, John Scott Strickland, Junko Takeda, Margaret Susan Thompson, William M. Wiecek

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.

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## M.A. Degree

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.

1. 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.
  2. The student completes 24 credits of coursework, a language qualification, and 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.
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## Ph.D. Degree

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.

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## Certificate Overview

The 12-credit certificate combines the resources of Maxwell and the University's School of Information Studies and L.C. Smith 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.

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## International Relations Program Overview

Chair and Associate Dean Ross Rubenstein, 215 Eggers Hall, 315-443-4000

Deputy Chair John McPeak, 215 Eggers Hall, 315-443-4000

See faculty listing under Public Administration and International Affairs

The multidisciplinary International Relations (IR) program links the Maxwell School's long-standing interest in contemporary world problems with scholarly approaches to solving them. The M.A. program combines an academic experience with professional training aimed at preparing students for positions in the public, non-profit, and private sectors in the international arena. The Ph.D. track begins with the M.A. in international relations and concludes with a Ph.D. from one of Maxwell's disciplinary departments.

### M.A. DEGREE

The Master of Arts in International Relations, a 40-credit program, draws students from throughout the world. It combines rigorous academic experience with professional training for positions in the public, non-profit, and private sectors.

The program emphasizes a multidisciplinary curriculum and uses the resources of various Maxwell School departments and research-oriented centers, such as the Program for the Advancement of Research on Conflict and Collaboration and the Moynihan Institute of Global Affairs. Core faculty members are drawn from public administration & international affairs, political science, anthropology, sociology, history, economics, and geography. 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.

All students are required to complete five core courses including international relations, economics, quantitative analysis, program evaluation and management, and one of five signature courses. Students then select one career track to organize their studies. Career tracks include: 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, and the Middle East.

Most students also take advantage of the Global Program offerings to fulfill the internship requirement. Students may complete a summer internship program in Washington, D.C. or overseas. In their second fall semester, students may participate in the Global Security and Development program in D.C.

Students may also choose to study in one of several overseas centers.

The program can be completed in 16 months. Proficiency in a second language is required.

Candidates for the MAIR degree have the option to pursue joint degrees in the fields of public administration, economics, law (the College of Law requires matriculation in their JD program prior to beginning coursework at Maxwell), and public relations at the S.I. Newhouse School of Public Communications (public diplomacy dual degree program). Students may also pursue concurrent degree programs with the MAIR program and other departments and colleges of the University, such as environmental science and forestry (SUNY-ESF), geography, information studies or management, among others.

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## International Relations/Public Administration Joint Degree Overview

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.

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## Certificate In Latin American Studies

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.

The Dates and Deadlines form provides specific deadlines by which forms must be complete. The Program of Study must be completed and signed by your advisor and the director of PLACA.

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## Law/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. 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 Paul Hagenloh, Associate Professor of History and Director of Graduate Studies, Department of History, 145 Eggers Hall, 443-4144 [phagenlo@syr.edu](mailto:phagenlo@syr.edu). Students with general questions and inquiries concerning procedures regarding joint degrees should contact Keri Foster, Associate Director for Student Life, Suite 444 College of Law, 443-1146, [kdfoster@law.syr.edu](mailto:kdfoster@law.syr.edu).

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## Law/International Relations

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.

Questions and inquiries may be addressed to Nell Bartkowiak, Associate Director of Graduate Studies, International Relations, 225 Eggers Hall, Maxwell School of Citizenship and Public Affairs (443-9340; [nsbartko@maxwell.syr.edu](mailto:nsbartko@maxwell.syr.edu)). Students with general questions and inquiries concerning procedures regarding joint degrees should contact Keri Foster, Associate Director for Student Life, Suite 444 College of Law (443-1146, [kdfoster@law.syr.edu](mailto:kdfoster@law.syr.edu))

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## Law/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 should be directed to Professor Glyn Morgan, Director of Graduate Studies, ([dgmorgan@maxwell.syr.edu](mailto:dgmorgan@maxwell.syr.edu)). Students with general questions and inquiries concerning procedures regarding joint degrees should contact Keri Foster, Associate Director for Student Life, Suite 444 College of Law (443-1146, [kdfoster@law.syr.edu](mailto:kdfoster@law.syr.edu)).

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## Program Overview

Law/Public Administration

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 can prepare for a career that rests on 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).

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## Leadership Of International And Non-Governmental Organizations Certificate Overview

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: 1) the operating context and key actors, 2) organizational leadership, and 3) policy context and analysis. There is one required public administration course. 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. This program may be pursued independent of, or as part of, a master's or Ph.D. program. All courses may be applied to the executive master of public administration degree.

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## Certificate Of Advanced Study In Middle Eastern Affairs

Program Director: Mehrzad Boroujerdi  
332 Eggers Hall  
315-443-5877  
mborouje@maxwell.syr.edu

Faculty Ahmed E. Abdel-Meguid, Carol Babiracki, Hossein Bashiriyeh, Mehrzad Boroujerdi, Miriam Fendius Elman, Carol Fadda-Conrey, Ken Frieden, Rania Habib, Susan Henderson, Amy Kallander, Tazim R. Kassam, Osamah F. Khalil, Amos Kiewe, Natalie Koch, Jaklin Kornfilt, Sandra Lane, Dana M. Olwan, Kara Richardson, Robert A. Rubinstein, 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:

1. 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 M117CAS.
2. 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):

2. 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:

- ANT/PAI/MES 668: Middle East in Anthropological Perspective
- ANT/IRP/MES 707: Culture in World Affairs
- ARC 735: Islamic Architecture
- HST/MES 644: Israel & Palestine: Historical Approaches
- PSC/MES 682: Social Theory & Middle East Politics
- PSC/MES/PAI 684: International Relations of the Middle East
- REL/ANT 628: Muslim Rituals, Practices, and Performances
- REL/JSP 676: Advanced Topics in Judaic Literature
- REL 607: Ancient Religious Rhetoric
- REL 625: Pluralism in Islam

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), Bahçesehir 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 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: The Hasan Abdullah Yabroudi 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.

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## Political Science Department Overview

100 Eggers Hall  
315-443-2416

Chair Thomas Keck

Faculty Kristi J. Andersen, Michael Barkun, Hossein Bashiriyeh, Kenneth Baynes, James P. Bennett, G. Matthew Bonham, Mehrzad Boroujerdi, Keith J. Bybee, Horace Campbell, Matthew R. Cleary, Elizabeth F. Cohen, Francine D'Amico, Bruce W. Dayton, Renee de Nevers, Gavan Duffy, Colin Elman, Miriam Fendius Elman, Margarita Estévez-Abe, Christopher G. Faricy, Shana Gadarian, Jonathan K. Hanson, Margaret Hermann, Seth Jolly, Thomas M. Keck, Ralph Ketcham, Audie Klotz, W. Henry Lambright, Robert D. McClure, Daniel McDowell, Glyn Morgan, Quinn Mulroy, Sarah B. Pralle, Grant D. Reeher, Mark Rupert, Anoop Sadanandan, S.N. Sangmpam, Hans Peter Schmitz, Yüksel Sezgin, Abbey Steele, Jeffrey M. Stonecash, Brian D. Taylor, Laurence Thomas, Margaret Susan Thompson, Stuart J. Thorson

Established in 1924, the department of political science is a national leader in graduate training.

The curriculum is divided into six fields: American politics, international relations, comparative politics, political theory, public administration & policy, and law & courts. 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.

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## Political Science M.A. Degree Overview

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. There is no thesis requirement, and 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.

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## Political Science Ph.D. Degree Overview

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.

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## Postconflict Reconstruction Certificate Overview

Director, William C. Banks, 402 McNaughton Hall, 315-443-2284

Administered by the Institute for National Security and Counterterrorism (INSCT), the Certificate of Advanced Study in Postconflict Reconstruction combines interdisciplinary courses, seminars, and internship opportunities to offer graduate and law students the unique opportunity to prepare themselves for a career in a wide range of postconflict stabilization, reconstruction, and peace-building professions. Participating students must complete 12 credits—three courses and a capstone project, internship, or similar. Classes are offered in the Maxwell School, the College of Law, the Newhouse School of Public Communications, and the Whitman School of Management.

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## Public Administration Program Overview

Chair and Associate Dean Ross Rubenstein, 215 Eggers Hall, 315-443-4000

Vice Chair John McPeak, 215 Eggers Hall, 315-443-4000

Faculty Shena Ashley, William C. Banks, Catherine A. Bertini, Robert Bifulco, Guthrie S. Birkhead, Edwin A. Bock, Stuart I. Bretschneider, Walter Broadnax, Stuart Brown, Robert Christen, Renee de Nevers, Thomas H. Dennison, Vernon L. Greene, Sarah Hammersma, Yilin Hou, Soonhee Kim, Sharon N. Kioko, W. Henry Lambright, Leonard Lopoo, John G. McPeak, Christina Merchant, Ines A. Mergel, Robert Murrett, Tina Nabatchi, John L. Palmer, Rebecca Peters, David C. Popp, Ross Rubenstein, Larry Schroeder, Abbey Steele, David Van Slyke, Peter J. Wilcoxon, Douglas A. Wolf, John M. Yinger

The Department of Public Administration and International Affairs offers management and policy coursework that explores a broad range of topics underlying today's global challenges. Modern society demands imaginative and sensitive leadership, and highly skilled public managers and policy analysts. The faculty in this 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 exercised major influence in the growth and development of the field of public administration and policy. The school's first dean was instrumental in the founding of the American Society for Public Administration (ASPA), serving as its first president, and the Public Administration Review was founded at Maxwell in 1937.

Since then, the department has expanded its scope to consider the political, economic, and social context of public administration and international affairs broadly, offering degree programs aimed at achieving substantial competency in institutional design, policy analysis, management and administrative techniques, policy implementation and negotiation. The programs also provide experiential learning opportunities that ensure graduates are able to effectively apply core skills to management and policy issues.

More than 8,000 alumni of the department's programs are employed in federal, state, and local governments, non-profit agencies, foundations, private firms, and international organizations and NGOs worldwide. They are leaders across all these sectors, working on public policy and management issues, both domestic and international in focus. Graduates of the Ph.D. program are well-represented on the faculties of most other leading schools that offer graduate education in public administration and policy.

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## M.P.A. Program Overview

The Maxwell School's M.P.A. program emphasizes general training of people who will assume high responsibilities in public service. By offering a variety of fields for students who want to gain a substantive focus while obtaining generalist training in public administration and policy, the program responds to the needs of today's public managers and policy analysts. Students have access to most of the University's graduate courses and also to those of the State University of New York College of Environmental Science and Forestry. Working with advisors, students have ample opportunity to tailor appropriate programs of study.

The program requires a residency of 12 to 18 months. All students begin the program in early July, and those who carry full course loads throughout their residency will complete the program the following June.

The degree requires 40 credits of coursework, 34 of which must be in public administration and international affairs courses. Twenty-five of these credits satisfy core area requirements. Core requirements include three or more credits in each of several areas, including economics, quantitative analysis, organization and management theory, public budgeting, and political context. Additional work in approved programs-of-study and related electives satisfies the remaining 15 credits. Courses may be selected from those of the public administration and international affairs department, other departments in the Maxwell School, or elsewhere in the University.

Degree requirements are flexible enough to allow a student to design a program in an area such as state and local government, financial management, public and non-profit management, technology and information policy, international and development administration, environmental policy and administration, international and national security policy, or social policy (health, aging, education, social welfare) and still complete the core courses required of all M.P.A. students.

M.P.A. candidates with limited public service experience are encouraged to take an internship during their residency, for which they can receive up to three credits toward the degree requirements. Students may petition to have a maximum of six credits of relevant graduate work earned elsewhere counted toward degree requirements. Students are expected to complete at least 34 credits while in residence at the University.

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## Public Administration - 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.

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## Public Administration Ph.D. Program Overview

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 that are central to preparation for the Ph.D. degree in Public Administration
- Obtain a firm understanding of the broad intellectual tradition of Public Administration
- Become active researchers beginning in their first year of the program

Doctoral studies in Public Administration provide an interdisciplinary study of public management and public policy analysis. Ph.D. students complete 72 graduate course credits plus 9 dissertation credits. Requirements for admission include an M.P.A. 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 3 credits in the intellectual history of public administration, 3 credits in public organization theory, 9 credits in research methods, and 12 credits in two fields of specialization (6 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 Ph.D. students also serve research apprenticeships during their first two years of residence. Participation in the University's TA 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.

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## Public Diplomacy (M.S. & M.A.)

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.

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 Syracuse University's Paul Greenberg House. Exit requirements include demonstrating proficiency in a foreign language.

### Required Courses At The S.I. Newhouse School Of Public Communications

#### Communications

COM 698 Media Law

#### Graphic Design

GRA 617 Visual Communications Theory and Practice

#### Public Relations

PRL 602 Introduction to Public Diplomacy and Communications

PRL 605 Public Relations Theory

PRL 607 Advanced Public Relations Diplomacy

PRL 608 Public Relations Writing

PRL 611 Public Relations Research

PRL 615 Public Relations Campaign Planning and Execution

PRL 725 Public Relations Management

PRL 735 Public Relations Practicum

### Required Courses At The Maxwell School Of Citizenship And Public Affairs

#### Public Administration and International Affairs

PAI 704 Quantitative Skills in International Relations

PAI 706 International Relations Capstone Seminar (1 credit)

PAI 708 Issues for 21st Century Public Diplomacy

PAI 709 Research Consultancy in Public Diplomacy

PAI 710 International Actors and Issues

PAI 720 Fundamentals of Economics

#### OTHER REQUIRED COURSES:

Summer off-campus internship program (and career track course) 6 credits

Career Track Course 3 credits

#### INTERNATIONAL RELATIONS SIGNATURE COURSE; CHOOSE ONE:

ANT/PAI 707 Culture in World Affairs

ECN 610/PAI 716 Economic Dimensions of Global Power

GEO 606 Development and Sustainability

HST 645 History of International Relations

PSC 783 Comparative Foreign Policy

TOTAL: 58 credits

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## Public Health Certificate Overview

Preparing students in the core public health competencies, this certificate allows individuals now working in public and community settings to meet the standards set by regulatory agencies for leadership roles in public health agencies. Other professionals may simply wish to supplement their training without pursuing a full master's degree.

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## Master Of Public Health (CNYMPH) Program Overview

Contact: Thomas H. Dennison, Ph.D., Associate Director

426 Eggers Hall; 315-443-9060; thdennis@maxwell.syr.edu

[www.upstate.edu/cnymph](http://www.upstate.edu/cnymph)

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, L.C. Smith 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.

A certificate of Advanced Study in Public Health (CASPH) a 5 course (15-credit hour) program of study, is also offered. 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.

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](http://www.upstate.edu/cnymph/academic/mph_degree/how_to_apply.php)

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## Certificate Of Advanced Studies In Public Infrastructure Management And Leadership

Department Chair: Chris E. Johnson, 151 Link Hall, 315-443-2311.

### Program Description

The L.C. Smith College of Engineering and Computer Science (LCS), in collaboration with the Department of Public Administration (PA) 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 course work that is relevant to their knowledge, interests, and needs.

### Certificate of Advanced Study in Public Infrastructure Management and Leadership (CAS-PIML)

The CAS-PIML will deliver a certificate to students in both LCS 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 Requirements

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 LCS, combined with the Public Administration 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 Managerial Leadership
- PAI 734 Public Budgeting, OR
- PAI 731 Financial Management in State and Local Governments
- MAE 548 Engineering Economics and Technology Valuation
- ECS 636 Infrastructure Engineering and Management

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
- CIE 600 Construction Engineering and Project Management
- CIE 643 Transportation Engineering
- CIE 678 Rehabilitation of Civil Infrastructure
- PAI 601 Fundamentals of Conflict Studies
- PAI 709 Public Organizations and Management
- PAI 730 Managing Individual, Group, and Systemic Conflicts
- PAI 730 Environmental Conflicts and Collaboration
- PAI 757 Economics of Development
- PAI 777 Economics of Environmental Policy

Total 15 credits leading to a Certificate of Advanced Study in Public Infrastructure Management and Leadership

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## Public Management And Policy Certificate Overview

The 12-credit CAS in Public Management and Policy provides preparation for students to better understand the non-technical elements of their professional environments. Enrollment is limited to students enrolled in graduate programs within the LC Smith College of Engineering and Computer Sciences, the i-School and within the College of Arts and Sciences' graduate programs in Biology, Chemistry, Earth Sciences and Physics. This certificate helps to bridge the gap between their technical skills and the public sector governments and governing systems in which they will work. Understanding the way political systems deal with decision process and how accountability to political authority effect the organization process can enhance how students function and allow them to more rapidly raise with these organizational settings.

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## School District Business Leadership (Professional Certification) C.A.S.

Contact: Joseph Shedd, 150 Huntington Hall, 315 443-2685, jbshedd@syr.edu

The School District Business Leadership C.A.S. program (SDBL) provides a comprehensive program in school business management provided jointly by the School of Education's Department of Teaching and Leadership and the Maxwell School of Public Affairs Department of Public Administration. The program leads to New York State certification as a School District Business Leader.

School district business leaders are typically the chief financial officers of school districts and often manage a broad range of non-instructional 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:

- 1) Financial management and management of ancillary services.
- 2) Education leadership and management.
- 3) Education law.
- 4) Human resource management.
- 5) Microeconomics.
- 6) Program evaluation.

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 (CAS) 3

EDA 762 Leadership for Inclusive Schooling (CAS) 3

EDA 735 Human Resource Management in Public Education 3

EDA 782 Issues and Practices in District Office Leadership (CAS) 3

EDA 792 Legal Basis of Education (CAS) 3

IDE 641 Techniques in Educational Evaluation 3

PAI 709 Public Organization and Management (MPA) 3

PAI 722 Quantitative Analysis (MPA) 3

PAI 723 Managerial Economics for Public Administrators -or equivalent-(MPA) 3

PAI 731 Financial Management of State and Local Governments (MPA) 3

PAI 735 State and Local Public Finance (MPA) 3

PAI 791 Education Financial Administration 3

PAI 792 Managing School District Non-Instructional Functions 3

EDA 899 Internship Seminar in School District Business Leadership (This

internship seminar is completed at the end of the program 4

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## Security Studies Certificate Overview

Director, William C. Banks, 402 MacNaughton Hall, College of Law, 315-443-2284

Administered by the Institute for National Security and Counterterrorism (INSCT), the Certificate of Advanced Study in Security Studies provides graduate students a grounding in the growing field of security studies and the analytical tools desired by many defense and defense-related agencies in the US and abroad, as well as by intergovernmental organizations. Students are required to take at least 12 credits in four courses chosen from among seven required courses. Remaining credits are selected from approved elective courses in the Maxwell School and other affiliated schools and colleges throughout the University.

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## Social Science Ph.D. Program Overview

Chair Vernon Greene  
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 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 and colleges and universities, though some enter professional and leadership positions in the nonprofit and public sectors.

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## 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 nearly always 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.

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## Master Of Social Science (Distance) Program Overview

Chair: Deborah Pellow

Asst. Director, Executive Education: Margaret Lane  
315-443-3759

Faculty: M. Barkun, D. Bennett, M. Boroujerdi, N. Kutcher, D. Pellow, S. Webb

The Master of Social Science degree was founded over 40 years ago and now resides in Maxwell's Executive Education Program. It utilizes interdisciplinary comparative analyses to explore the world's broad social science problems. The curriculum pays special attention to the issues of international studies, the foundations and development of major societies and questions involving war and society in the world's major cultural areas.

The innovative program is accomplished by two two-week residencies, distance learning and independent study with faculty members from across the Maxwell School, who work together to ensure an interdisciplinary approach to learning.

This unique arrangement allows MSSc students to earn a master's degree while concurrently maintaining their professional careers as NGO officials, teachers, military personnel, government officers, journalists, and corporate executives involved in international business. Study for the Master of Social Science degree can begin at any time of the year.

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## Sociology Department Overview

Chair Christine Himes, 302 Maxwell Hall, 315-443-2346.

Graduate Director Madonna Harrington Meyer, 307A Lyman Hall, 315-443-9440

Faculty Steven R. Brechin, Marjorie L. DeVault, Dawn Dow, Cecilia A. Green, Madonna Harrington Meyer, Christine L. Himes, Prema Kurien, Andrew S. London, Amy Lutz, Yingyi Ma, Jackie Orr, Arthur Paris, Gretchen Purser, Merrill Silverstein, Janet Wilmoth

Affiliated Faculty Sari Biklen, Peter Blanck, Linda Carty, Richard Loder, Chandra Talpade Mohanty, David A. Sonnenfeld, Steven Taylor

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, and provides opportunities for joint degrees or collaborative study with many departments and multidisciplinary research centers at the Maxwell School. Students may also focus on specific geographical areas, including the United States, Asia, Africa, and South and Central America.

A core theory course incorporates classical foundations of Sociology, as well as more contemporary sociological theory. The Department's strength lies in its teaching and research in three major areas: (1) qualitative methods, particularly ethnography, life history, historical analysis, and participant observation; (2) inequality studies, emphasizing social inequalities related to gender, race, ethnicity, immigration status, religion, class, age, sexuality, and ability, and exploring such diverse institutions and contexts as the family, education, workplace, economy, environment, healthcare, criminal justice, and state; (3) aging and the life course, health, and social policy, including gerontology, family studies, demography, economics, technological innovations, and public policy analysis. After doctoral students complete the core courses, they pursue advanced study, and develop 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 M.A. requires 30 credits, including: 12 credits of theory, methods, and statistics; 6 credits in advanced Sociology seminars; and 12 credits of graduate courses. A master's thesis option may be substituted for six hours of graduate credit.

The Sociology Department typically admits five to seven 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, as is participation at the Maxwell School's multidisciplinary research centers.

In addition to scholarly and research activity, the Sociology Department stresses teacher training. It is an active participant 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.

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## Sociology M.A. Overview

The Department normally accepts only those students wishing to pursue the Ph.D., although provision is made for awarding the M.A. degree. All incoming students must complete a core curriculum of our courses. Students entering with a master's degree from another institution may waive specific core courses by petitioning the graduate committee. The master's degree is awarded upon passing of the core courses, and completion of 30 graduate credits. Students may write a master's thesis and receive six thesis credits.

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## Sociology Ph.D. Overview

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 are required to obtain the Ph.D., including at least 45 credits of graded coursework and at least 9 dissertation credits.

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 two advanced courses 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.

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## South Asia Studies Certificate Overview

Faculty Carol Babiracki, Shobha K. Bhatia, Tej K. Bhatia, Himika Bhattacharya, Manan Desai, Tula Goenka, Ann Grodzins Gold, Tazim R. Kassam, Prema Kurien, Chandra Talpade Mohanty, Iswari P. Pandey, Romita Ray, Anoop Sadanandan, Larry Schroeder, Farhana Sultana, Cecilia Van Hollen, Susan S. Wadley, Joanne P. Waghorne

Affiliated Faculty:

Douglas Biklen, Mehrzad Boroujerdi, Richard Breyer, Michael Carey, Gareth Fisher, Rashmi Gangamma, Devashish Mitra, Lars Rodseth, Jaipaul Roopnarine

The Certificate of Advanced Study (CAS) in South Asia 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/SAS 621 Gender & Sexuality in South Asia

ANT 625 Problems in the Anthropology of South Asia

ANT/SAS/PAI 626 Cultures and Politics of Afghanistan and Pakistan

HIN 620 Hindi for Research Purposes

HST 775 Readings and Research in South Asian History

REL 687 Global Hinduism

Candidates can choose three other courses from the list below:

ANT/SAS 621 Gender & Sexuality in South Asia

ANT 625 Problems in the Anthropology of South Asia

ANT/SAS/PAI 626 Cultures and Politics of Afghanistan and Pakistan

ANT/REL 628\* Muslim Rituals, Practices and Performances

ANT 756\* Development Anthropology

ANT/GEO/WGS 764\* Gender and Globalization

HIN 620 Hindi for Research Purposes

HST 715 Readings and Research in American History: Subaltern and New Social History

HST 775 Readings and Research in South Asian History

LIN 671\* Dimensions of Bilingualism & Multiculturalism

LIN 681\* Global Communication through World Englishes

PAI 707\* Culture in World Affairs

PAI 715\* Topics in Global Development

PAI 758\* Local Public Finance in Developing and Transition Economies

REL 621\* Teaching World Religions in Theory & Practice

REL 625\* Pluralism in Islam

REL/SAS 626\* Muslim Women Beyond the Veil

REL 627\* Globalization and Religion: Process & Problems

REL 687 Global Hinduism

REL 692\* Other People's Religions

REL 696\* Gender and Religion: Theory & Practice

REL 699\* Writing Religions & Cultures

\* 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.

# Courses

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## Anthropology

### ANT 500 Selected Topics 1-3 SI

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

### ANT 523 Globalization and its Discontents in Latin America 3 Y

Crosslisted with: LAS 523

Effects of and reactions to globalization and neo-liberal policies in rural communities, including industrialization, rural-urban and international migration and ethnic movements.

### ANT 553 Women and Social Change 3 E

Crosslisted with: WGS 553

Function of changes in women's roles in sociocultural urbanization, revolution, and modernization. Women in Third World countries compared to women in industrialized countries.

### ANT 571 Topics in Sociolinguistics 3 SI

Crosslisted with: LIN 571, SOC 571

Functions of language in society. Geographical, socioeconomic, and male-female differentiation. Functions of various types of speech events. Requirements include a research project. R1, 6 credits maximum

### ANT 574 Anthropology and Physical Design 3 E

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.

### ANT 600 Selected Topics 1-3 SI

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

### ANT 611 History of Anthropological Theory 3 Y

Main theoretical approaches to the study of the origin and development of society and culture: cultural evolutionists, functionalists, diffusionists, structuralists, and historicists.

### ANT 612 Ethnology 3 SI

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.

### ANT 614 Cities, Spaces and Power 3 O

Double Numbered with: ANT 414

Processes of urbanization, migration, adjustments of peasants in cities, ethnic and cultural variation in urban areas. Cultural differences in industrial development. Uses of applied anthropology in urban situations. Sometimes offered abroad.

### ANT 616 Political Anthropology 3 IR

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.

### ANT 617 Economic Anthropology 3 IR

Contribution of anthropology to economic theory and the relevance of orthodox economics to cross-cultural and evolutionary studies of society.

### ANT 619 Ritual Theory and Religious Practice 3 IR

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.

### ANT 620 Readings, Research and Ethnography 3 S

Individual or group readings and research on topics in ethnography. Student or group works with a faculty member and submits reports as individually arranged. R

### ANT 621 Gender & Sexuality in South Asia 3 O

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/"third sex" identities. Additional work required of graduate students.

### ANT 624 Negotiation: Theory and Practice 3 Y

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.

### ANT 625 Problems in Anthropology of South Asia 3 IR

One topic of theoretical concern to anthropologists dealing with South Asia, e.g., caste, kinship, village Hinduism, economics, urbanization, rural/urban networks.

### ANT 626 Cultures and Politics of Afghanistan and Pakistan 3 E

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. First offered in Summer 2014

### ANT 627 Brazil: Anthropological Perspectives 3 IR

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.

### ANT 628 Muslim Rituals, Practices, and Performances 3 IR

Crosslisted with: REL 628

Historical, cultural, and sociological analysis of pan-Islamic festivals and rituals. Local, culturally-specific, unofficial practices in Islam.

### ANT 629 Transformation of Eastern Europe 3 IR

Double Numbered with: ANT 428

Change and continuity after the demise of communism as experienced by ordinary citizens. Transformations in agriculture, industry, social, and political institutions; the rise of ethnic nationalism; and ethnic conflict. Additional work required of graduate students.

ANT 631 Method and Theory in Biological Anthropology 3 Y  
Mechanisms of human adaptation to environmental stress; emphasizing human variation. Cultural and biological modes of adaptation. Paradigmatic and methodological issues, with special emphasis on biocultural and contemporary approaches.

ANT 633 Advanced Human Osteology 3 E  
Forensic uses of human osteology. Skeletal differentiation of living and fossil human populations from mammals. Overview of statistics. Procedures for estimating height, age, sex, and race.

ANT 634 Anthropology of Death 3 E  
Double Numbered with: ANT 434  
Death in anthropological perspective. Survey of the many ways death has entered into the work of archaeologists, biological anthropologists, ethnographers and social theorists.

ANT 636 Bioarchaeology 3 IR  
Double Numbered with: ANT 436  
Surveys the analysis of human skeletal remains in archaeological and medico-legal settings. Methods and techniques of analysis and interpretation will be emphasized. Case studies will be used to illustrate application to variable social and historical contexts. Additional work required of graduate students.

ANT 641 Anthropological Archaeology 3 Y  
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 3 O  
Double Numbered with: ANT 442  
Formulation and conduct of archaeological research with a focus on field and laboratory methods used to obtain and analyze data. Survey techniques, excavation strategies, archaeological classification, and data base management. Additional work required of graduate students.

ANT 643 Advanced Field Methods in Archaeology 6 SS  
Supervised training in excavating, organizing, coordinating, and directing research on an archaeological site. R

ANT 644 Laboratory Analysis in Archaeology 3 E  
Double Numbered with: ANT 444  
Introduction to archaeological 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 3 IR  
Crosslisted 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 3 IR  
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 648 History of Archaeology 3 IR  
Double Numbered with: ANT 348  
Tracing the discipline's origins with the Renaissance dilettante. Brief survey of scientific and quantitative methods.

ANT 649 World Heritage Sites 3 E  
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 3 IR  
Crosslisted with: REL 651, SOC 651  
Classical sociological writings of Emile Durkheim and Max Weber and their contemporary significance.

ANT 652 Anthropology and Public Policy 3 IR  
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 655 Culture and AIDS 3 IR  
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 3 IR  
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 3 IR  
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 3 IR  
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 3 IR  
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 3 IR

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 3 IR

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 3 O

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 3 IR

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 3 E

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 3 IR

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 3 O

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 1-6 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. R

ANT 672 Language, Culture, and Society 3 Y

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 3 IR

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 674 Culture and Folklore 3 IR

Crosslisted with: WGS 674; Double Numbered with: ANT 474

Ways in which folklore (oral and material traditions, including personal narratives), reflects key cultural ideas such as gender, ethnicity, and history. Analytical methods for examining folk traditions. Additional work required of graduate students.

ANT 675 Culture and Disputing 3 IR

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 3 E  
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 3 IR

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 3 IR

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 682 Life Histories/Narratives 3 IR

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 3 IR

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 3 IR

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 3 Y  
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 3 IR  
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 1-6 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. R

ANT 691 Critical Issues in the Study of Native Americans 3 IR  
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 3 SI  
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 3 IR  
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 1-3 SI  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

ANT 701 Seminar on Multilateral Peacekeeping 3 IR  
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 3 Y  
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 3 Y  
Theoretical issues of the past two decades. Includes feminism and anthropology. Reflexive and interpretive ethnography. Sociobiology versus culturology. Marxist anthropology.

ANT 713 Proposal Writing 3 SS  
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 3 Y  
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 3 IR  
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 3 IR  
Crosslisted with: GEO 764, WGS 764  
The impact of the increasing hypermobility of capital and culture flows across borders on gender relations.

ANT 781 Ethnographic Methods 3 IR  
Cultural anthropological research techniques. Participant observation, various types of interviewing, psychological testing devices, use of photographic and tape recording equipment, methods of recording field data, problems of developing rapport.

ANT 800 Selected Topics 1-3 SI  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

ANT 970 Experience Credit 1-6 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. R

ANT 990 Independent Study 1-6 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. R

ANT 997 Masters Thesis 1-6 S  
R

ANT 999 Dissertation 1-15 S  
R

## Economics

ECN 500 Selected Topics 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

ECN 505 Mathematical Economics 3 Y  
Introduction to use of basic mathematical techniques in economic analysis.  
PREREQ: (ECN 301 OR 311) AND (MAT 284 OR 285 OR 286 OR 295 OR 296).

ECN 510 Special Topics in Economics 3 IR  
Various special topics of economics issues offered as available.  
PREREQ: ECN 301 OR 311. R5, 18 credits maximum

ECN 521 Economic Statistics 3 S  
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 102) OR 203.

ECN 522 Econometric Methods 3 Y  
Statistical procedures. Problems of estimating parameters in regression models of economic behavior.

PREREQ: ECN 521 AND (ECN 301 OR 311).

ECN 525 Economics and Gender 3 Y  
Crosslisted with: WGS 525  
Offered only in Strasbourg. European economy, with central focus on economic principles underlying decisions to create and extend scope of European Community and on economic policies EU has followed since creation.

ECN 566 International Macroeconomics and Finance 3 Y  
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 1-12 SI  
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. R

ECN 600 Selected Topics 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. \* R

ECN 601 Survey Microeconomic Theory 3 Y  
Microeconomics. For graduates with little recent work in economics.

ECN 602 Survey Macroeconomic Theory 3 Y  
Macroeconomics. For graduates with little recent work in economics.

ECN 604 Economics for Managers 3 IR  
Micro- and macroeconomic theory for managerial decision making. Forecasting. Not open to students seeking advanced degrees in economics.

ECN 605 Mathematics for Economists 3 SS  
A review of mathematical techniques required in economics. Calculus, matrix, algebra, difference and differential equations, and set theory. Open to economics Ph.D. and Applied Statistics masters students only. Two semesters of calculus required.

ECN 610 Special Topics in Economics 3 IR  
Various special topics of economics issues offered as available.  
PREREQ: ECN 601. R5, 18 credits maximum

ECN 611 Microeconomics I 3 Y  
Consumer and firm theory. Emphasis on the development of analytic techniques and the ability to apply them to economic models.  
PREREQ: ECN 301, 302, 602.

ECN 612 Microeconomics II 3 Y  
General equilibrium theory and advanced topics in economic theory.  
PREREQ: ECN 611.

ECN 613 Macroeconomics I 3 Y  
Aggregate economic analysis. Emphasizes macroeconomic models and main currents in contemporary macroeconomic thought.

ECN 614 Macroeconomics II 3 Y  
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 3 IR  
Economic theories from antiquity to the 20th century.

ECN 620 Foundations of Econometrics 3 SS  
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 3 Y  
Mathematical formulation of economic models. Statistical problems of estimating parameters in regression analysis.  
PREREQ: ECN 605 AND ECN 620.

ECN 622 Econometrics II 3 Y  
Estimation problems and techniques in more complex economic models.  
PREREQ: ECN 621.

ECN 631 Public Finance 3 Y  
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 3 Y  
Crosslisted with: PAI 735  
Expenditures and revenues of state and local governments. Fiscal aspects of intergovernmental relations.  
PREREQ: ECN 601.

ECN 655 Economics of Health and Medical Care 3 Y  
Crosslisted with: PAI 736  
Economic theory, empirics 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): ECN 601 or equivalent; (for PPA 736): PPA 723.  
PREREQ: ECN 601.

ECN 661 Economics of Development 3 Y  
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 3 Y  
Crosslisted with: PAI 758  
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 3 Y  
Balance of payments, foreign exchange markets, international trade theory, tariffs, quotas adjustment mechanisms, and exchange controls.

ECN 681 Money, Banking & Monetary Policy 3 SS  
Financial instruments and structure, banking organization and regulation. Money supply determination control and policy. The Federal Reserve: structure and policy instruments. Master's or doctoral candidates only.  
PREREQ: ECN 602.

ECN 720 Topics in Econometrics 3 IR  
Selected topics in applied and advanced econometrics.

PREREQ: ECN 622. R3, 12 credits maximum

ECN 731 Public Expenditures 3 Y  
Theory of public goods; incidence of expenditures; intergovernmental relations; expenditure determinants, benefit-cost analysis.

ECN 732 Taxation 3 Y  
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 3 Y  
Urban land-use patterns, transportation, and housing. Theoretical and quantitative framework.

ECN 745 Regional Economics 3 E  
Theory and analysis of regional economics; interregional income theory and factor movements, regional growth, accounts, and policy.

ECN 751 Labor Economics I 3 Y  
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 3 Y  
Income distribution, effects of health on work and wages, discrimination, retirement decisions, and impacts of government programs and policies.  
PREREQ: ECN 751.

ECN 765 Advanced International Trade 3 Y  
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 3 Y  
Crosslisted with: PAI 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.  
PREREQ: PAI 723 OR ECN 601.

ECN 777 Economics of Environmental Policy 3 Y

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 820 Dissertation Workshop I 3 Y  
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. R

ECN 821 Dissertation Workshop II 3 Y  
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. R

ECN 865 Topics International Economics 3 Y  
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 665.

ECN 997 Masters Thesis 1-6 S  
R

ECN 999 Dissertation 1-15 S  
R

## Geography

GEO 500 Topics in Geography 1-3 Y  
In-depth studies of selected topics. R

GEO 510 Research on North America 1-3 IR  
Reading and special work R

GEO 520 Research on Latin America 1-3 IR  
Crosslisted with: LAS 520  
Reading and special work R

GEO 530 Research on Africa 1-3 IR  
Reading and special work. R

GEO 537 Environmental Policy in a Development Context 3 S  
Crosslisted with: LAS 537  
Offered only in Santiago. Examines historical/intellectual/ material processes that transformed nature into natural resources to be exploited; ways global political process has guided global responses to environmental problems; Chilean environmental policy over the last 20 years.

GEO 538 Research on Europe 1-3 IR  
Reading and special work. R

GEO 540 Research on Southern and Eastern Asia 1-3 IR  
Reading and special work. R

GEO 550 Research on Physical Geography 1-3 IR  
Reading and special work. R

GEO 560 Research: Economic Geography 1-3 IR  
Reading and special work. R

GEO 561 Global Economic Geography 3 IR  
Globalization, world economic processes, international development, and policy issues; emphasizing geographical perspectives.

GEO 563 The Urban Condition 3 IR  
Contemporary cities. Economic growth and decline. Social polarization. Construction of the built environment. Case studies from around the world.

GEO 564 Urban Historical Geography 3 O  
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 570 Research on Cultural Geography 1-3 IR  
Reading and special work. R

GEO 572 Landscape Interpretation in Cultural Geography 3 SI  
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 3 O  
In-depth reading of Marx's Capital to understand: (a) the relationship between political economy and the geographical landscape; (b) the formative role of "Capital" in contemporary geographic theory.

GEO 576 Gender, Place, and Space 3 IR  
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 1-12 IR  
Reading and special work. R

GEO 583 Environmental Geographical Information Science 3 Y  
Data types, collection techniques, and processing strategies in natural resource survey. Monitoring and environmental sciences. Basic concepts of GIS data structures and algorithms. Data quality issues. User requirements, management aspects, and implementation experience.  
PREREQ: GEO 383 OR 683.

GEO 595 Geography and the Internet 3 Y  
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.

GEO 600 Selected Topics 1-3 Y  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

GEO 602 Research Design in Geography 3 Y  
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 3 Y  
Historical survey of development of Geography. Emphasis on 20th century: regionalism, positivism, humanism, Marxism, feminism, post-structuralism/post-colonialism

GEO 606 Development and Sustainability 3 Y  
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 1-3 S  
Topics to be selected in conference with advisor for individual program of study and research.

GEO 655 Biogeography 3 E  
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 1-6 S  
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. R

GEO 672 Geopolitics in Theory and Practice 3 IR  
Review of geopolitical theories, their historical origins, and influence on the practice of statecraft and foreign policy; focus on contemporary U.S.-global relations, especially in the European context. Critical approach to applied geopolitical thinking.

GEO 681 Map Design 3 Y  
Principles of cartographic design. Expository cartography for geographic research. Projections, symbolization, generalization, and use of electronic publishing technology.

GEO 682 Remote Sensing for Environmental Applications and Research 3 Y  
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 4 S  
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 686 Advanced Quantitative Geographic Analysis 3 E  
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 3 E  
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 3  
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 705 Theories of Development 3 E  
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 3 Y  
Research seminar on contemporary problems in human and regional geography, emphasizing development and socio-economic issues. R

GEO 730 Political Economy of Nature 3 O  
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 3 Y

Advanced work in climatology, land forms, and other aspects of physical geography. R

GEO 754 Seminar in Environmental History 3

Origins of field, key debates, research methods relating to the historical geography of humans and the environment.

GEO 755 Seminar in Political Ecology 3 IR

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 3

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 764 Gender and Globalization 3

Crosslisted with: ANT 764, WGS 764  
The impact of the increasing hypermobility of capital and culture flows across borders on gender relations.

GEO 772 Seminar: Cultural Geography 3 O

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. R

GEO 773 Seminar in Economic Geography 3

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.

GEO 774 Seminar: Historical Geography 3 Y

Research seminar on current historiographic issues and archival methodologies in historical geography. R

GEO 781 Seminar: Cartography 3 Y

Research seminar devoted to topics of current interest in geospatial technology, cartographic communication, and the history of cartography in the twentieth-century.

GEO 815 Seminar in Urban Geography 3 Y

Research seminar on theoretical and empirical issues in urban geography.

GEO 870 Seminar on Population Geography 3 SI

Specialized research topics dealing with the application of demographic measurements to geographic problems. R

GEO 876 Feminist Geography 3 O

Crosslisted with: WGS 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.

GEO 970 Experience Credit 1-6 S

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. Permission, in advance, of assigned instructor, department chair, or dean. R

GEO 997 Master's Thesis 1-6 S R

GEO 999 Doctoral Dissertation 1-15 S R

## History

HST 500 Selected Topics 1-3 IR

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

HST 510 Studies in African American History 3 IR

Crosslisted with: AAS 510  
Particular periods or aspects of African American history. R

HST 600 Selected Topics 1-3 IR

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

HST 615 Graduate Preparation 3 S

Sections offered corresponding to the major areas of history so graduate students may prepare for more advanced graduate study. R

HST 622 Empire 3 SI

Seminar on classic texts about empire from Thucydides to The Federalist. Studied from 432 B.C. to the present.

HST 625 The European Union 3 IR

Crosslisted with: SOS 625  
Interdisciplinary introduction to history, politics, and economics of the European community.

HST 634 Underground Railroad 3 SI

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 3 SI

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 3 IR

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 3 IR

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 3 Y

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 3 IR

Race and law in American history, 1600-1960, the historical experience of African-Americans, the indigenous peoples, and Asian-Americans.

HST 690 Independent Study 1-6  
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. R

HST 693 Oral History Workshop 3 IR  
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 3 Y  
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 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

HST 715 Readings and Research in American History 3 S  
R

HST 725 Readings and Research in Latin American History 3 SI  
Secondary readings in Latin American history. R

HST 735 Readings and Research in European History 3 S  
R

HST 738 American Legal History: Modern Public Law 3 IR  
A history of American constitutional law from reconstruction to c. 1960.

HST 755 Readings and Research in Eastern European History 3 SI  
Secondary literature in Eastern European history.

HST 765 Readings and Research in African History 3 SI  
Crosslisted with: AAS 765

HST 775 Readings and Research in South Asian History 3 S  
Crosslisted with: SAS 775  
Graduate seminar introducing main debates in the historiography of late medieval and modern South Asia.

HST 800 Selected Topics 1-3  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

HST 801 Historiography 3 Y

HST 802 Modes of Analysis in History 3 IR  
The colloquium will discuss a large variety of articles and monographs in European and American history.

HST 803 Theories and Philosophies of History 3 IR  
History of historical thought and practice in the development of modern historical method.

HST 804 First-Year Graduate Research Seminar 3 Y  
Seminar geared to particular research interests of first-year students.

HST 805 Seminar in American History 3 S

HST 806 Seminar in European History 3 Y

HST 950 Documentary Film and History Program Paper 3  
Alternative to TRF 650 for Documentary Film and History students. Substantial research paper with accompanying documentary treatment.

HST 990 Independent Study 1-6  
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. R

HST 996 Graduate Readings 3 S  
To be used for field exam study. One year of coursework in the Ph.D. program is required. R1, 6 credits maximum

HST 997 Masters Thesis 1-6 S  
R

HST 999 Doctoral Dissertation 1-15 S  
R

## Middle Eastern Studies

MES 626 Beyond the Veil: Gender Politics in Islam 3 Y  
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 3  
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 3 IR  
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 3 IR  
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 3 Y  
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 1-6  
R

MES 707 Culture in World Affairs 3  
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 3 Y**  
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 3 Y**  
Presents fundamental concepts in applied probability, exploratory data analysis, 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 3 Y**  
An introduction to the principles, methods, and issues related to environmental health sciences.

**MPH 604 Social and Behavioral Dimensions of Public Health 3 Y**  
Covers areas 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 3 Y**  
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 Practice 3 Y**  
The second of two 3-credit courses intended to provide an introduction to a series of contemporary issues in public health practice.

**MPH 607 Public Health Administration 3 Y**  
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 3 Y**  
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 3 Y**  
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.

**MPH 653 Chronic Disease Epidemiology 3 Y**  
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 3 Y**  
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 3 Y**  
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, 602.

**MPH 656 Health Services/Outcomes Research 3 Y**  
Focuses on monitoring of health status, quality of life in populations and clinical settings, as well as survey and secondary data base methodologies  
PREREQ: MPH 602.

**MPH 657 Advanced Research Methods in Public Health 3 Y**  
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 3 Y**  
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 3 Y**  
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 687 Statistical Methods for Categorical Data 3 Y**  
Covers statistical methods for analyzing categorical (nominal and ordinal) data which are frequently encountered in public health and biomedical research  
PREREQ: MPH 602, 661.

**MPH 688 Principles of GIS for Public Health Research and Practice 3 Y**  
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, 603.

**MPH 700 Selected Topics 1-3 Y**  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester R

## Native American Studies

**NAT 600 Selected Topics 1-3 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. R

**NAT 645 Public Policy and Archaeology 3 IR**  
Crosslisted with: ANT 645; 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 656 Representations of Indigenous Peoples in Popular Culture 3 IR  
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 3 IR  
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 3 IR  
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 Admin & Internatl Affrs

PAI 515 China in Transition 3 S  
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 1-12 SI  
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. R

PAI 601 Fundamentals of Conflict Studies 3  
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 3 S  
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 3 E  
Crosslisted with: ANT 626, SAS 626  
Introduction to Afghanistan and Pakistan, recent histories, cultures, current politics. Covers geography, religious systems, gender roles, economic systems, foreign policy issues, refugees, migration. Additional work required of graduate students. First offered in Summer 2014

PAI 632 International Public and Non-Government Organization Management 3 Y  
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 3 Y  
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 3 SI  
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 3  
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 3  
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 3 Y  
Crosslisted with: PSC 655  
Policy implications of the increasingly important interaction between information technology development and the governance process.

PAI 658 Contemporary Issues in Turkey 3 S  
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 3 Y  
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 3 IR  
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 1-6 S  
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. R

PAI 684 International Relations of the Middle East 3 Y  
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 1-3  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

PAI 701 Seminar on Multilateral Peacekeeping 3  
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 3 SS  
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 3 SS  
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 3 S  
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 3 S  
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 1 Y  
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 3 S  
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 3 Y  
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 3 Y  
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 3 Y  
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 6 SS  
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 3 Y  
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 3 Y  
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 3 Y  
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. R

PAI 716 Economic Dimensions of Global Power 3 Y  
Explores the ways in which growing economic interdependence shifts in the locus of global wealth; and ongoing technological change affect the ability of state and non-state actors to exert influence.  
PREREQ: ECN 601 OR PAI 723.

PAI 717 International Security 3 Y  
Theoretical approaches to study of international 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 3 IR  
Crosslisted with: PSC 706  
Current problems in planning and administering national security policy in the United States.

PAI 719 Fundamentals of Post-Conflict Reconstruction 3 Y  
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 3 Y  
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 3 Y  
Basic inferential statistics (point and interval estimation, hypothesis testing). Descriptive statistics (measure of central tendency, variation, bivariate and multivariate association).

PAI 722 Quantitative Analysis 3 Y  
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 3 S

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 3 Y

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 3

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 3 SS

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 3

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 3 IR

Crosslisted with: PSC 707

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 3 S

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. R

PAI 731 Financial Management in State and Local Governments 3 Y

Financial problems confronting state and local governments. Governmental accounting and auditing, municipal borrowing; bond rating; cash management; effects of changing economic base on revenues and expenditures; actuarial funding of employee retirement systems.

PREREQ: PAI 734 AND ECN 635.

PAI 733 Public Personnel and Collective Bargaining 3 IR

Survey of public personnel administration. Current practice, issues and problems in personnel management. Policies and programs affecting the sociopolitical and human resources dimensions of public organizations.

PAI 734 Public Budgeting 3 Y

Role of the modern budget in determination of policy, administrative integration, control of government operations and intergovernmental relations, and in relation to private economy. Unit costs, work programs, budgetary analysis.

PAI 735 State and Local Government Finance 3 Y

Crosslisted with: ECN 635

Expenditures and revenues of state and local governments. Fiscal aspects of intergovernmental relations.

PREREQ: PAI 723.

PAI 736 Economics of Health and Medical Care 3 Y

Crosslisted with: ECN 655

Economic theory, empirics 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): ECN 601 or equivalent; (for PPA 736): PPA 723.

PREREQ: PAI 723.

PAI 742 Public Administration and Law 3 Y

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 3 IR

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 3 Y

Current problems of urban management: centralized versus decentralized metropolitan government; fiscal strain; delivery of municipal services; collective bargaining; governmental accountability.

PAI 745 Intergovernmental Relations 3 IR

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 3 Y

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 3 Y

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 3 Y

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 3 Y

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 751 JD/MPA Seminar 3 Y

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 3 Y  
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 Executive Leadership and Policy Politics 3 Y  
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 3 Y  
Public policy and administration in the context of a constitutional democracy. Relationships between administrative and constitutional values.

PAI 756 Policy and Administration in Developing Countries 3 Y  
Poverty alleviation in developing and transitioning countries. Develops and practices skills needed to create, manage, and evaluate projects to alleviate poverty in transitioning countries.

PAI 757 Economics of Development 3 Y  
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.

PAI 758 Public Finance in Developing Areas 3 Y  
Crosslisted with: ECN 662  
Public finance in less-developed countries. Urban taxation and provision of public services. Considering efficiency and equity issues. PREREQ: PAI 723.

PAI 759 Girls' Education in the Developing World 3 Y  
Explores the benefits of girls' education; obstacles to higher numbers of girls in school; current situation in various developing countries.

PAI 761 Organization Development 3 IR  
Organization development: its literature, practical applications, evaluation of its results.

PAI 762 Challenges of International Management and Leadership 3 Y  
Preparation for careers leading and managing organizations in a global environment. Students will think strategically about organizations and gain skills and competencies that effective leaders of all types of organizations need.

PAI 763 NGO Management in Developing and Transitioning Countries 3 Y  
Examines concerns central to NGO management and the NGO community regarding accountability, effectiveness, professionalism, and understanding the context in which NGOs operate.

PAI 764 UN Organizations: Managing for Change 3 Y  
Processes for change in United Nations organizations. Topics include governance, organizational reform and political reform.

PAI 765 Humanitarian Action: Challenges, Responses, Results 3  
Major humanitarian challenges worldwide since 1992. Disasters caused by nature and man: conflicts and major economic stress. Challenges for women, children, refugees, displaced people. Involvement of government, UN agencies, NGOs, militaries, donors, press, and others.

PAI 767 Fund Development for Nonprofit Organizations 3  
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 3  
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 3  
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 771 Public Management of Technology 3 IR  
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 3 Y  
Variety of concepts concerned with the interaction of science and technology and government.

PAI 773 Technology and Its Processes 3 IR  
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 3 IR  
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 3 Y  
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 3 Y  
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. PREREQ: PPA 723 OR ECN 601.

PAI 777 Economics of Environmental Policy 3 Y  
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. PREREQ: PAI 723 OR ECN 601.

PAI 781 Social Welfare Policy 3 Y  
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 3 Y  
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 3 Y  
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 3 Y  
Overview of education policies designed to reform American schools and school systems. Topics include market based reforms, enhanced accountability, teacher recruitment and compensations plans, and decentralization, among others.

PAI 785 Policy Implementation 3 Y  
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 3 Y  
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 3 Y  
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 3 IR  
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 3 Y  
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, 723.

PAI 791 Education Financial Administration 3 Y  
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 3 Y  
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 801 Intellectual History of Public Administration 3 Y  
Analyze the historical, cultural and intellectual currents that undergird theories and concepts in public administration.

PAI 802 Public Organization Theory and Research 3 Y  
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 3 Y  
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 3 Y  
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 3 S  
Special problems in the politics, substance, or methodology of policy making, or in the execution, administration, or evaluation of public policy. R

PAI 811 Quantitative Methods III: Advanced Quantitative Methods Seminar 3 IR  
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 804.

PAI 812 Public Finance 3 IR  
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 1-6 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. R

PAI 895 Mid-career Training Group 1-3 Y  
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. R1, 6 credits maximum

PAI 896 Mid-career Training Group 3 Y  
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 3 S  
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 1-3 S  
Crosslisted with: PSC 911  
R2, 9 credits maximum

PAI 996 Master's Project Paper 3 S  
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). R

PAI 999 Dissertation 1-15 S  
R

## Political Science

PSC 500 Selected Topics 1-3  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

PSC 600 Selected Topics 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

PSC 602 Public Policy Analysis: Theory and Practice 3 Y  
Crosslisted with: SOS 604  
Overview of policy literature, including political economy and practical politics. Formal analyses and case studies.

PSC 611 American Parties and Elections 3 IR  
Political parties, interest groups, and electoral behavior in American political context.

PSC 612 Development of the American Administrative State 3 IR  
Origins, development, and character of the American administrative state from 1877 to the present. Welfare state, regulatory state, and the civil state.

PSC 621 Theories of American Politics 3 IR  
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 3 Y  
Contemporary theories of international relations. Approaches to understanding and explaining international behavior at single-nation, multiple-nation, and systematic levels.

PSC 655 Global Information Technology Policy 3 Y  
Crosslisted with: PAI 655  
Policy implications of the increasingly important interaction between information technology development and the governance process.

PSC 670 Experience Credit 1-6 S  
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. R

PSC 671 Comparative Political Analysis 3 Y  
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 3 E  
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 3 IR  
Crosslisted with: MES 682  
Orientalist, Marxian, 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 3 Y  
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 1-6 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. R

PSC 691 Logic of Political Inquiry 3 Y  
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 3 Y  
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 3 Y  
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 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

PSC 704 Comparative Political Economy 3 Y  
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 3 IR  
Crosslisted with: PAI 718  
Current problems in planning and administering national security policy in the United States.

PSC 707 National Planning and Capacity to Govern 3 IR  
Crosslisted with: PAI 728  
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.

PSC 711 American Constitutional Development 3 IR  
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 3 IR  
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 3 IR  
Separate and shared powers of Congress and the Presidency. Consequences for policy making.

PSC 714 Federalism, State, and Local Politics 3 IR  
Origins and significance of federalism for American politics. Role of states and localities. Sources of conflicts in state-local politics. Nature of state-local political processes. Intergovernmental relations.

PSC 715 Judicial Politics 3 IR  
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 3 Y  
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 3 SI  
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 3 Y  
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 752 International Law and Organizations 3 IR  
Foundations and application of international law. Institutional and political capability of international organizations. Recent theoretical and methodological development.

PSC 753 International Political Economy 3 Y  
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 3 IR  
Forms of international conflict and explanations for occurrence and resolution.

PSC 755 Politics and Governance in the Information Age 3 IR  
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 3 Y  
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 3 IR  
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 3 IR  
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 3 Y  
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 3 Y  
Selected aspects of foreign policy, such as American foreign policy, Soviet foreign policy, and foreign policy analysis. R

PSC 769 Comparative Parties and Politics 3 IR  
Political parties, interest groups, the electorate, and legislative behavior in a comparative political context.

PSC 779 Political and Social Change 3 IR  
Effects of long-term changes in societies on political behavior and institutions. Modernization.

PSC 780 Seminar on Political Systems 3 Y  
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. R

PSC 781 Politics of the Developing World 3 IR  
The socio-economic, political, and cultural issues shaping people's lives in the more than 140 state-societies that constitute the "Third World."

PSC 782 Politics of China 3 Y  
Political development, political institutions, and political economy of China and Chinese foreign relations, emphasizing the reform era.

PSC 783 Comparative Foreign Policy 3 S  
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 3 IR  
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 3 IR  
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 3 IR  
Political institutions and political development of Russia and other post-Soviet and post-communist states, particularly since 1991.

PSC 787 Democracy and Democratization 3 IR  
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 3 Y  
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 3 Y  
Logic of designing research in political science. Conceptual, theoretical, and empirical analysis. Focus on developing dissertation proposals.

PSC 793 Constructing the World Polity 3 IR  
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 3 IR  
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 795 Antonio Gramsci and the Development of Cultural Marxism 3 SI  
Power, cultural hegemony, and ideological struggle in capitalist societies. Theoretical currents running through Marx, Gramsci, and contemporary interpreters. Includes substantial readings from Gramsci's major theoretical statement, the "Prison Notebooks."

PSC 796 Formal Theories of Choice 3 IR  
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 3 Y  
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 3 SI  
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 1-3 IR  
Seminar R

PSC 810 Selected Topics in Public Administration 3 IR  
Seminar R

PSC 820 Selected Topics in American Politics 3 IR  
Seminar R

PSC 860 Selected Topics in International Relations 3 IR  
Seminar R

PSC 880 Selected Topics in Comparative Politics 3 IR  
Seminar R

PSC 901 Readings and Research on Political Theory and Methodology 1-3 S  
R

PSC 911 Readings and Research on Public Administration and Policy 1-3 S  
Crosslisted with: PAI 930  
R2, 9 credits maximum

PSC 920 Readings and Research on American Politics 1-3 S  
R

PSC 960 Readings and Research on International Relations 1-3 S  
R

PSC 970 Experience Credit 1-6 S  
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing. R

PSC 980 Readings and Research on Comparative Politics 1-3 S  
R

PSC 990 Independent Study 1-6 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. R

PSC 999 Dissertation 1-15 S  
R

## South Asian Studies

SAS 620 Language Training in Preparation for Research Using Tamil 3  
Crosslisted with: TML 620  
Language training to prepare students to conduct research in areas that require knowledge of Tamil. R3, 12 credits maximum

SAS 621 Language Training in Preparation for Research Using Hindi 3 S  
Crosslisted with: HIN 620  
Language instruction to prepare students to conduct research in areas that require knowledge of Hindi. Permission of instructor. R4, 12 credits maximum

SAS 622 Gender & Sexuality in South Asia 3 O  
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 3 E  
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. First offered in Summer 2014

SAS 690 Independent Study 1-6 IR  
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. R

SAS 775 Readings and Research in South Asian History 3 S  
Crosslisted with: HST 775  
Graduate seminar introducing main debates in the historiography of late medieval and modern South Asia.

## Sociology

SOC 500 Selected Topics 1-3 SI  
In-depth selected study of certain social problems. R

SOC 513 Statistics for Social Science 3 Y  
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 3 SI  
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. R1, 6 credits maximum

SOC 600 Selected Topics 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

SOC 606 Quantitative Methods 3 Y  
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 3 Y  
Exam-ination 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 3 S  
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 3 SI  
Major contemporary approaches to sociological theory. Reading representative works and comparing their application to selected topics.

SOC 625 Feminist Organizations 3 Y  
Crosslisted with: WGS 625; Double Numbered with: SOC 425  
Women's movement history in the United States and internationally. Successes and problems of organizations built by feminist activism. Implications for a new generation of feminist (and other) activism. Additional work required of graduate students.

SOC 627 New York City: Black Women Domestic Workers 3 Y  
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 3 IR  
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 3 Y  
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 3 IR  
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 3 IR  
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 3 IR  
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 3 IR  
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 3 SI  
Life and structure of American cities. Sociological perspectives on urban life, growth, decline, and restructuring of cities.

SOC 664 Aging and Society 3 Y  
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 666 Sociology of Formal Organizations 3 IR  
Formal and informal structure and decision making in industrial, governmental, religious, educational, and professional organizations. Their potential for democratization. Interorganizational relationships.

SOC 677 Class, Status, and Power 3 SI  
Double Numbered with: SOC 377  
Structures, causes, and consequences of socioeconomic inequalities in modern societies. Poverty and wealth, social mobility, and the persistence of inequality. Comparison and assessment of theories of social stratification.

SOC 704 Science, Technology, and Society 3 IR  
Sociology and social history of science and technology. Interaction of science, technology, and society. Technical controversies. Planning technological change. Suggested complement to PSC 705.

SOC 714 Intermediate Social Statistics 3 Y  
Introduction to multivariate statistical techniques to social science data.  
PREREQ: SOC 513.

SOC 810 Readings on Theory and Methodology 3 IR  
R

SOC 811 Advanced Seminar in Qualitative Research I 3 Y  
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 3 Y  
Crosslisted with: EDU 815  
Applications to issues of special education and related educational or human service settings.

SOC 813 Advanced Social Statistics 3 SI  
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 3 SI  
Crosslisted with: WGS 821  
The feminist critique and its implications for planning, conducting, and reporting on empirical studies.

SOC 825 Foundations of Organizational Sociology 3 O  
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 3 SI  
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 880 Seminar: Selected Areas of Social Organization and Change 3 S  
Provides an opportunity for staff and students to select and explore currently significant areas in the study of social organization and change. R

SOC 997 Master's Thesis 1-6 S

SOC 999 Dissertation 1-15 S  
R

## Social Science

SOS 575 Philosophy of Social Science 3 O  
Crosslisted with: PHI 575  
Philosophical and methodological issues in social and behavioral science. Role of laws in explanation of human action, methodological individualism and holism, functional explanation, value-neutrality, behaviorism, and computer simulation.

SOS 601 Fundamentals of Conflict Studies 3 S  
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 3 Y  
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 3 Y  
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. R

SOS 621 Mediation: Theory and Practice 3 SS  
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 3 SS  
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 3 SS  
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 3 IR  
Crosslisted with: HST 625  
Interdisciplinary introduction to history, politics, and economics of the European community.

SOS 705 Theories of Development 3 E  
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 3 IR  
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 1-9 IR  
Interdepartmental seminars for graduate students enrolled in the social sciences program. Open to students in the respective disciplines. R

SOS 890 Readings and Research in International Development Policy 3 IR  
For students preparing research for Ph.D. or Masters thesis, or in-depth research papers. Permission of instructor. R

SOS 991 Social Science Dissertation Proposal 3 IR  
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 1-15 S

# Faculty

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Alan Allport, Assistant Professor, History  
Ph.D., University of Pennsylvania, 2007  
Modern British and European history; war and social change; family and children's history

Kristi J. Andersen, Chapple Family  
Professor of Citizenship and Democracy;  
Laura J. and L. Douglas Meredith Professor;  
Maxwell Professor of Teaching Excellence,  
Political Science  
Ph.D., University of Chicago, 1976  
American politics, political parties, public opinion, women and politics

Douglas V. Armstrong, Laura J. and L.  
Douglas Meredith Professor of Teaching  
Excellence, Anthropology  
Ph.D., University of California, Los Angeles,  
1983  
Archaeology of North America, historical  
archaeology, ethnohistory, Caribbean, North  
America

Elizabeth Ashby, Assistant Professor,  
Economics  
Ph.D., Syracuse University, 2006  
Public finance, labor economics, applied  
microeconomics, public economics

Shena Ashley, Assistant Professor, Public  
Administration & International Affairs  
Ph.D., Georgia State University, 2007  
Nonprofit organizations, evaluation

Badi Baltagi, Distinguished Professor,  
Economics  
Ph.D., University of Pennsylvania, 1979  
Applied and theoretical econometrics

William C. Banks, Laura J. and L. Douglas  
Meredith Professor of Teaching Excellence,  
Public Administration & International Affairs  
and Board of Advisors Distinguished Professor,  
Law  
J.D. University of Denver, 1974  
Comparative legal systems, domestic and  
international terrorism, emerging powers,  
covert war powers, civil military relations

Michael Barkun, Professor Emeritus,  
Political Science  
Ph.D., Northwestern University, 1965  
Millenarian and utopian movements,  
jurisprudence, international law

Hossein Bashiriyeh, Lecturer, Political  
Science  
Ph.D., University of Liverpool (England),  
1982  
20th Century Political Thought; Democratic  
Transitions; Thomas Hobbes

Subho Basu, Associate Professor, History  
Ph.D., University of Cambridge, 1994  
Modern South Asian history, labor history,  
history of contemporary social movements,  
nationalism and post colonial politics

Kenneth Baynes, Professor, Philosophy and  
Political Science (by courtesy)  
Ph.D., Boston University, 1987  
Social and political philosophy, critical  
theory, continental philosophy

Jacob Bendix, Associate Professor,  
Geography  
Ph.D., University of Georgia, 1992  
Biogeography, geomorphology, human  
impacts on environmental systems, media  
coverage of environment

David H. Bennett, Laura J. and L. Douglas  
Meredith Professor of Teaching Excellence,  
History  
Ph.D., University of Chicago, 1963  
Political extremism in America, 20th-century  
American history, modern military history

James P. Bennett, Associate Professor  
Emeritus, Political Science  
Ph.D., Massachusetts Institute of Technology,  
1978  
International relations, methodology

Catherine A. Bertini, Professor of Practice,  
Public Administration & International Affairs  
B.A., SUNY Albany, 1971  
Managing international and humanitarian aid  
organizations, former Under-Secretary-  
General for Management at the United  
Nations; Former Executive Director, World  
Food Program

Robert Bifulco, Associate Professor Public  
Administration & International Affairs  
Ph.D., Syracuse University, 2001  
Public finance, budgeting and financial  
management

Sari Knopp Biklen, A.A.U.W. Meredith  
Professor and Chair, Cultural Foundations of  
Education and Professor, Sociology (by  
courtesy)  
Ed.D., University of Massachusetts, 1973  
Qualitative research methodology, gender,  
race, and education, sociology of popular  
culture, cultural studies

Guthrie S. Birkhead, Professor Emeritus,  
Public Administration & International Affairs  
Ph.D., Princeton University, 1951  
Metropolitan studies, comparative  
administration, ethics, intergovernmental  
relations

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, Associate Professor,  
Political Science  
Ph.D., American University, 1990  
The Middle East, comparative politics,  
international relations

Susan Branson, Associate Professor,  
History  
Ph.D., Northern Illinois University, 1992  
U.S. women's history, U.S. social history, U.S.  
political history

Steven R. Brechin, Professor, Sociology  
Ph.D., University of Michigan, 1989  
Environmental sociology, organizational  
sociology, natural resources

Stuart I. Bretschneider, Laura J. and L.  
Douglas Meredith Professor of Teaching  
Excellence, Public Administration &  
International Affairs; Director, Center for  
Technology and Information Policy  
Ph.D., Ohio State University, 1981  
Quantitative methods, information  
management, computer application and  
strategic planning

Walter Broadnax, Distinguished Professor,  
Public Administration & International Affairs  
Ph.D., Syracuse University, 1975  
Strategic public management, executive  
leadership

Stuart Brown, Professor of Practice, Public Administration & International Affairs  
Ph.D., Columbia University, 1985  
International economics, macroeconomics, emerging markets, political economy

Hans C. Buechler, Professor, Anthropology  
Ph.D., Columbia University, 1966  
Culture change, internal and international migration, urban problems, ethnic identity, ethnic elites, political anthropology, life history methodology, Andes, Latin America, Spain, Switzerland, Central Europe, eastern Germany

John S. Burdick, Professor, Anthropology  
Ph.D., City University of New York, 1990  
Religious movements, politics, gender, medical, African Americans, Brazil, Latin America

Leonard E. Burman, Daniel Patrick Moynihan Professor of Public Affairs & International Affairs; 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, post-colonial discourse; Third World feminism

A.H. Peter Castro, Associate Professor, Anthropology  
Ph.D., University of California, Santa Barbara, 1988  
Applied anthropology, international development, conflict management, ecology, forestry, agrarian societies, refugees, colonialism, East Africa

Craig B. Champion, Associate Professor, History  
Ph.D., Princeton University, 1993  
Hellenistic Greece, Greek democracy and republican Rome, ancient imperialism, ethnic identity formation in classical antiquity, the politics of culture in ancient Greece and Rome, classical historiography

Robert Christen, Professor of Practice, Public Administration and International Affairs  
M.S. Ohio State University, 1984  
Microfinance, agricultural economics, development finance

Matthew R. Cleary, Associate Professor, Political Science  
Ph.D., University of Chicago, 2004  
Comparative politics, Latin American politics, comparative political economy

Andrew W. Cohen, Associate Professor, History  
Ph.D., University of Chicago, 1999  
Legal history, American labor history, 20th century American history

Elizabeth F. Cohen, Associate Professor, Political Science  
Ph.D., Yale University, 2003  
Political theory, history of political thought, immigration and citizenship

Goodwin Cooke, Professor of Practice Emeritus, Political Science  
B.A., Harvard University, 1953  
Former U.S. Foreign Service Officer, experience in Asia, Europe, Canada, and Africa; ambassador to Central African Republic

William D. Coplin, Laura J. and L. Douglas Meredith Professor of Teaching Excellence, Public Affairs  
Ph.D., American University, 1964  
International relations, public policy analysis

Francine D'Amico, Part-time Associate Professor, International Relations  
Ph.D., Cornell University, 1989  
Latin American politics and international relations

Bruce W. Dayton, Research Assistant Professor, Political Science; Assistant Director, Moynihan Institute of Global Affairs  
Ph.D., Syracuse University, 1999  
International environmental affairs, political psychology, public policy dispute resolution

Renee de Nevers, Associate Professor, Public Administration & International Affairs and Political Science (by courtesy)  
Ph.D., Columbia University, 1992  
International security policy, international organizations

Christopher R. DeCorse, Professor, Anthropology  
Ph.D., University of California, Los Angeles, 1989  
Archaeology, historical archaeology, culture change, trade, West Africa, general anthropology

Thomas H. Dennison, Professor of Practice; Co-Director, Masters in Public Health Program; Program Advisor, Health Service Management and Policy (HSMP), Public Administration & International Affairs  
Ph.D., Pennsylvania State University, 1987  
Health care administration, finance and policy

Marjorie L. DeVault, Professor, Sociology  
Ph.D., Northwestern University, 1984  
Sex and gender studies, qualitative methods, feminist studies

Albrecht Diem, Associate Professor, History  
Ph.D., University of Utrecht, 2000  
Early Medieval Europe, early Christianity, monasticism

Dawn Dow, Assistant Professor, Sociology  
Ph.D., University of California, Berkeley, 2012  
Race/ethnicity, family, intersectionality (race, class, gender), gender, sociology of law, qualitative research methods and theory

- Gavan Duffy, Associate Professor, Political Science  
Ph.D., Massachusetts Institute of Technology, 1987  
Political methodology, political behavior and communication, American politics
- William D. Duncombe, Professor, Public Administration & International Affairs  
Ph.D., Syracuse University, 1989  
Public budgeting and finance, quantitative methods, development administration, education policy and finance
- Donald H. Dutkowsky, Professor, Economics  
Ph.D., State University of New York at Buffalo, 1982  
Macroeconomic, monetary theory and policy, applied econometrics
- Michael R. Ebner, Associate Professor, History  
Ph.D., Columbia University, 2004  
History of modern Europe, Italy, Fascism, and political violence
- Samuel Eddy, Professor Emeritus, History  
Ph.D., University of Michigan, 1958  
Classical, Greece and Rome
- Colin Elman, Associate Professor, Political Science  
Ph.D., Columbia University, 1999  
International relations theory, qualitative research methods
- Miriam Fendius Elman, Associate Professor, Political Science  
Ph.D., Columbia University, 1996  
International security, democracy, politics of the Middle East
- Gary V. Engelhardt, Professor, Melvin A. Eggers Faculty Scholar, Faculty Associate, Aging Studies Institute, Economics  
Ph.D., Massachusetts Institute of Technology, 1993  
Housing economics, public finance, tax policy, public economics, labor economics
- Margarita Estévez-Abe, Associate Professor, Political Science  
Ph.D., Harvard University, 1999  
Comparative politics, political economy, gender, and Japan
- Jerry Evensky, Laura J. and L. Douglas Meredith Professor for Teaching Excellence, Economics  
Ph.D., Syracuse University, 1984  
History of economic thought, labor economics, philosophy of economics (methodology), economic education
- Cissie C. Fairchilds, Professor Emerita, History  
Ph.D., Johns Hopkins University, 1972  
European social history, early modern France, women's history
- Christopher G. Faricy, Assistant Professor  
Ph.D., University of North Carolina at Chapel Hill, 2010  
American politics, public policy, economic inequality
- Carol Faulkner, Associate Professor and Chair, History  
Ph.D., Binghamton University, 1998  
19th century American history, slavery
- Michael A. Flusche, Associate Professor Emeritus, History  
Ph.D., Johns Hopkins University, 1973  
American Civil War and Reconstruction, American South
- Shana Gadarian, Assistant Professor, Political Science  
Ph.D., Princeton University, 2008  
American politics and political communication, political behavior, political psychology, research methods and public health
- Peng Gao, Associate Professor, Geography  
Ph.D., University of Buffalo, 2003  
Geographic information systems modeling, human impacts on physical environments, fluvial systems
- Susan H. Gensemer, Associate Professor, Economics  
Ph.D., Purdue University, 1984  
Micro-economic theory, decision theory, quantitative economics, economics and gender
- Ann Grodzins Gold, Professor, Religion and Anthropology (by courtesy)  
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
- 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
- Paul M. Hagenloh, Associate Professor, History  
Ph.D., University of Texas, Austin, 1999  
Modern Russia/Soviet Union: Modern dictatorships, history of policing, genocide, critical theory
- Sarah Hammersma, Assistant Professor, Public Administration and International Affairs  
Ph.D. University of Wisconsin, Madison, 2004  
Public economics, labor economics, applied microeconomics
- Jonathan K. Hanson, Assistant Professor, Political Science  
Ph.D., University of Michigan, Ann Arbor, 2007  
Comparative political economy and development, East Asia, quantitative methods
- Madonna Harrington Meyer, Laura J. and L. Douglas Meredith Professor for Teaching Excellence, Sociology  
Ph.D., Florida State University, 1991  
Aging, health care, gender policy
- Margaret Hermann, Gerald B. and Daphna Cramer Professor of Global Affairs; Professor, Political Science; Director, Moynihan Institute of Global Affairs  
Ph.D., Northwestern University, 1965  
Political leadership, political psychology, foreign policy decision making, comparative foreign policy
- Samantha Kahn Herrick, Associate Professor, History  
Ph.D., Harvard University, 2002  
Medieval European history, Christian hagiography and apostolic legends, memory, power

Christine L. Himes, Maxwell Professor and Chair, Sociology

Ph.D., University of Pennsylvania, 1989  
Demography, aging, parental caregiving

William Horrace, Professor and Chair, Melvin A. Eggers Economics Faculty Scholar, Economics  
Ph.D., Michigan State University, 1996  
Theoretical and applied econometrics, spatial econometrics

Yilin Hou, Professor, Public Administration & International Affairs  
Ph.D. Syracuse University, 2002  
Public budgeting and finance

Azra Hromadzic, Assistant Professor, Anthropology  
Ph.D. University of Pennsylvania, 2009  
political anthropology, ethno-political violence and post-conflict reconciliation, socialism and post-socialism, citizenship and globalization, gender, youth identity and cultures, comparative education, Eastern Europe and the Balkans

Matthew Huber, Assistant Professor, Geography  
Ph.D. Clark University, 2009  
political economy, historical geography, energy and capitalism, oil, resource governance and social theory

Seth Jolly, Assistant 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, Assistant Professor, History  
Ph.D., University of California, Berkeley, 2007  
Modern Middle East

George Kallander, Assistant Professor, History  
Ph.D., Columbia University, 2006  
Korean and northeast Asian history and culture

Chihwa (Duke) Kao, Professor, Economics  
Ph.D., State University of New York at Stony Brook, 1983  
Econometrics, statistics, mathematical economics

Neil Katz, Associate Professor Emeritus, Public Affairs

Ph.D., University of Maryland, 1974  
Nonviolent conflict and change, conflict resolution, modern American peace movements

Thomas M. Keck, Associate Professor and Michael O. Sawyer Chair in Constitutional Law and Politics; Chair, Political Science  
Ph.D., Rutgers University, 1999  
Supreme Court, American constitutional development

William F. Kelleher Jr., Associate Professor, Anthropology  
Ph.D., University of Michigan, 1990  
Colonialism, history and memory, work and class, political violence, Northern Ireland, North America

Jerry S. Kelly, Distinguished Professor, Economics  
Ph.D., Harvard University, 1969  
Social choice, econometric theory, microeconomic theory

Ralph Ketcham, Maxwell Professor Emeritus of Citizenship and Public Affairs; History, Public Affairs, and Political Science  
Ph.D., Syracuse University, 1956  
American political thought, era of American Revolution, public policy, comparative political cultures, comparative political theory, American intellectual history

O samah 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

Soonhee Kim, Professor, Public Administration & International Affairs  
Ph.D., State University of New York at Albany, 1998  
Public management, human resources management, leadership development

Sharon N. Kioko, Assistant Professor, Public Administration & International Affairs  
Ph.D., Indiana University, 2008  
State and local government finance, financial management and accounting, program evaluation

Audie Klotz, Professor, Political Science  
Ph.D., Cornell University, 1991  
International relations, transnational actors and activism

Thomas J. Kniesner, Krisher Professor, 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

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

Sandra Lane, Professor, Health and Wellness and Anthropology (by courtesy)  
Ph.D., University of California at San Francisco and Berkeley, 1988

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

Yoonseok Lee, Assistant Professor, Economics  
Ph.D., Yale University, 2006  
Econometric theory, emiparametric/nonlinear (dynamic) panel data models, many (weak) instrument problem, high dimensional models, social interaction and spatial dependence

Andrew Lipman, Assistant Professor, History  
Ph.D., University of Pennsylvania, 2010  
Colonial North American and U.S. to 1877, Native Americans, Early American material cultures

Chung-Chin (Eugene) Liu, Assistant Professor, Economics  
Ph.D., Syracuse University, 2006  
Economic development, labor economics, international economics, immigration

Richard R. Loder, Part-time Professor of Sociology  
Ph.D., Syracuse University, 1978  
race and ethnicity, social process and social change, federal Indian policy and identity, Native American Studies

Andrew S. London, Professor, Sociology  
Ph.D., University of Pennsylvania, 1993  
Health and health care, demography, families, HIV/AIDS, carework, poverty, veterans, aging and the life course, LGBT Studies

Leonard Lopoo, Associate Professor, Public Administration & International Affairs; Director, Center for Policy Research  
Ph.D., Chicago, 2001  
Poverty economic geography, child and family policy

Julia Loughlin, Professor Emeritus, Sociology  
Ph.D., Columbia University, 1971  
Sex and gender roles, race/ethnic/minority relations, science and technology

Mary E. Lovely, Chair of International Relations (Undergraduate); Professor, Economics  
Ph.D., University of Michigan, 1989  
International economics, public finance, labor economics

Amy Lutz, Associate Professor, Sociology  
Ph.D., SUNY Albany, 2002  
Race, ethnicity, stratification, political sociology, Latin American/Latino studies

Yingyi Ma, Assistant Professor, Sociology  
Ph.D., Johns Hopkins, 2006  
Social stratification and social inequality, sociology of education, immigration, quantitative methods

Robin P. Malloy, E.I. White Chair and Distinguished Professor of Law and Professor, Economics (by courtesy)  
J.D., University of Florida, 1980; LL.M., Illinois, 1983  
Real estate transactions, law and economics, land use and development, property

William P. Mangin, Professor Emeritus, Anthropology  
Ph.D., Yale University, 1954  
Urban, race and ethnicity, applied qualitative methods; Peru, United States, Spain

Laurie Marhoefer, Assistant Professor, History  
Ph.D., Rutgers University, 2008  
Modern European history (Germany), gender history

Frederick D. Marquardt, Assistant Professor Emeritus, Maxwell Professor of Teaching Excellence, History  
Ph.D., University of California, Berkeley, 1973  
German and European social history

Peter T. Marsh, Professor Emeritus, History  
Ph.D., University of Cambridge, 1962  
19th/20th century Britain, international political economy

Allan C. Mazur, Professor, Public Affairs  
Ph.D., Johns Hopkins University, 1969  
Biosociology, sciences and technology

Robert D. McC lure, Professor, 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, Associate Professor and Vice Chair, 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

Christina Merchant, Professor of Practice, Public Administration & International Affairs  
M.S., American University, 1990  
Conflict management systems design, federal mediation, alternative dispute resolution

Ines A. Mergel, Assistant Professor, Public Administration & International Affairs  
D.B.A., University of St. Gallen, 2005  
Information management, social network analysis

Susan W. Millar, Associate Professor, Geography  
Ph.D., Rutgers University, 1995  
Physical geography, periglacial geomorphology, arctic science, climate change

Jerry Miner, Professor Emeritus, Economics  
Ph.D., University of Michigan, 1958  
Public economics, human resources economics

Don Mitchell, Distinguished Professor, Geography  
Ph.D., Rutgers University, 1992  
Cultural, political economy of landscape, social theory, labor, geographies of power and marginalization, Marxism

Devashish Mitra, Professor; Gerald B. and Daphna Cramer Professor of Global Affairs, Economics  
Ph.D., Columbia University, 1996  
International trade, political economy, development economics

Chandra Talpade Mohanty, Professor and Chair, Women's and Gender Studies Department, Sociology  
Ph.D., University of Illinois at 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), cartographic communication and map design, history of cartography in the 20th century, environmental mapping

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

Quinn Mulroy, Assistant Professor, Political Science  
Ph.D., Columbia University, 2012  
American political development, political institutions, public policy, American legal system, bureaucracy, Congress, race and environmental policy and law, research methodology

Robert Murrett, Professor of Practice, Public Administration & International Affairs M.A., Georgetown University and M.A., Defense Intelligence College  
Intelligence, national security, military strategy

Piyusha Mutreja, Assistant Professor, Economics  
Ph.D., University of Iowa, 2010  
International economics, economics development, macroeconomics

Tina Nabatchi, Associate Professor, Public Administration & International Affairs  
Ph.D., Indiana University, 2007  
Deliberative democracy, alternative dispute resolution in the federal government

James Newman, Professor Emeritus, Geography  
Ph.D., University of Minnesota, 1968  
Population and settlement geography, diet and nutrition, human geography of Africa, prehistory

Shannon A. Novak, Associate Professor, Anthropology  
Ph.D., University of Utah, 1999  
Bioarchaeology, ethnohistory, gender, political violence, materiality of the body, North America

Inge O'Connor, Assistant Professor, Economics  
Ph.D., Syracuse University, 1996  
Public economics, labor economics

Rosemary O'Leary, Professor Emeritus, Public Administration and International Affairs  
J.D. University of Kansas, 1981; Ph.D. Syracuse University, 1988  
Public management, environmental policy, dispute resolution, law

Jan Ivar Ondrich, Professor, Economics  
Ph.D., University of Wisconsin, 1983  
Econometrics, labor economics, urban economics

Jackie Orr, Associate Professor, Sociology  
Ph.D., University of California, Berkeley, 1999  
Contemporary theory, sociology of science, technology and medicine, gender studies

John L. Palmer, University Professor and Dean Emeritus, Public Administration & International Affairs and Economics  
Ph.D., Stanford University, 1970  
Public management and public policy, social welfare policy

Arthur Paris, Associate Professor, Sociology  
Ph.D., Northwestern University, 1974  
Urban sociology; race/ethnic/minority relations; science and technology

Eleonora Patacchini, Associate Professor, Economics  
Ph.D., University of Southampton (UK), 2004  
Panel data econometrics, spatial statistics and graph theory, urban economics

Lourenço Paz, Assistant Professor, Economics  
Ph.D., University of Maryland, 2009  
International trade and labor economics

Deborah Pellow, Professor, Anthropology  
Ph.D., Northwestern University, 1974  
Women, urbanization, ethnicity, cultural aspects of space and design, Africa, China

Thomas Perreault, Associate 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  
Ph.D., Brown University, 2011  
Lusophone Africa; International Development, especially the cultures of non-governmental health organizations; Globalization; Medical Anthropology, especially the study of reproductive health; Anthropology of Science and Medicine.

William S. Pooler, Associate Professor Emeritus, Sociology  
Ph.D., University of Michigan, 1971  
Quantitative methodology, family, criminal justice

David C. Popp, Associate Professor, Public Administration & International Affairs  
Ph.D., Yale University, 1997  
Environmental economics, economics of technological change, public finance

Sarah B. Pralle, Associate Professor, Political Science  
Ph.D., University of Washington, Seattle, 2001  
Public policy processes

James E. Price, Associate Professor Emeritus, Economics  
Ph.D., Massachusetts Institute of Technology, 1963  
Macroeconomics, international trade

Gretchen Purser, Assistant Professor, Sociology  
Ph.D., University of California at Berkeley, 2009  
Work and labor markets, urban poverty, punishment and ethnography

- Richard Ratcliff, Professor Emeritus, Sociology  
Ph.D., University of Wisconsin - Madison  
Political economy, stratification/mobility, conflict resolution, social theory, research methods
- Jane M. Read, Associate Professor, Geography  
Louisiana State University, 1999  
Geographic information systems and remote sensing, human-environment interactions, tropical environments, Latin America
- Grant D. Reeher, Professor, Political Science; Director, Campbell Institute  
Ph.D., Yale University, 1992  
American politics, American political theory, political philosophy
- J. David Richardson, Professor Emeritus, Economics  
Ph.D., University of Michigan, 1970  
International economics, trade policy
- David J. Robinson, Dellplain Professor of Latin American Geography, Geography  
Ph.D., London University, 1967  
Latin America, historical development, Internet
- Jonnell Robinson, Assistant Professor, Geography  
Ph.D., University of North Carolina, 2010  
Community geography, participatory geographic information systems (GIS)
- Lars Rodseth, Associate Professor, Anthropology  
Ph.D., University of Michigan, 1993  
History of the human sciences, social and evolutionary theory, kinship, nationalism, violence, ideology, religion; South Asia, Tibet, United States
- Dennis Romano, Dr. Walter Montgomery and Marian Gruber Professor of History, History  
Ph.D., Michigan State University, 1981  
Renaissance Italy, early modern social and cultural history, Venice
- Stuart S. Rosenthal, Maxwell Advisory Board Professor, Economics  
Ph.D., University of Wisconsin, 1986  
Urban economics, housing economics, real estate finance, public economics
- Ross Rubenstein, Associate Dean and Chair, Public Administration & International Affairs  
Ph.D., New York University, 1997  
Public finance, policy analysis and education policy
- Robert A. Rubinstein, Professor, Anthropology  
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, Political Science  
Ph.D., Claremont Graduate School, 1988  
International relations
- Tod D. Rutherford, Professor and Chair, Geography  
Ph.D., University of Wales, 1992  
Economic restructuring, labor and the automobile industry, labor market processes and policies, regional development
- Anoop Sadanandan, Assistant Professor, Political Science  
Ph.D., Duke University, 2011  
Comparative politics, political economy, political and economic development, institutions, political parties, ethnic politics, developing countries and India
- S.N. Sangmpam, Professor, African American Studies and Political Science  
Ph.D., University of Chicago, 1984  
Comparative politics, Panafricanism, African American politics
- Hans Peter Schmitz, Associate Professor, Political Science  
Ph.D., European University Institute, 1999  
International relations, nonstate actors, human rights
- 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
- Maureen Trudelle Schwarz, Professor, Anthropology  
Ph.D., University of Washington, 1995  
Advocate of Native North Americans and their rights, Navajo reservation, issues of representation, notions of personhood, medical and religious pluralism, indigenous justice systems
- Milton Sernett, Professor Emeritus, History and African American Studies  
Ph.D., University of Delaware, 1972  
African American religious history, slavery and abolition
- Yüksel Sezgin, Assistant Professor  
Ph.D., University of Washington, 2007  
Comparative politics, law and courts, the middle east, religion, human rights
- Martin S. Shanguhya, Assistant 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, History  
Ph.D., University of California, Berkeley, 1966  
American political history, early national and middle period, 1789-1860
- Abdulaziz Shifa, Assistant Professor, Economics  
Ph.D., Stockholm University, 2013  
Macroeconomics, development and political economy
- Merril Silverstein, Marjorie Cantor Professor of Aging Studies  
Ph.D., Columbia University, 1990  
Intergenerational relations, social support, caregiving policy, migration in later life, and international views on aging families
- Perry Singleton, Assistant Professor, Economics  
Ph.D., University of Maryland, 2007  
Public finance, health economics, labor economics, applied microeconomics
- Theresa A. Singleton, Associate Professor, Anthropology  
Ph.D., University of Florida, 1980  
Historical archaeology, African American history and culture, slavery in plantation America
- Gary Spencer, Professor Emeritus, Sociology  
Ph.D. Boston, 1970  
Dramaturgy, prejudice and discrimination, ethnicity
- David H. Stam, University Librarian Emeritus and Senior Scholar, History  
Ph.D., Northwestern University  
Library history, bank history, 19th-century British studies, historiography

- Abbey Steele, Assistant Professor, Public Administration & International Affairs and Political Science (by courtesy)  
Ph.D., Yale University, 2010  
Civil wars, political and criminal violence, state-building and governance, political order, trafficking and Latin America
- James B. Steinberg, Dean and University Professor  
J.D., Yale University  
Public affairs, foreign policy and national security
- William C. Stinchombe, Professor Emeritus, History  
Ph.D., University of Michigan, 1967  
American diplomatic history, political history
- Jeffrey M. Stonecash, Maxwell Professor Emeritus, Political Science  
Ph.D., Northwestern University, 1975  
Political parties, intergovernmental relations, state politics
- John Scott Strickland, Associate Professor, History  
Ph.D., University of North Carolina, 1984  
American South, African American religion and culture, United States social history, 1700–1900
- Farhana Sultana, Associate Professor, Geography  
Ph.D., University of Minnesota, 2007  
Political ecology, development theory, water resources management
- Junko Takeda, Associate Professor, History  
Ph.D., Stanford University, 2006  
Modern European history
- Brian D. Taylor, Associate Professor, Political Science  
Ph.D., Massachusetts Institute of Technology, 1998  
Comparative politics, Russian politics
- Laurence Thomas, Professor, Political Science and Philosophy  
Ph.D., University of Pittsburgh, 1976  
Political theory, foundations of moral character
- Margaret Susan Thompson, Associate Professor, History and Political Science  
Ph.D., University of Wisconsin, 1979  
Modern American history, government and politics, religion, women's history
- Stuart J. Thorson, Donald P. and Margaret Curry Gregg Professor; International Relations and Political Science  
Ph.D., University of Minnesota, 1972  
International relations, political theory and methodology
- John Marshall Townsend, Professor, Anthropology  
Ph.D., University of California, Santa Barbara, 1972  
Medical and psychological anthropology, theory and methodology, cross-cultural mental health, human sexuality, ethnic relations, symbolic interaction, United States, Germany
- A. Dale Tussing, Professor Emeritus, Economics  
Ph.D., Syracuse University, 1964  
Health economics, poverty, Marxian economics
- Cecilia Van Hollen, Associate Professor, Anthropology  
Ph.D., University of California, Berkeley and San Francisco, 1998  
Cultural and medical anthropology, reproductive health, gender; South Asia
- David Van Slyke, Professor, Public Administration & International Affairs  
Ph.D., SUNY Albany, 1999  
Public administration and organizations, public policy process, strategic management, philanthropy, and charitable giving
- Susan S. Wadley, Ford-Maxwell Professor of South Asian Studies, Anthropology  
Ph.D., University of Chicago, 1973  
Social change, demography, religion, folklore, performance studies, gender issues, India
- Michael Wasylenko, Senior Associate Dean and Professor, Economics  
Ph.D., Syracuse University, 1975  
Public finance, public finance in developing countries, urban economics
- Stephen S. Webb, Professor Emeritus, History  
Ph.D., University of Wisconsin, 1965  
Early American and Anglo-American history, the Iroquois
- Jeffrey Weinstein, Assistant Professor, Economics  
Ph.D., Yale University, 2008  
Public economics, economics of education, urban economics
- John C. Western, Professor, Geography  
Ph.D., University of California, Los Angeles, 1978  
Social, cultural, urban; Southern Africa, Europe
- Peter J. Wilcoxon, Associate Professor, Public Administration & International Affairs and Economics  
Ph.D., Harvard University, 1989  
Environmental economics, natural resource economics
- Janet Wilmoth, Professor, Sociology; Director, Aging Studies Institute  
Ph.D., Pennsylvania State University, 1995  
Sociology of aging and the life course, demography, health
- Robert M. Wilson, Associate Professor, Geography  
Ph.D., University of British Columbia, 2003  
Environmental historical geography, western United States and Canada, environmental policy
- Jamie L. Winders, Associate Professor, Geography  
Ph.D., University of Kentucky, 2004  
Urban and social geography, race/ethnicity, gender, migration, North America, identity theorizations, U.S. South, qualitative and historical research methods, social theory
- Douglas A. Wolf, Gerald B. Cramer Professor of Aging Studies, Public Administration & International Affairs  
Ph.D., University of Pennsylvania, 1977  
Aging policy, population studies, quantitative methods
- John M. Yinger, Trustee Professor, Public Administration & International Affairs and Economics  
Ph.D., Princeton University, 1974  
Urban economics, state and local government finance, housing

# S.I. Newhouse School Of Public Communications

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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](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

- Master of Arts in Advertising
- Master of Arts in Arts Journalism
- Master of Arts in Audio Arts
- Master of Science in Broadcast and Digital Journalism
- Master of Science in Communications Management
- Master of Arts in Documentary Film and History
- Master of Arts in Magazine, Newspaper, and Online Journalism
- Master of Science in New Media Management
- Master of Arts in Media Studies
- Master of Science in Photography
- Dual Masters' Programs in Public Diplomacy (M.S in Public Relations and M.A in International Relations)
- Master of Science Program in Public Relations
- Master of Arts in Television, Radio and Film

### Graduate: Doctoral Level

- Ph. D. in Mass Communications

### Minors

- Communications Photography
- Public Communications Studies

## Educational Mission

The S. I. Newhouse School of Public Communications' mission is to educate ethical, visionary communicators whose goal is to establish an open marketplace of ideas guided by the First Amendment using contemporary professional practices. In the course of earning their degree, students are expected to achieve the following educational outcomes:

1. Demonstrate strong writing ability.
2. Demonstrate the ability to construct and tell a story effectively in spoken words, images, text and through multi-media.
3. Understand and make use of information technology, and grasp its import for society.
4. Understand effective visual language and how to apply it to create visual messages and enhance communications.
5. 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.
6. Think analytically, gain numerical proficiency and learn to develop well-researched positions on issues.
7. Demonstrate knowledge of the historical traditions in public communications and of industry practices and products.
8. Demonstrate a knowledge of ethical practice in the communications field, along with an understanding of the responsibilities media practitioners have for the public welfare.
9. 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.
10. Demonstrate the ability to work within a team under deadline pressure.
11. Develop the knowledge to compare and contrast media systems around the world.
12. Learn to value, embrace and support diversity in society and the media.
13. Learn to access, evaluate, synthesize and make use of information in the creation of media products.
14. 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  
Marla 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; documentary film and history; magazine, newspaper, and online journalism; new media management; photography; public diplomacy; public relations; and television, radio and film.

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 this online Course Catalog.

## ADMISSION

### Master's Degree Programs

Applicants for Master's degree programs must have Bachelor's degrees from accredited colleges or universities and must take the Graduate Record Examination. (GMAT scores can be substituted for applications to the New Media Management program.)

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.

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.

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, [pcgrad@syr.edu](mailto:pcgrad@syr.edu), 315-443-4039 (voice), 315-443-1834 (fax). Inquiries for the research-based Media Studies program should be addressed to [masscomm@syr.edu](mailto:masscomm@syr.edu), 315-443-3372, and inquiries about Executive Education should be directed to [mprussel@syr.edu](mailto:mprussel@syr.edu), 315-443-3368.

## 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](mailto:masscomm@syr.edu), 315-443-3372.

## Program Requirements FOR MASTER'S DEGREES

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 course work 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 newspapers).

**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 \$15.50 per hour and also receive tuition scholarships (usually 6 or 9 credits per semester, depending upon the position). 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.

## 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 once each year in August. Application deadline: May 15.

For more information contact the director, Maria Russell, at [mprussel@syr.edu](mailto:mprussel@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; computerized news writing and editing laboratories with motion graphics, 3D animation, and research tools, such as SPSS. Newhouse 1 also houses multimedia laboratories supporting digital imaging, Final-Cut© editing, digital sound editing, and Adobe Creative Suites©; an advertising/public relations campaigns laboratory; and the Bill Glavin Magazine Lab, a collaborative space for magazine writing and production. There is a large professional photography studio fully equipped with Profoto D4 strobe equipment and lighting attachments, as well as HD SLR 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 monitors the use of dozens of digital video camera systems (HD tape and DSLR formats), lights, microphones, and other production accessories. Post-production facilities include sixty HD editing stations (AVID©, Adobe Premiere, and Final Cut Pro©), a 16-channel, digital music-recording studio; two digital 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. There is a multi-room complex for teaching broadcast journalism that contains a newsroom and writing laboratories equipped with Electronic News Production System© (ENPS); a radio production lab where students edit digital news stories using Audacity©; and screening and viewing rooms. In addition, students are involved extensively in the University's Orange Television Network <http://orangetv.syr.edu/>, which is headquartered in Newhouse 2.

Until Fall of 2014, parts of Newhouse 2 will be undergoing extensive studio renovations which will bolster the School's ability to support cross-disciplinary forms of content creation, from television entertainment to news, film, visual effects, set augmentation, press conferences, commercials, green screen, and more. This new generation, "anything-anywhere" five-studio complex is designed to support the wide and varied needs of storytellers in all fields of study.

Newhouse 3 houses a 300-seat auditorium; a collaborative media suite in which students can build Web-based, interactive information sites; executive education interactive classrooms; student lounges; spaces for media-related student activities; and a research center. A dining and social area connects all three buildings in the center of the complex. A glass-enclosed bridge connecting Newhouse 1 and 2 provides a walkway with a winter garden setting for studying or socializing.

## Research Centers

### BLEIER CENTER FOR TELEVISION AND POPULAR CULTURE

The S.I. Newhouse School is the home of the Bleier Center for Television and Popular Culture. The center maintains a large archive of television scripts and history, including videotaped memories of such television pioneers as Steve Allen, Daniel Schorr, and Betty White. The center presents major industry figures as artists-in-residence, sponsors symposia on critical issues in television, and oversees the publication of a Syracuse University Press series of books on television. For further information contact Robert Thompson, director, 315-443-4077, <http://tvcenter.syr.edu/>

### CENTER FOR DIGITAL MEDIA ENTREPRENEURSHIP

The Newhouse Center for Digital Media Entrepreneurship provides courses, consulting, and connections to encourage Newhouse students to start businesses and to identify new career opportunities in a fast-changing media industry. The Center teaches digital media trends, business modeling, and the latest in venture development. The work of the center is reinforced through one-on-one coaching and supporting resources on- and off-campus including mentoring, team development, assistance with legal, funding, technology and management issues, and more. Through internships and events (such as South by Southwest in Austin, Internet Week in NY), students are exposed to digital media startups and the start-up culture. In promoting digital media innovation and entrepreneurship, the Center also connects students to alumni and others who are innovating and changing the media industry. For further information contact Sean Branagan, director, 315-443-6310; e-mail [startups@syr.edu](mailto:startups@syr.edu) or visit <http://www.newhousestartups.com/>

### 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, chair of the Public Relations Department at 315-443-7401.

### 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, printing, photography, film, and freelance writing. Communications-related databases, accessible from any location on or off campus, include LexisNexis Academic, Factiva, ProQuest Central, Library PressDisplay, World News Connection, The New York Times Historic Archives, SCOLA, AP Images, Vanderbilt University's Television News Archive, JSTOR, Communications & Mass Media Complete, World Advertising Research Center, Adspender, Adforum, ProQuest Dissertations & Theses Full Text, Web of Knowledge, Scopus, and many more. In addition, the library has hundreds of videos and DVDs, sound recordings, and media trade magazines, collections of the memoirs of foreign correspondents; and private papers of American newspeople, broadcasters, authors, and cartoonists.

The Library's Special Collections Research Center (SCRC) collects the history of American broadcasting. Recent acquisitions include the personal papers of iconic broadcast journalist Ted Koppel. That archive includes near complete runs of Nightline and The Koppel Report. SCRC is also the repository for the papers of several American columnists of national note—Drew Pearson, Westbrook Pegler, George Sokolsky, Harold Ickes, Dorothy Thompson, and Arthur Brisbane; an outstanding collection of prints, negatives, and personal papers of noted photographer Margaret Bourke-White, as well as personal papers, scripts, and audio-visual media of communications personalities Norman Corwin, Mike Wallace, Dick Clark, Long John Nebel, and Fulton Lewis Jr., as well as those involved in the business of television, such as Ed Bleier. The library 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.

## Academic Offerings

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### Advertising (M.A.)

Contact: James Tsao, Chair  
318 Newhouse 3, 315-443-7362

Faculty Beth Egan, Amy P. Falkner, Carla V. Lloyd, Edward W. Russell, Brian Sheehan, James Tsao

Advertising is a fast-paced industry, changing with the times and, along with other communications professions, riding the digital wave into new waters. Our 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/ICC 523	Digital Branding and Strategy
ADV 604	Seminar in Advertising Practice and Leadership
ADV 611	Strategic Principles and Practices
ADV 612	Strategic Brain: Account Planning and Research
ADV 613	Strategic Brain: Media Planning
ADV 615	Creative Brain
ADV 625	Integrated Advertising Campaigns (6 credits)
COM 698	Media Law
GRA 617	Visual Communications Theory and Practice

### 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 to 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

Total: 36 Credits

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## Arts Journalism (M.A.)

Contact: Johanna Keller, Director  
333 Newhouse 2, 315-443-9251

Faculty Theo Cateforis, Johanna Keller, Craig MacDonald, Jonathan Massey, Gary M. Radke, David M. Rubin, Robert J. Thompson

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.

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 602	Arts Reporting	3 credits
AJP 606	Feature and Critical Writing*	3 credits
AJP 611	Literature of Arts Journalism	3 credits
AJP 615	Cultural Issues I	1 credit
AJP 616	Cultural Issues II	1 credit
AJP 621	Practicum: NYC Arts	1 credit
AJP 631	Capstone Arts Writing Workshop	6 credits
COM 698	Media Law	3 credits
NEW 605	News Writing and Reporting*	3 credits

\* Students with substantial journalism background may petition to substitute a suitable elective.

### Electives (12 Credits)

Additional graduate courses in areas such as architecture, film, fine arts, music, or theater, as well as journalism, communications, and writing courses.

### Recommended But Not Required:

AJP 636	Cultural Media Practicum	3 credits
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TO TAL: 36 credits

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## M.A. In Audio Arts

Contact: Douglas Quin, Co-Director  
315-443-7398, dhquin@syr.edu

Ulf Oesterle, Co-Director  
315-443-3119, uoesterl@syr.edu

Faculty: Various faculty from the College of Visual and Performing Arts' Setnor School of Music and Newhouse School's Television, Radio and Film Department.

#### M.A. in Audio Arts

Audio Arts is a joint graduate studies program harnessing the experience and strength of the Schools of Music and 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 MA 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 Association for Education in Journalism and Mass Communication.

#### Required Coursework (24 credits)

EEE 620 Foundations of Entrepreneurship  
RAE 601 Audio Arts Graduate Survey  
RAE 610 Audio Arts Colloquium (three 1-credit modules)  
RAE 675 Audio Arts Industry Practicum featuring a major market internship in a particular Audio Arts Arena.  
TRF 510 Specialized Practice (three 1- credit modules)  
TRF 605 Audio Arts Practices  
TRF 637 Telecommunications Law and Policy  
CAPSTONE in Audio Arts, choose one:

- TRF 600: Emerging Media Incubator
- TRF 642: Television Production Workshop
- TRF 668: Advanced Audio
- TRF 669: Advanced Filmmaking
- RAE650: Special Projects

#### 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 and Policy
- Research Component: both RAE 601 Audio Arts Graduate Survey, and EEE 620

Foundations of Entrepreneurship.

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.

#### 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

### 3.0 Minimum GPA for Graduation

Total: 36 credits

Degree: Master of Arts

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## Broadcast And Digital Journalism

Contact : Dona Hayes, Chair,  
318B Newhouse 3, 315-443-1944.

Faculty Hubert Brown, Michael Cremedas, Frank Currier, Barbara C. Fought, Dona Hayes, Suzanne Lysak, John Nicholson, Simon Perez, 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. This course is followed by a summer seminar and internship in Washington, D.C.

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)  
BDJ 611 Writing for Broadcast and Digital News  
BDJ 636 Critical and Historical Perspectives on Broadcast Journalism  
BDJ 663 News Reporting I  
BDJ 664 News Reporting II (4 credits)  
BDJ 665 News Producing and Presenting (6 credits)  
BDJ 667 News Reporting III (4 credits)  
BDJ 675 Washington Professional Experience (4 credits)  
COM 647 Applied Media Research  
COM 698 Media Law

### Electives (6 Credits, Choose Two Courses)

Selection varies in any given year.

TO TAL: 40 credits

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## Communications Management (M.S.)

### Limited Residency/Distance Learning Executive Program For Public Relations Professionals

Contact: Maria P. Russell, Academic Director  
314 Newhouse 3, 315-443-3368 Fax: 315-443-3946  
commgt@syr.edu  
[http://newhouse.syr.edu/Academics/Communications\\_Management/overview.cfm](http://newhouse.syr.edu/Academics/Communications_Management/overview.cfm)

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 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 six-day residency on the Syracuse University campus at the start of the fall term (mid-August); a required week-long residency at Syracuse University's Lubin House in New York City in the spring term (early January); and a required week-long 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 electronic mail, web sites (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, research, communications law, management, communications theory, social media, accounting, finance, organizational behavior, strategic planning, crisis management, problem-solving, conflict resolution, negotiation, leadership, advertising, branding, marketing, and public relations measurement and evaluation.

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## Documentary Film And History (M.A.)

Contact: Richard Breyer, Co-Director  
315-443-9249, rlbreyer@syr.edu  
Scott Strickland, Co-Director  
315-443-5875, jsstrick@syr.edu

Faculty Subho Basu, Richard L. Breyer, Richard Dubin, Tula Goenka, Sharon R. Hollenback, Norman A. Kutcher, Patricia H. Longstaff, Gladys McCormick, James Roger Sharp, Evan Smith, John Scott Strickland, 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.

The program's curriculum stresses three general areas of study: writing and production, research, distribution and funding of documentaries and other non-fiction 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

DFH 610	Documentary Production Research (three 1-credit courses)
DFH/HST 693	Oral History Workshop
DFH/HST 695	Historical Narratives and Interpretation
DFH 670	Internship (2-credits)
HST elective	Various topics (HST 500-997)
HST elective	Various topics (HST 500-997)
HST 802	Modes of Analysis in History
TRF 611	Dramatic Writing for Television and Film
TRF 637	Telecommunications Law and Policy
TRF 650	Advanced Practice: Special Projects
TRF 655	Screenwriting and Production Workshop
TRF 659	Documentary Production
TRF elective	Various Topics (TRF 500-997)

TO TAL: 38 CREDITS

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## Law/Advertising

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 Keri Foster, Associate Director for Student Life, Suite 444 College of Law (443-1146, kdfoster@law.syr.edu).

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## Law And Arts Journalism

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.

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## Law/Documentary Film & History

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.

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## Law/Magazine, Newspaper & Online Journalism

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.

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## Law/Media Management

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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.

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## Law/Media Studies

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.

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## Law/Photography

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.

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## Law/Public Relations

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 Keri Foster, Associate Director for Student Life, Suite 444 College of Law (443-1146, kdfoster@law.syr.edu).

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## Law/Television, Radio & Film

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.

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## Magazine, Newspaper, And Online Journalism (M.A.)

Contact: Melissa Chessher, Director  
318 Newhouse 3, 315-443-4004

Faculty Harriet Brown, Melissa Chessher, Steve Davis, Joan A. Deppa, Aileen Gallagher, Charlotte Grimes, Joel Kaplan, Robert E. Lloyd, Stephen M. Masielat, Dan Pacheco, 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  
GRA 617 Visual Communications Theory and Practice  
ICC 606 Applied Research in Content Management  
MNO 601 Principles: Business, History, and the Ethics of Journalism  
MNO 617 Multiplatform Reporting and Writing  
MNO 631 Journalism Enterprise (6 credits)  
NEW 605 News Writing and Reporting

### Editing (Choose One)

MNO 608 Magazine Editing  
NEW 508 Newspaper Editing

### 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.

TO TAL: 36 credits

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## Ph.D. In Mass Communications

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, 18 credits count toward the dissertation. 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.

### Requisite

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)

Mass Communication Theory at least 15 credits, including:

COM 755 Communications Theory  
TRF 698 Social Effects of Television  
COM 788 Theories of Media Content

Research Methods and Statistics at least 15 credits, including:

COM 605 Quantitative Methods for Mass Communications Research

Two of the following courses:

COM 700 Advanced Research Methods—Experimental Design  
COM 700 Advanced Research Methods—Qualitative Research  
COM 806 Advanced Survey Research Methods  
COM 807 Content Analysis Research Methods

and two statistics courses.

#### 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).

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## Media Studies (M.A.)

Contact: Bradley Gorham, Director of Media Studies Program  
318 Newhouse 3, 315-443-3372, [masscomm@syr.edu](mailto:masscomm@syr.edu)

Faculty: See Faculty for the S.I. Newhouse School of Public Communications

This program emphasizes media processes and effects. Areas of inquiry include, but are not limited to, political communication, social effects, and media and diversity. This program stresses media theory and research, with students exploring a topic of their choosing in a culminating thesis. It is excellent preparation for more advanced study at the doctoral level or for research-oriented jobs in the private or public sector.

This 36-credit program leads to a Master of Arts (M.A.) 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  
COM 605 Quantitative Methods for Mass Communications Research  
COM 606 Qualitative Methods for Mass Communications Research  
COM 698 Media Law or  
TRF 637 Telecommunications Law and Policy  
COM 701 Proseminar for Graduate Study (0 credit)  
COM 755 Communications Theory

Perspectives In Communications Course (Choose THREE)

ADV 645	Economics, Persuasion, and the Global Marketplace
COM 600	Selected Topics
COM 646	Media and Diversity
COM 688	Origins of Contemporary Media Issues
COM 740	Selected Topics in Research Communications
COM 777	Seminar in Media Effects
COM 788	Theories of Media Content
ICC 617	Issues in Media Management
MNO 601	Principles: Business, History & the Ethics of Journalism
TRF 592	Film Business
TRF 594	Television Business
TRF 595	Programming and Audience Analysis
TRF 600	Selected Topics
TRF 636	Critical and Historical Perspectives on Television, Radio, and Film
TRF 683	Communications Industry Frontiers

### 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)

TO TAL: 36 credits

## New Media Management (M.S.)

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.

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. Courses are three-credits unless otherwise noted.

### Requirements Of The Newhouse School Of Public Communications

#### Required Courses

COM 698	Media Law or
TRF 637	Telecommunications Law and Policy
ICC 606	Applied Research in Content Management
ICC 617	Issues in Media Management
ICC 625	New Media Business
ICC 683	Case Studies in Media Management or
TRF 683	Communications Industry Frontiers

#### Capstone

ICC 689	New Media Management Capstone (6 credits)
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### Requirements Of The Martin J. Whitman School Of Management

#### Required Courses

EEE 643	Emerging Enterprise Consulting or
MAR 745	Strategic Brand Management
MBC 603	Creating Customer Value (1.5 crs)
MBC 604	Managing the Market Mix (1.5 crs)
MBC 607	Understanding Financial Statements (1.5 crs)
MBC 609	Accounting for Managerial Decisions (1.5 crs)
MBC 618	Competitive Strategy (1.5 crs)
MBC 619	Corporate Strategy (1.5 crs)
MBC 639	Leadership in Organizations

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

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## Photography (M.S.)

Contact: Bruce Strong, Chair, Multimedia Photography and Design  
318 Newhouse 3, 315-443-2304

Faculty Deborah Pang Davis, Mike Davis, Seth Gitner, Anthony R. Golden, Ken Harper, 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.

### Prerequisites

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 Master's Thesis, 6 credits  
GRA 617 Visual Communications Theory and Practice  
PHO 608 Problems in Photography

#### Photography (choose one)

PHO 604 Advertising and Illustration Photography II  
PHO 625 Picture and Multimedia Editing

#### Mass Communications and Society (choose one)

COM 605 Quantitative Methods for Mass Communications Research  
COM 698 Media Law  
COM 755 Communications Theory

#### Photo Electives

6 credits from graduate-level photography courses.

#### General Electives

6 credits of graduate coursework.

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 or  
COM 755 Communications Theory  
COM 698 Media Law  
GRA 617 Visual Communications Theory and Practice  
PHO 608 Problems in Photography or  
PHO 609 Problems in Photography

#### Photography (choose one)

PHO 604 Advertising and Illustration Photography II  
PHO 625 Picture and Multimedia Editing

#### Photo Electives

9 credits from graduate-level photography courses

General Electives

9 credits of graduate coursework

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

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## Public Diplomacy (M.S. & M.A.)

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.

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 Syracuse University's Paul Greenberg House. Exit requirements include demonstrating proficiency in a foreign language.

### Required Courses At The S.I. Newhouse School Of Public Communications

Communications

COM 698 Media Law

Graphic Design

GRA 617 Visual Communications Theory and Practice

Public Relations

PRL 602 Introduction to Public Diplomacy and Communications

PRL 605 Public Relations Theory

PRL 607 Advanced Public Relations Diplomacy

PRL 608 Public Relations Writing

PRL 611 Public Relations Research

PRL 615 Public Relations Campaign Planning and Execution

PRL 725 Public Relations Management

PRL 735 Public Relations Practicum

### Required Courses At The Maxwell School Of Citizenship And Public Affairs

Public Administration and International Affairs

PAI 704 Quantitative Skills in International Relations

PAI 706 International Relations Capstone Seminar (1 credit)

PAI 708 Issues for 21st Century Public Diplomacy

PAI 709 Research Consultancy in Public Diplomacy

PAI 710 International Actors and Issues

PAI 720 Fundamentals of Economics

### OTHER REQUIRED COURSES:

Summer off-campus internship program (and career track course) 6 credits

Career Track Course 3 credits

## INTERNATIONAL RELATIONS SIGNATURE COURSE; CHOOSE ONE:

ANT/PAI 707	Culture in World Affairs
ECN 610/PAI 716	Economic Dimensions of Global Power
GEO 606	Development and Sustainability
HST 645	History of International Relations
PSC 783	Comparative Foreign Policy

TOTAL: 58 credits

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## Public Relations (M.S.)

Contact: Maria Russell, Acting Chair  
318 Newhouse 3, 315-443-7401

Faculty Guy J. Golan, William Jasso, Hua Jiang, Dennis F. Kinsey, Robert M. Kucharavy, Joon Soo Lim, 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
GRA 617	Visual Communications Theory and Practice
MBC 607	Understanding Financial Statements (1.5 credits)
MBC 627	Financial Markets and Institutions (1.5 credits)
PRL 525	Public Relations Practicum (Internship)
PRL 604	Writing for News and Public Relations
PRL 605	Public Relations Theory
PRL 611	Public Relations Research
PRL 614	Advanced Public Relations Writing for Digital Platforms
PRL 615	Public Relations Campaign Planning and Execution
PRL 635	Public Relations Culminating Experience
PRL 725	Public Relations Management

Comprehensive exam required for students on the professional track.

#### MAYMESTER Required Elective (3 Credits)

Elective course will be selected in consultation with the student's adviser from the graduate offerings in the Newhouse School and the University at large during Maymester.

Professional track total: 36 credits

### THESIS TRACK

#### Requirements

COM 698	Media Law
GRA 617	Visual Communications Theory and Practice
PRL 604	Writing for News and Public Relations

PRL 605	Public Relations Theory
PRL 611	Public Relations Research
PRL 614	Advanced Public Relations Writing for Digital Platforms
PRL 615	Public Relations Campaign Planning and Execution
PRL 725	Public Relations Management

Two required research and theory electives chosen with adviser (6 credits)

Thesis: COM 997 (6 credits) required

Thesis track total: 36 credits

## Television, Radio And Film (M.A.)

Contact: Michael Schoonmaker, Chair  
318 Newhouse 3, 315-443-4004

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.

Everyday 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 studies 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 (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
TRF 636	Critical and Historical Perspectives on Television, Radio and Film
TRF 637	Telecommunications Law and Policy
TRF 655	Screenwriting and Production Workshop
TRF 675	Entertainment Industry Practicum (1-3 credits)
TRF 696	Research for Entertainment Media

### 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 in such topics as directing; producing; radio; music underscoring and recording; sound for film; visual effects; animation; a range of popular culture topics in authorship, genre studies and critical issues; stereoscopic production; cinematography; editing; casting and working with actors; sports production; reality production; motion graphics; TV show production (various genres); production management; specialized forms of screenwriting; audio; filmmaking; TV and online process and technique; global perspectives; TV and film business; development; and internships.

Students may also petition courses from other Newhouse or University programs to count as electives in their program of study.

#### Additional Requirements

At least 18 credits of the program's total 36 credits of coursework must be 600-level or above. Students must pass a comprehensive examination which they are eligible to take upon completion of 30 credits.

Total: 36 credits

# Courses

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## Advertising

### ADV 500 Selected Topics 1-3 IR

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

### ADV 507 Strategic Media Planning 3 S

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 3 S

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 3 Y

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 3 Y

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 1-3 IR

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

### ADV 601 Introduction to Copy and Layout 3 IR

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 3 Y

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 3 IR

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.

### ADV 611 Strategic Principles and Practices 3 SS

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 3 Y

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 3 Y

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 3 Y

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 6 SS

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 Economics, Persuasion, and the Global Marketplace 3 Y

Double Numbered with: ADV 345  
Persuasive communications' impact on and relationship to society. Evaluation of effects of advertising on national and global economies. Critical evaluation of persuasive appeals. Discussion of marketing to children, political persuasion, alcohol and tobacco promotion. Additional work required of graduate students.

## Arts Journalism

### AJP 601 Issues for Arts Journalists 3 IR

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 3 SS

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 3 Y

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 3 Y

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 1 Y

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 1 Y  
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 1 Y  
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 6 SS  
Capstone experience for graduate Arts Journalism majors. Students will research, write, and revise substantive works of arts journalism in workshop environment.  
PREREQ: AJP 601, 611, 621.

AJP 636 Cultural Media Practicum 3 Y  
Required to support and provide learning context for internship at media or nonprofit arts institution. Professional ethics and workplace protocols. Career development. R1, 6 credits maximum

### Broadcast And Digital Journalism

BDJ 500 Selected Topics 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

BDJ 510 Topics in Specialized Practices 1 Y  
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. R2, 3 credits maximum

BDJ 530 Topics in Specialized Reporting II 3 IR  
Event and issue-oriented reporting. Each section focuses on a content area such as politics, consumerism, or the environment.  
PREREQ: BDJ 364 OR 464 OR 663 OR 664. R1, 6 credits maximum

BDJ 560 Television News Magazine Production 1 S  
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. R2, 3 credits maximum

BDJ 567 Advanced Newscast Producing and News Management 3 Y  
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 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

BDJ 611 Writing for Broadcast and Digital News 3 SS  
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 3 Y  
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 3 SS  
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 4 Y  
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 6 SS  
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 4 Y  
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 2 Y  
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 4 SS  
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 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

COM 505 Communications Law for Journalists 3 S  
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 3 S  
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 3 S  
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 3 IR  
Print and electronic media in the United States in the context of social and political developments in the 20th century.

COM 527 International Communications 3 IR  
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 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

COM 601 Thesis Design 3 SS  
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 3 Y  
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 3 Y  
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 637 Historical Methods in Mass Media 3 IR

Seminar in media problems explored via qualitative-historiographic research techniques. For students writing theses, planning for research and teaching, or planning specialized careers in investigative reporting.

COM 646 Media and Diversity 3 Y  
Analysis of contemporary media processes as they relate to race, ethnicity, class, gender, and sexual orientation.

COM 647 Applied Media Research 3 Y  
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 1-3 S  
Reading course for master's candidates. Close supervision by instructor. Covering examination and grade required. Assigned readings. R5, 6 credits maximum

COM 670 Experience Credit 1-6 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. R

COM 688 Origins of Contemporary Media Issues 3 IR  
Historic origins and development of current issues in mass communications, involving the structure and function of the media.

COM 690 Independent Study 1-6 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. R

COM 698 Media Law 3 S  
Problems in media law, including libel, privacy, fair trial/free press, obscenity.

COM 700 Selected Topics 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

COM 701 Proseminar for Graduate Study 0 Y

Required for all first-year Ph.D. and media studies master's students. Topics to include academic integrity, research resources, faculty research. Specific focus to vary annually.

COM 740 Topics in Research Communication 3 IR  
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. R1, 6 credits maximum

COM 746 Techniques of Communications Research 3 IR  
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 3 Y  
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 3 O  
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 3 IR  
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 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

COM 806 Advanced Survey Research Methods 3 IR  
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 3 IR

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 1-6 S

Undifferentiated program for individualized study for students working for doctorate. R1, 12 credits maximum

COM 997 Masters Thesis 1-6 S

R

COM 999 Dissertation 1-18 S

R17, 18 credits maximum

### Documentary Film And History

DFH 600 Selected Topics in Documentary Film and History 1-3 IR

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

DFH 610 Documentary Production Research 1 S

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. R2, 3 credits maximum

DFH 693 Oral History Workshop 3 Y

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 3 Y

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 3 Y

Students work out plans, specifications, and details of design, layout, illustration, production. Classic and contemporary styles; functional design.

PREREQ: GRA 217 OR 617. R1, 6 credits maximum

GRA 547 Magazine Design and Production 3 IR

Principles of magazine graphics using current practices and technology to create magazine designs. Digital typography, layout, cover design, computer-based production. Credit cannot be given for GRA 547 and GRA 567.

PREREQ: GRA 217 OR 617.

GRA 550 Workshop in Typography 1-3 IR

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 617.

GRA 557 Information Graphics 3 IR

Principles and techniques of information visualization for public communications applications including journalism, advertising, and public relations. Emphasis on principles of quantitative and qualitative research for information graphics and techniques of visual narrative and information-based design.

PREREQ: GRA 217 OR 617.

GRA 567 Advertising Production 3 IR

Development of ad campaigns from thumbnail sketches through finished comps. Emphasizing concept and its stylistically appropriate expression through typography, layout, and use of photography/illustration publishing standards including current computer software for design. Concurrent lab required.

PREREQ: GRA 217 OR 617.

GRA 587 News Design 3 Y

Principles of typography, image editing, and design using computer pagination to solve problems in newspaper, magazine layout.

PREREQ: GRA 217 OR 617.

GRA 617 Visual Communications Theory and Practice 3 SS

Visual problem-solving including conceptualization, typography, design, image editing, and production of printed communications. Applies current practices and digital equipment to implement visual theories and principles. Concurrent lab required.

GRA 637 Typographic Design 3 Y

Double Numbered with: GRA 437

Exploration of proper techniques for the setting of typography. Study of history of graphic design and typeface design. Focus on expressive and functional use of type as it relates to print, web and motion graphics. Additional work required of graduate students.

GRA 647 Motion Graphics and User Experience 3 Y

Double Numbered with: GRA 447

Using the latest in motion graphics and interface design technologies, students learn to build rich user experiences. Students will create web user interfaces and multimedia productions using video, still images, audio and type. Additional work required of graduate students.

GRA 677 Graphic Design Problems 3 Y

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 647..

### Interactive Communications Core

ICC 500 Selected Topics 1-3 IR

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

ICC 505 Web Journalism and Innovation 3 S

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 664 OR MNO 617.

**ICC 523 Digital Branding and Strategy 3 Y**

Crosslisted with: ADV 523

Examines the transformative role that digital media (websites, social networks, blogs, wikis, mobile) have on the advertising industry. How consumers are reached and interpret the message from these digital platforms.

**ICC 565 Designing Interactivity 3 S**

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 Communicating with Computers 3 IR**

Using computers for interactive, multi-media programs and presentations with emphasis on information and entertainment. Students create individual projects using a time-based media software such as Flash.  
PREREQ: ICC 565 OR IST 263.

**ICC 600 Selected Topics 1-3 IR**

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

**ICC 601 Technology of the New Media 3 IR**

Introduction to the digital technology used to produce computer-based interactive multimedia CD-ROMs and web sites. Basic manipulation of digital still images, motion video, sound, and graphics.

**ICC 605 Writing for New Media 3 IR**

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 3 Y**

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 617 Issues in Media Management 3 SS**

Intensive reading course where students explore key economic, legal and technological forces changing media businesses.

**ICC 625 New Media Business 3 S**

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, 605.

**ICC 635 New Media Culminating Experience 6 IR**

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 3 Y**

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 6 SS**

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 3 IR**

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.  
PREREQ: ICC 625.

**ICC 696 New Media Capstone Workshop 6 IR**

The capstone project demonstrates the student's ability to conceptualize and produce a new media project that delivers content interactively to an audience.  
PREREQ: ICC 695.

**Magazine**

**MAG 500 Selected Topics 1-3 IR**

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

**MAG 518 Critical Writing 3 Y**

Criticism and its function in journalism.

Reviewing books, plays, motion pictures, and other art forms.

PREREQ: (NEW 205 AND MAG 205) OR MNO 617.

**MAG 529 Writing and Editing for Magazine Websites 3 S**

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.  
PREREQ: MAG 406 OR 408 OR MNO 617.

**MAG 538 Travel Writing 3 Y**

Writing and selling magazine articles about traveling and specific geographic areas. Students will write in a variety of styles, especially exploring the narrative form.  
PREREQ: NEW 305 OR MNO 617.

**Magazine, Newspaper, And Online Journalism**

**MNO 600 Selected Topics: Magazine, Newspaper, and Online Journalism 1-3 IR**

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

**MNO 601 Principles: Business, History, and the Ethics of Journalism 3 Y**

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 3 Y**

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.  
PREREQ: NEW 605.

**MNO 608 Magazine Editing 3 S**

Editing and rewriting copy for magazines: ideas, heads, decks, story organization. Pictures, layout, dummy production. Additional work required of graduate students.  
PREREQ: NEW 605.

**MNO 617 Multiplatform Reporting and Writing 3 Y**  
Reporting and writing using the beat system. Creating content for different publications, including newspapers, magazines, and websites. Packaging text and multimedia. Prereq: NEW 605.  
PREREQ: NEW 605.

**MNO 629 Magazine Management 3 Y**  
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.  
PREREQ: MNO 608.

**MNO 631 Journalism Enterprise 6 SS**  
A capstone experience for graduate magazine, newspaper, and online journalism majors. Students will devote 200 hours per term as part of a reporting/writing/editing team. Students will produce a publishable journalism project.  
PREREQ: NEW 605.

### **Multimedia Photography And Design**

**MPD 500 Selected Topics 1-3**  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

**MPD 600 Selected Topics 1-3**  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

**MPD 606 Advertising and Illustration Photography Capstone 3 IR**  
Double Numbered with: MPD 406  
Using advanced photo illustration skills, students collaborate with other Newhouse majors and on a major department project. Students develop their individual brand producing multimedia work for their print and web portfolio. Students cannot receive credit for more than one of the following: MPD 406/606, MPD 426/626, MPD 478/678.  
Additional work required of graduate students.  
PREREQ: PHO 604.

**MPD 626 Multimedia and Photojournalism Capstone 3 Y**  
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 3 IR**  
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  
PREREQ: GRA 677.

**MPD 690 Independent Study 1-6 SI**  
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. R

### **Newspaper And Online Journalism**

**NEW 500 Selected Topics 1-3 IR**  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

**NEW 508 Newspaper Editing 3 S**  
Preparation of copy for publication. Headline writing. Correction of copy. Evaluation of news. Condensation of news stories. News display and makeup.  
PREREQ: (NEW 205 AND GRA 217) OR (BDJ 204 AND GRA 217) OR (NEW 605 AND GRA 617).

**NEW 509 Advanced Newspaper Editing 3 Y**  
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 3 S**  
Event- and issue-oriented reporting in politics, courts, science, environment, minorities, education, local government. One news area to a section.  
PREREQ: NEW 305 OR BDJ 364 OR 664 OR MNO 617. R1, 6 credits maximum

**NEW 535 Newspaper and Magazine Practicum 1-3 S**  
Practical on-site experience reporting and writing for Central New York newspapers and magazines. Weekly class sessions. Discussion of supplementary journalistic topics. Class assignments. Research paper.  
PREREQ: NEW 305 OR BDJ 364 OR 664 OR MNO 617. R2, 3 credits maximum

**NEW 600 Selected Topics 1-3 IR**  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

**NEW 605 News Writing and Reporting 3 SS**  
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 3 IR**  
Theoretical, historical background. Social functions; economics; ethics. Daily, community, alternative press magazines. Online operations.

**NEW 635 Newsroom Practicum 6 IR**  
News gathering, writing, and editing practice and analysis using the Syracuse area as a news laboratory.  
PREREQ: NEW 508, 617.

### **Photography**

**PHO 500 Selected Topics 1-3 IR**  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

**PHO 510 Photographic Workshop 3 IR**  
Advanced photography. Problems in advertising illustration, photojournalism, and digital imaging. Emphasizing selection, composition, and content suitable for communication media. R1, 6 credits maximum

PHO 511 Color Imaging 3 IR  
Technical and creative application of color theory and color-imaging technology for communications.

PHO 515 Contemporary Photography 3 IR  
Contemporary photography in illustration, advertising, and journalism. Aesthetic and communicative aspects. Lecture course without laboratory.

PHO 530 Topics in Photography 3 Y  
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. R2, 9 credits maximum

PHO 555 Photography for Newspaper and Magazine 3 S  
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 0 S  
Basic photo lab for PHO 301 or PHO 555.  
COREQ: PHO 301 OR 555.

PHO 560 Advanced Photo Lab 0 S  
Advanced photo lab to support advanced photography course work. Enrollment in advanced photography courses. R7

PHO 581 Photographic Workshop 3 Y  
Advanced photography workshop in advertising and/or photojournalism. Emphasis on content suitable for publication in communications media. Offered London campus only.

PHO 603 Advertising and Illustration Photography I 3 S  
Double Numbered with: PHO 403  
Lecture, studio, and laboratory on producing digital, still, motion and sound for commercial and advertising content for print and web. Emphasis on concept generation and studio and location lighting. Additional work required of graduate students. Graduate student must be admitted into program or portfolio review.

PHO 604 Advertising and Illustration Photography II 3 Y  
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 603/403.

PHO 605 Photojournalism and Multimedia 3 Y  
Double Numbered with: PHO 405  
Principles and practices of photojournalism and multimedia storytelling. Photographing news, features, portraits, and sports. Picture story and essay production using digital, still, video, and sound. Location lighting techniques. Marketing practices. Additional work required of graduate students.

PHO 607 Advanced Color 3 IR  
Advanced techniques, aesthetics, and communication in the color medium.

PHO 608 Problems in Photography 3 S  
Advanced problems and projects in various areas of photography. Permits student to concentrate on specific areas of interests.

PHO 609 Problems in Photography 3 S  
Advanced problems and projects in various areas of photography. Permits student to concentrate on specific areas of interests.

PHO 610 Research in Photography 1-3 IR  
For advanced students to conduct technical and creative research. R5, 6 credits maximum

PHO 625 Picture and Multimedia Editing 3 Y  
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 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

PRL 525 Public Relations Practicum 3 S  
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 1-3 Y  
In-depth look at different public relations specializations, including media relations, government relations, investor relations, crisis communications, employee communications, and sports information. R2, 3 credits maximum

PRL 600 Selected Topics 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

PRL 602 Introduction to Public Diplomacy and Communications 3 SS  
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 3 Y  
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.

PRL 605 Public Relations Theory 3 Y  
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 3 Y  
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 3 Y  
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.

PRL 611 Public Relations Research 3 Y  
Nature, formation, and communications of attitudes and public opinion in public relations settings. Application of social science methods for measuring attitudes, opinions, and public relations performances. Actual research designed and carried out for client.  
PREREQ: PRL 604.

PRL 614 Advanced Public Relations Writing for Digital Platforms 3 Y  
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.  
PREREQ: PRL 604.

PRL 615 Public Relations Campaign Planning & Execution 3 Y  
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 3 IR  
Special problems in a specific area of organizational public relations.  
PREREQ: PRL 615.

PRL 635 Public Relations Culminating Experience 3 SS  
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 3 S  
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 3 Y  
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 3 Y  
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, 604, 605, 611, 615, 725.

#### Radio/Television News

RTN 566 Special News Coverage 3 IR  
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.

#### Television, Radio, And Film

TRF 500 Selected Topics 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

TRF 510 Specialized Practice 1 S  
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. R

TRF 530 Popular Culture Studies 3 S  
In-depth examination of critical issues, aesthetics, genre, and authorship involved in electronic media and cinema. Topics range from television genres to film classics. R3, 12 credits maximum

TRF 545 Television & Radio Performance 3 S  
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 3 Y  
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. R1, 6 credits maximum

TRF 592 Film Business 3 S  
Economics of the film industry. Financing of films, budgets, sources of funds, contracts. Securing distribution. National and international marketing of films. Film rental. Booking films for television or theater. Exploitation of ancillary markets.

TRF 594 Television Business 3 S  
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 3 IR  
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 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

TRF 605 Audio Arts Practices 3 SS  
Introduction to the fundamental practices involved in the creation of effective audio for radio, music, television, film, and online media.

TRF 610 Proseminar in Television, Radio, and Film 1 S  
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. R2, 3 credits maximum

TRF 621 Feature Film Writing 3 Y

Double Numbered with: TRF 421

Study and practice of the craft of feature film writing. Additional work required of graduate students.

PREREQ: TRF 611.

TRF 622 Comedy Writing 3 S

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 3 Y

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 3 Y

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 3 SS

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 3 Y

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 3 S

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 R3, 12 credits maximum

TRF 642 Television Production Workshop 3 Y

Double Numbered with: TRF 442

Students write, design, produce, direct, and program projects specifically for television presentation. Additional work required of graduate students.

TRF 650 Advanced Practice: Special Projects 1-3 IR

Double Numbered with: TRF 450

Faculty member works with student on project especially tailored for his/her unique content objectives. Additional work required of graduate students.  
PREREQ: TRF 651 OR 652 OR 653 OR 654 OR 656 OR 657 OR 658 OR 659. R5, 6 credits maximum

TRF 651 Filmmaking 3 S

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 Shortform Production 3 Y

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 3 Y

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 3 SS

Introduction to writing, designing, planning, and producing programs for radio, television, and film.

COREQ: TRF 636.

TRF 656 Sound for Picture 3 Y

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 3 Y

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 3 IR

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 3 Y

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 3 IR

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 594 OR 595 OR 683.

TRF 662 Advanced TV Production 3 S

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 3 Y  
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 652 OR 653 OR 654 OR 656 OR 657 OR 658 OR 659.

TRF 668 Advanced Audio 3 IR  
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 653 OR 654 OR 656 OR 657 OR 658 OR 659.

TRF 669 Advanced Filmmaking 3 Y  
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 652 OR 653 OR 654 OR 656 OR 657 OR 658 OR 659.

TRF 675 Entertainment Industry  
Practicum 1-3 SS  
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. R2, 3 credits maximum

TRF 683 Communications Industry  
Frontiers 3 Y  
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 3 Y  
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 3 IR  
Influence of mass media, especially television, on American society. Television from perspective of social psychology, child development, political science, and sociology.

# Faculty

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Courtney Barclay, Assistant Professor, Communications  
Ph.D., University of Florida, 2008  
Media law, mass communication

Frank Biocca, Professor; Newhouse Chair; Communications; Television, Radio and Film  
Ph.D., University of Wisconsin-Madison, 1986  
Mass communication, human-computer interaction, media psychology

Lorraine Branham, Professor and Dean, Newspaper and Online Journalism  
B.A., Temple University, 1976  
News editing, journalism, publishing, media management

Richard L. Breyer, Professor, Television, Radio and Film; Co-Director, Documentary Film and History  
M.A., New York University, 1967  
Television production, documentary/educational writing and production

Harriet Brown, Associate Professor, Magazine  
M.F.A., Brooklyn College, 1982  
Magazine writing and editing, creative writing, body image and media

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  
Political reporting, writing, producing, and minority broadcasting

Melissa Chessher, Associate Professor, Chair, Magazine; Director, Magazine, Newspaper and Online Journalism Program  
M.A., Baylor University, 1987  
Magazine writing and editing

Fiona Chew, Professor, Television, Radio and Film; Endowed Chair of Public Communications  
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

Michael Cremedas, Associate Professor, Broadcast and Digital Journalism  
Ph.D., University of Florida, 1988  
Broadcast writing, reporting, and production; viewer retention of broadcast news

Frank Currier, Professor of Practice, Broadcast and Digital Journalism  
M.A., University of Missouri at Columbia, 1968  
Broadcast news writing and reporting

Deborah Pang Davis, Assistant Professor, Multimedia Photography and Design  
B.F.A., The University of Arts, Philadelphia, 1994  
Interactive design, entrepreneurship

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, whole-package thinking

Steve Davis, Associate Professor, Chair, Newspaper and Online Journalism  
B.J., University of Missouri at Columbia, 1977  
News writing and reporting, multimedia journalism

Joan A. Deppa, Associate Professor, Newspaper and Online Journalism  
Ph.D., Michigan State University, 1981  
News writing, reporting, media coverage of terrorism

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  
MBA, 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

Amy P. Falkner, Associate Professor, Advertising; Associate Dean for Academic Affairs  
M.A., Syracuse University, 1989  
Media planning, advertising to gay and lesbian markets, social media

Barbara C. Fought, Associate Professor, Broadcast and Digital Journalism; Communications  
J.D., University of Detroit, 1992  
Communications law, broadcast news writing and reporting, access to information

Aileen Gallagher, Assistant Professor, Magazine  
B.A., Syracuse University, 1999  
Magazines, online editorial, blogs

Keith Giglio, Assistant Professor, Television, Radio and Film  
M.F.A., Wagner College, 1989  
comedy writing, screenwriting, writing for video games

Seth Gitner, Assistant Professor, Newspaper and Online Journalism, Multimedia Photography and Design  
B.F.A. Rochester Institute of Technology, 1995  
Photojournalism and multimedia web content

Tula Goenka, Associate Professor, Television, Radio and Film  
M.S., Syracuse University, 1986  
Film and television production, global film

Guy J. Golan, Associate Professor, Public Relations  
Ph.D. Mass Communications, University of Florida, Gainesville, 2003  
Public diplomacy, international communication, political communication, media effects and public opinion

Anthony R. Golden, Associate Professor, Multimedia Photography and Design; Co-Director, Military Program  
Ph.D., Syracuse University, 1986  
Advertising and illustration photography

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

Charlotte Grimes, Knight Chair in Political Reporting; Newspaper and Online Journalism B.S., East Carolina University  
Media and politics, political reporting, journalism ethics

Roy Gutterman, Associate Professor, Communications; Newspaper and Online Journalism; Director, Tully Center for Free Speech  
J.D., Syracuse University, 2000  
First Amendment, speech and press law, covering legal affairs, public access

Ken Harper, Assistant Professor, Multimedia Photography and Design  
M.A., Ohio University, 2009  
Graphics and interactive design

Dona Hayes, Associate Professor, Chair, Broadcast and Digital Journalism; Co-Director, Military Program  
M.S., Syracuse University, 1976  
Broadcast newswriting, reporting, and production

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  
Television writing, media and society

William Jasso, Professor of Practice, Public Relations  
M.S., Syracuse University, 2002  
Public relations strategy management, crisis management, traditional and social media relations, employee engagement

Hua Jiang, Assistant Professor, Public Relations  
Ph.D., University of Maryland, College Park, 2009  
Relationship management in public relations, social media, public relations leadership, health communication, quantitative research methods

Barbara E. Jones, Professor of Practice, Television, Radio and Film  
M.S., Syracuse University, 1988  
Television programming, television business, interactive digital media, international media

Joel Kaplan, Professor, Newspaper and Online Journalism; Associate Dean for Graduate Professional Studies  
M.S.L., Yale Law School, 1991  
News writing, investigative reporting, media law

Johanna Keller, Associate Professor, Newspaper and Online Journalism; Communications; Director, Goldring Arts Journalism Program  
M.A., Antioch, 1996  
Critical writing, cultural reporting

Dennis F. Kinsey, Professor, Public Relations; Co-Director, Public Diplomacy Program; Director, Mass Communications Ph.D. Program  
Ph.D., Stanford University, 1994  
Public relations theory and research, political public relations, Q-methodology

Robert M. Kucharavy, Professor of Practice, Public Relations  
B.A., Le Moyne College, 1969  
Public relations management and crisis communications

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 and the environment, media and gender

Joon Soo Lim, Assistant Professor, Public Relations  
Ph.D., University of Florida, 2006  
Public Relations campaigns, social media strategies, social influence and persuasion

Carla V. Lloyd, Professor; Advertising, Communications  
Ph.D., Syracuse University, 1994  
Advertising media, research, and fashion communications

Robert E. Lloyd, Professor of Practice, Newspaper and Online Journalism  
M.A., Syracuse University, 1979  
News writing and reporting, media and society

Patricia H. Longstaff, Professor, Television, Radio and Film  
M.P.A., Harvard University, 1994  
Communications law, regulation of new communications technologies

Suzanne Lysak, Assistant Professor, Broadcast and Digital Journalism  
B.S., Boston University, 1985  
Broadcast news producing, news management, television news employment issues

Stephen M. Masielat, Associate Professor, Newspaper and Online Journalism; Coordinator of Interactive Communications Core; Director of New Media Management Program  
M.P.S., Cornell University, 1992  
Multimedia, the Internet as a tool of communication

Lawrence Mason Jr., Professor, Communications; Multimedia Photography and Design  
Ph.D., Syracuse University, 1979  
Communications and society, fashion photography

John Nicholson, Professor of Practice, Broadcast and Digital Journalism  
B.S., Syracuse University, 1968  
Broadcast news writing and reporting, sports journalism

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

Dan Pacheco, Professor of Practice, Newspaper and Online Journalism, Peter A. Horvitz Endowed Chair in Journalism Innovation  
B.S., University of Colorado, 1994  
Applying new technologies to reporting and storytelling, new content business models, news startups.

Simon Perez, Assistant Professor, Broadcast and Digital Journalism

M. A., Universidad Complutense, Madrid, Spain, 1991

Multimedia journalism, journalism ethics, fairness in reporting, courtroom reporting

Douglas Quin, Associate Professor, Television, Radio and Film; Co-Director, Audio Arts Program

Ph.D., The Union Institute and University, 1999

Acoustic ecology, sound production

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, Acting Chair, Public Relations; Director, Communications Management Independent Study Degree Program

M.S., Syracuse University, 1972

Public relations management, professional development in public relations

Kandice Salomone, Associate Professor, Communications

Ph.D., Syracuse University, 1992

Communications research

Michael Schoonmaker, Associate Professor, Chair, Television, Radio and Film

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 editing

Brian Sheehan, Associate Professor, Advertising

M.A.T., Loyola Marymount University, 2007

Branding, advertising strategy, campaigns

Pamela J. Shoemaker, John Ben Snow Professor of Communications

Ph.D., University of Wisconsin-Madison, 1982

Gatekeeping, cross-cultural study of news

Evan Smith, Professor, Television, Radio and Film

M.S., Syracuse University, 1979

Television and feature film script writing, comedy writing, the 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

M.A., Western Kentucky University, 1973

Photojournalism, multimedia storytelling

Corey Takahashi, Assistant Professor, Magazine

B.A., University of California, Santa Cruz, 1998

Global media, culture and arts reporting, mobile apps, multimedia producing

Sherri Taylor, Adjunct

Professor/Administrator, Multimedia Photography and Design; Director, Empire State Scholastic Press Association

M.A., Syracuse University, 1990

Graphic design, scholastic press

Robert J. Thompson, Trustee Professor of Television and Popular Culture; Television, Radio and Film, Director, Bleir Center for Television and Popular Culture

Ph.D., Northwestern University, 1987

Television history and criticism, television and popular culture

Donald C. Torrance, Associate Professor, Broadcast and Digital Journalism; Television, Radio and Film; Director, Carnegie

Environmental Science Journalism Program

B.A., Alfred University, 1971

Broadcast news writing and production, science journalism

James Tsao, Professor; Chair, Advertising

Ph.D., Temple University, 1989

Online advertising, international advertising

Chris Tuohey, Associate Professor, Broadcast and Digital Journalism

M.A., Ohio State University, 1990

Broadcast news reporting, writing, and producing, sports journalism

William Ward, Professor of Practice, Communications

Ph.D., Michigan State University, 2007

social media, digital innovation, cause-related marketing

Randy Wenner, Adjunct Professor/Administrator, Broadcast and Digital Journalism

M.S., Syracuse University, 1996

Broadcast news writing, producing, and reporting

# College Of Visual And Performing Arts

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Ann Clark, Dean  
200 Crouse College  
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 four areas: the School of Art and Design, the Department of Communication and Rhetorical Studies, the Department of Drama, and the Setnor School of Music. Recognizing the link between education, understanding, and cultural knowledge, the College of Visual and Performing Arts is also committed to providing sites for learning about diversity throughout its curricula.



## General Regulations

For academic rules and regulations that apply to all University students, see the Academic Rules and Regulations section of this catalog, which also contains special regulations that apply to all undergraduate students matriculated in the College of Visual and Performing Arts.

### INTRA-UNIVERSITY TRANSFER

Applications for intra-University transfer are available in the Office of Recruitment and Admissions, 202 Crouse College. Applications are held until the end of the semester.

### TRANSFER CREDIT

Transfer of credit is considered only for courses that may be applied to the program in which the student is interested. In the School of Art and Design, Department of Drama, Department of Transmedia, and the Setnor School of Music, transfer students often have an excess of credits in academic subjects that cannot be applied to a specific program due to the high number of studio credits required. The result may be that the period of undergraduate study is extended beyond the typical four years. In the Setnor School of Music, placement examinations in music theory and applied music are also required before credit is accepted.

In all cases, transfer credit is evaluated after admission. Credits—not grades or honor points—are transferred from other institutions. Only credits earned at Syracuse University are counted in the grade point average.

All transfer students not previously contacted about the transfer of academic credit should report as early as possible after their arrival on campus to the Office of Student Affairs, 200 Crouse College.

### 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.

## School Of Art And Design

Department of Art, 102 Shaffer Art Building, 315-443-4613  
Department of Design, The Warehouse, First Floor, 315-443-2455  
Department of Foundation, 102 Shaffer Art Building, 315-443-2251  
Department of Transmedia, 102 Shaffer Art Building, 315-443-1033

### The School of Art and Design

As a professional school within a major university, the School of Art and Design offers a wealth of academic resources and endless opportunities and activities. Students are actively involved in mastering their chosen discipline and receive a liberal education that is integral to the development of artists and designers. They have one-on-one interaction with the school's active, professional faculty and numerous visiting artists.

The School of Art and Design has a tradition of excellence that goes back more than 130 years; in fact, Syracuse University was the first university in the country to grant a bachelor of fine arts (B.F.A.) degree. Within its three departments (art, design, and transmedia), the school offers 17 majors that lead to a B.F.A. degree: art education, art photography, art video, ceramics, communications design, computer art, fashion design, film, history of art, illustration, environmental and interior design, jewelry and metalsmithing, painting, printmaking, and sculpture. It also offers a program leading to a bachelor of industrial design (B.I.D.) degree in industrial and interaction design.

School of Art and Design students are encouraged to explore interdisciplinary study within the school and University as well as pursue opportunities for internships and study abroad experiences. Students may also take advantage of the courses, programs, and events offered through COLAB, an interdisciplinary initiative based in the College of Visual and Performing Arts that encourages students and faculty to use their diverse skills and perspectives to solve complex, real-world problems creatively and collaboratively. The School of Art and Design is committed to ensuring that students receive a comprehensive education in art and design in all of their disciplinary forms. In studio courses where students are involved in representing their own issues and identities, diversity is by nature an integral component of each class. In lecture-based studies courses, the work of underrepresented groups and issues of gender and sexual orientation are incorporated into the curricula. In addition, specific concerns of diversity are addressed in the courses listed below:

AED 522 Art for Special Populations  
ART 105 Color and Light  
ART 111 20th- to 21st-Century Art in Context  
ART 112 Special Topics in History of Art  
ART 113 20th- to 21st-Century Design in Context  
ART 114 Special Topics in History of Design  
ART 250 Filmmaking: Cinematic Modes  
ART 300 Selected Topics (e.g., Art and Politics)  
ART 361/561 Studio Symposium  
ART 563/564 Art in America  
PTG 300 Decoding Images  
EDI 553 Philosophy and Research  
IND577 Philosophy and Ethics  
DES248 Design Issues

Department of Art  
Contact Errol Willett, Chair, 102 Shaffer Art Building, 315-443-4613

The School of Art and Design is Department of Art offers an exciting, energetic culture of students who are encouraged to cross conventional boundaries with their work. They are motivated, curious, and committed to artistic growth. The department takes a genuine interest in teaching students what being a professional artist means so that they are prepared for the future. Curricula are designed to allow students to take classes within the 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.

#### Department of Design

Contact Lucinda Kaukas Havenhand, Chair, The Warehouse, First Floor, 315-443-2455

In the Department of Design, located in the School of Art and Design, faculty and students form an inquisitive and intelligent community that is concerned with the world around it. Many of the departments' professionally oriented programs are top-ranked in the United States and have a 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, SU's newly renovated building in downtown Syracuse that allows students and faculty to benefit from a city atmosphere and interactions with local design firms.

#### Department of Foundation

Contact Joanna Spitzner, Department of Foundation, 222 Smith Hall, 315-443-2251.

The foundation program is taken during the first year and is a prerequisite for all B.F.A. and B.I.D. programs in the departments of art and design. Students in the B.F.A. degree program in fashion design have additional specific foundation requirements and should refer to their program of study for more information.

The foundation curriculum is designed to provide the most rigorous introductory courses necessary for a complete education in art and design. The foundation year includes four required studios: Dimensional Arts, Foundation Drawing, Time Arts, and Two-Dimensional Integrated Design; two required courses in art and design history; and one required Syracuse University writing course. Students take two required studios in the fall semester and the remaining two in the spring, and one art or design history course in the fall and the other in the spring. There is no sequence in the order of the studios. The goal of these courses is to strengthen conceptual and technical abilities, promote research activity, and provide a cultural and historical context for a broader and more diverse understanding of students' ideas.

In addition to these required courses, students have choices of studio art and academic electives in both semesters. Studio electives provide students with a broad, rich experience. In addition to the special topics studio electives offered by the Department of Foundation, certain 100- and 200-level studio courses are offered by the Departments of Art, Design, and Transmedia. Students take at least one academic or studio elective in the fall semester. They may also choose to take a second academic elective, but not two studio electives in the fall. In the spring semester, students are required to take one academic elective and are strongly encouraged to take a studio elective. Students may take academic electives from other areas of the University, including within the School of Art and Design.

Throughout the year, first-year students come in contact with faculty and students from all programs in the School of Art and Design, with opportunities for conversation and presentations about the different majors so they are prepared to select a major at the end of the year.

#### Fall Semester

WRT 105 Writing Studio I 3

Academic electives/studio elective 3-6

Choose two of the following

FND 111 Time Arts 3

FND 113 Foundation Drawing 3

FND 115 Two-Dimensional Integrated Design 3

FND 117 Dimensional Arts 3

Choose one of the following

ART 111 Twentieth- to 21st-Century Art in Context 3

ART 113 Twentieth- to 21st-Century Design in Context 3

15-18

#### Spring Semester

Academic elective 3

Academic/studio elective(s) 3-6

Choose the remaining two not taken in the fall semester

FND 111 Time Arts 3

FND 113 Foundation Drawing 3

FND 115 Two-Dimensional Integrated Design 3

FND 117 Dimensional Arts 3

Choose remaining one not taken in fall semester

ART 111 Twentieth- to 21st-Century Art in Context 3

ART 113 Twentieth- to 21st-Century Design in Context 3

15-18

WRT 205, although not a foundation requirement, is a University requirement, and should be taken within the first two years of study. It is offered only in the spring semester.

## Department of Transmedia

Contact Heath Hanlin, Chair, 102 Shaffer Art Building, 315-443-1033

Students in the School of Art and Design is Department of Transmedia forge a strong vision and the capacity to act intelligently as an artist . The department is committed to providing a meaningful exploration of media arts with strong, professional artistic practice. Each curriculum in the department is shaped to offer greater flexibility for unique academic experiences, including core courses in transmedia theory and practices. Faculty encourage students to exhibit work on and off campus and arrange for visiting artists to give lectures and critiques. They are also actively involved in the Syracuse community, organizing screenings, film festivals, and exhibitions, which give students additional opportunities for creative exploration and involvement.

## General Regulations

### DEGREE REQUIREMENTS

A minimum of 126 credits is required to complete all of the four-year B.F.A. degree programs in the School of Art and Design except for environmental and interior design, which requires 120 credits. The industrial and interaction design program requires a full five years of study and 156 credits. For the B.F.A. programs in the Department of Transmedia, the minimum number of credits required for graduation is 129.

All students matriculated in the Departments of Art and Design's B.F.A. and B.I.D. degree programs must satisfy their program's foundation requirements. Major programs are usually selected by the end of the first year and require approximately 30 credits in one area of professional work, along with other coursework that may be required for the chosen program. Students in the B.F.A. program in fashion design should refer to their specific program of study for major requirements and other coursework.

All students matriculated in the B.F.A. degree programs in the Department of Transmedia must satisfy the requirements of the transmedia core.

No degrees are granted unless all fees have been paid or satisfactorily adjusted.

### ADVANCED PLACEMENT COURSES

The School of Art and Design accepts advanced placement (AP) credit for art/general, art/media and art/drawing for electives only. AP credits may not be used for first-year foundation program studios or transmedia core courses. Syracuse University and the School of Art and Design accept many other academic credits including art history. Please refer to the Academic Rules and Regulations section of this catalog for more information.

### Special Services and Programs:

#### STUDY ABROAD

The College of Visual and Performing Arts, through Syracuse University Abroad, provides an opportunity for students matriculated in the School of Art and Design to take advantage of study programs in Florence, Italy; Prague, Czech Republic; and London, England.

Students majoring in one of the B.F.A. programs or the B.I.D. program may study abroad for a semester, a year, or a summer in London and Florence. This educational experience draws upon the rich resources of these cities' museums, architectural monuments, and cultural offerings. Students may take either a semester- or a year-long program that includes six to nine credits of studio work each semester.

The film program offers both semester-long and short-term study with FAMU in Prague, Czech Republic. Students must obtain departmental approval to participate.

A direct placement program with the London College of Fashion offers students majoring in the B.F.A. programs in fashion design and textile design a professional semester in London during their junior year. In addition to classes they would normally take on the SU campus, students may take courses in such areas as millinery design, shoe design, and electronic machine embroidery. All of the students have internships with English designers and are immersed in the London fashion scene. Contact SU Abroad at 315-443-3471, or online at suabroad.syr.edu.

Students who elect to spend a semester abroad may find that some program adjustments are necessary. Students should consult with their advisor for more information and contact the Office of Student Affairs, 204 Crouse College, 315-443-2517.

#### SPECIAL STUDIES IN ART

The special studies in art program leads to the B.F.A. degree and is designed expressly for interdisciplinary study. The program is not automatically available; it must be mutually approved by the advisors in the various areas incorporated into the program. All applicants must undergo a personal interview and a portfolio review. In addition, a written proposal for the complete program of study is required, including specific courses and credits. Students are expected to complete the foundation program, and sophomores must have a 3.0 cumulative grade point average and a portfolio of superior caliber to be accepted. The decision to enroll in the special studies program must be made before the student accumulates 60 credits.

For further information and instructions for application, contact the Department of Art, 102 Shaffer Art Building, 315-443-4613.

**COURSES FOR NON-ART STUDENTS:** Some studio and academic courses are open to non-art majors:  
FND 102/103, 104,105,106,107,108, PTG 203/204, 503/504, SCU 207,208,507,508.

# Department Of Drama

Timothy J. Bond, Producing Artistic Director, Department of Drama and Syracuse Stage

Ralph Zito, Chair

820 East Genesee Street, 315-443-2669

As an undergraduate conservatory-style theater training program that is both directly partnered with a professional theater company and part of a major American university, SU Drama is uniquely positioned to train the next generation of professional theater artists. Students learn from faculty members who themselves are practicing professionals in every aspect of theater. The Department provides students with the opportunity to draw upon the unparalleled theater and art resources of London, England, or Florence, Italy, through study abroad. It also offers a unique drama experience through the Tepper Semester, a rigorous artistic training program in the culturally rich setting of New York City. Many of the alumni who have gone on to become highly respected writers, actors, directors, producers and designers return to campus occasionally to lecture, advise, and participate in informal discussions. Visiting artists working at Syracuse Stage or other professional venues in the area often conduct workshops or discussions with Drama students.

The Department of Drama offers four professional programs, leading to the B.F.A. degree: in theater design and technology, acting, musical theater, and stage management. It also offers a B.S. degree in drama. The Department of Drama is committed to ensuring that students receive a strong foundation in the theater in all of its forms. Undergraduates put classroom theory into practice and carry out the University's academic mission of Scholarship in Action through productions and community engagement.

The unique affiliation between the Drama Department and Syracuse Stage, an outstanding Equity theater company, provides opportunities for our students to gain professional experiences in all areas of study while working toward their undergraduate degrees. These two organizations share space in the same theater complex.

The faculty covers material in appropriate courses that includes plays by playwrights from all backgrounds. The practice of non-traditional casting affords students the opportunity to perform roles not traditionally assigned to them. Design/technical theater studio courses by nature invite and promote exploration of diversity in ideas, themes, and approach to visual presentation of plays; texts for assigned projects are chosen on the basis of ensuring a diverse experience. Academic topics courses (451/452) occasionally embrace themes directly relating to diversity. In addition, the following courses include issues of diversity:

## Acting and Scene Study Courses

DRA 105 Introduction to Acting for Nonmajors  
DRA 125 /126 Introduction to Acting  
DRA 220 Introduction to Scene Study  
DRA 221 /222 Voice/Verse Practicum, I and II  
DRA 261 /262 Introduction to Musical Theater Practice, I and II  
DRA 305 Advanced Acting for Theater Minors  
DRA 320 Advanced Acting: Modern Drama  
DRA 321 /322 Advanced Voice Verse Practicum, I and II  
DRA 352 Survey of Theater History  
DRA 360 Community Actors Workshop  
DRA 362 Musical Theater Scene Study  
DRA 405 Advanced Acting Poetics for Nonmajors  
DRA 420 Advanced Acting: Poetic Drama  
DRA 523 Professional Audition Theory and Practice  
DRA 530 Advanced Actors Workshop

## Design Courses

DRD 311/312 Scene Design  
  
DRD 321/322 Costume Design  
DRA 328 Stage Makeup

## Academic Courses

DRA 115 /116 Introduction to the Theater  
DRA 260 Musical Theater Practicum  
DRA 352 Survey of Theater History  
DRA 355 /356 Development of the Theater and Drama, I and II  
DRA 451 /452 Topics in Theatrical and Dramatic History  
DRA 453 History of Musical Theater  
DRA 480 London Studios (London Program)  
DRA 315 Play Analysis and Introduction to Mise-en-Scène  
DRA 331 Introduction to Directing

## B.F.A. Degree

The B.F.A. degree is the dominant degree in the drama department. Along with traditional drama requirements, students have the option of selecting support courses from the University's other professional schools, including art and music. Each program requires 94-100 credits in the selected discipline, drama and related support courses, which are selected by the student and advisor to achieve specific professional goals. The remaining 30 credits are devoted to academic courses outside of the department.

During the first year of study, students in the Acting and Musical Theater Programs concentrate on building fundamental skills rather than on performance. Students in both programs share classes in acting, movement, and voice. In addition to these Core courses, Musical Theater students begin their training in dance and singing. Freshman Design and Technology Students begin their studies in art foundation, theater design and stagecraft, and in their second year begin studies specific to their area of interest (scenic, costume or lighting). Stage Management students begin with a foundation in theater, stage management, and stagecraft from the first year.

Continuation in the B.F.A. program in Acting or Musical Theater is based on faculty evaluation of the student's classwork and personal commitment at the end of the second year of study. However, this is not the only evaluation. All students in the department are evaluated periodically to see whether their commitment and development warrant continuation in the program they have selected.

## B. S. Degree in Drama

The B.S. degree in Drama is structured much like the traditional arts and sciences degree and enables students to incorporate the intensive training of the drama program with a broad education in the liberal arts. Students interested in the B.S. degree may choose a track (concentration) in Acting, Directing, Playwriting or in Theater Technology, providing they have been admitted to and have completed a portion of the BFA program. However, Students may be directly admitted into the Theater Management B.S. track.

The B.S. degree requires 120 credits, including a minimum of 50 credits in the liberal arts, and a cumulative grade point average of 2.0 (C). In addition to the liberal arts distribution of requirements, students must select an 18-credit minor or academic specialization in an academic (non-studio) area of study. They may take additional credits if they wish to satisfy their own interests.

## SYRACUSE STAGE

Syracuse Stage is a professional (LORT Equity) theater company. Together with the Department of Drama, it forms part of an unusual University-professional theater affiliation. The close relationship between a major professional theater serving the city and a vigorous University undergraduate program for training young professionals is fostered by their common home in one complex.

Drama students earn credits by assisting professional directors, designers, and technicians and by appearing in productions at Syracuse Stage; in turn, the staff of the professional theater is involved in all the productions of the drama department, supervising and assisting student designers and technicians with their work. Some student actors are cast in professional productions, and all students profit from the experience, advice, and example of professional actors, designers, directors, and resident staff working in the same building. A number of specialized drama department classes are taught by members of the Syracuse Stage staff who are part-time adjuncts to the faculty.

## STUDY ABROAD

The College of Visual and Performing Arts, through Syracuse University Abroad, provides students in the Department of Drama with the opportunity to draw upon the unparalleled theater resources of London, England, or design resources in Florence, Italy, through study abroad. Coursework is designed to take advantage of the quantity and quality of London theater. A unique weekly acting workshop at the prestigious Globe Theatre\*, offered during the Fall semester, provides training in special skills such as stage movement and voice. Students may also take courses in the arts and sciences, communications, environmental arts, or management. A direct placement program with the London College of Fashion offers students majoring in costume design an opportunity to study costume design and technology during their junior year. Design students may choose to study in Florence, Italy, where rich cultural resources in art, theater, and opera provide an unforgettable educational experience.

\* Please note that participation in the Globe program is limited to 18 students annually.

For further information, contact the Office of Student Services, 204 Crouse College, or SU Abroad, 106 Walnut Place ([suabroad.syr.edu](http://suabroad.syr.edu)).

## THE TEPPER SEMESTER: A NEW YORK CITY DRAMA EXPERIENCE

The Tepper Semester is a unique program from Syracuse University's Department of Drama that offers undergraduate students in advanced levels of acting, musical theater, design, and stage management the opportunity to immerse themselves in a rigorous artistic training program in the culturally rich setting of New York City.

Students in the Tepper Semester work closely with an accomplished faculty of professional, working artists who nurture the students' creative, intellectual, and personal growth. The faculty also helps students gain an understanding of the business skills essential for a rewarding and successful career in the industry.

Residency in New York City is an integral part of the Tepper Semester. Artistic training is fueled by the cultural and educational resources of the city. In addition to being exposed to a broad range of theater, they can experience museums, libraries, and various entertainment venues.

## SYRACUSE UNIVERSITY DRAMA ORGANIZATION

The Syracuse University Drama Organization (SUDO) is the national chartered alumni club for SU drama alumni and friends in the entertainment industry.

Based in New York City, SUDO's primary goals are to be a source of networking for drama alumni and to provide new and future alumni with mentoring assistance. To meet its goals, SUDO hosts many social, cultural, and fund-raising functions such as an annual reunion party, an Academy Awards party, a biannual cabaret, and a new play reading series. SUDO also publishes a regular newsletter available to members.

#### DRAMA MINOR

The Department of Drama currently offers a minor to those students enrolled in other courses of study. Students must petition the drama faculty, have a 2.5 grade point average, and have at least a sophomore standing. Fifteen students are accepted as minors each year on a "first-come, first-served" basis. Minors must fulfill 18 credits of class, including 3 credits of introduction to the theater (DRA 115 ) and 3 credits of theater history (DRA 352 ,355, or 356). At least 9 of the remaining 12 credits must be in upper-level classes. Students may select courses from among classes in history, dramatic literature, theater management, theater design and technology, acting for nonmajors, and others.

#### COURSES FOR NON-DRAMA STUDENTS

Non-drama students are welcome in DRA 105,315, 352, 355, 356, 305, 405, 491 and DRD 555 Evolution of Stage Design as well as in ART 250 and 253 (offered by the School of Art and Design).

## Communication And Rhetorical Studies

Contact Amos Kiewe, Chair, 100 Sims Hall, 315-443-2308

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.

Students pursue a B.S. degree in communication and rhetorical studies by taking 36 credits in communication and rhetorical studies, 54 credits in arts and sciences, and 30 credits in University-wide electives. In this program, students integrate studies in communication and rhetorical studies with courses from other professional schools and the College of Arts and Sciences.

#### Special Services and Programs

#### HONORS IN COMMUNICATION AND RHETORICAL STUDIES

Outstanding students are encouraged to pursue honors in communication and rhetorical studies. Exceptional students may undertake a project of their own choosing under the direction of a faculty member. Project reports are presented at the end of the semester.

For further information about the Honors Program, contact the Office of Student Affairs, 204 Crouse College, or the Honors Program, 306 Bowne Hall.

#### STUDY ABROAD

The College of Visual and Performing Arts, through the Syracuse University Abroad (SU Abroad), provides communication and rhetorical studies majors with the opportunity to study in London or Madrid. Students may participate for a semester or a year.

Normally, communication and rhetorical studies courses are offered only in the spring semester.

Students may choose from courses in communication and rhetorical studies and complete their course loads by selecting from a wide range of courses in arts and sciences, management, public communications, and human services.

For further information, contact the Office of Student Affairs, 204 Crouse College, or SU Abroad, 106 Walnut Place ([suabroad.syr.edu](http://suabroad.syr.edu)).

## Setnor School Of Music

215 Crouse College, 315-443-5892  
<http://vpa.syr.edu/music>

In collaboration with the SU Strasbourg Center, and the Conservatoire Nationale de Strasbourg, the school offers an opportunity for a semester abroad for music majors.

Students enrolled in the Bandier Program are encouraged to spend a semester in London, England, a place considered the center of the music industry world. Opportunities for supervised internships while abroad are available and encouraged.

The Rose, Jules R., and Stanford S. Setnor School of Music is committed to offering opportunities for the highest level of professional musical development within the context of a broad, humanistic education that seeks to engender an integrative balance in the work of its students. The school seeks also to encourage the broadest possible range of creative options for its students, recognizing that the western classical tradition continues to grow and expand, and that it is only one in a world of myriad others.

The school recognizes all musical disciplines as essential to the health of the profession and to the continued evolution of culture, and so strives for the highest standards of achievement for students in all degree programs.

The school affirms its role and responsibilities as a citizen of its community, and of the larger culture, and so is committed to serving the community through outreach and education, and to creating an inclusive environment in which all can develop their gifts.

The Setnor School of Music is also committed to ensuring that students receive a full grounding in music in all of its forms. In the music history sequence, contributions by women and minority composers are treated as part of the overall cultural context of each period studied. In addition, special studies courses specifically address a range of non-traditional topics. The following courses address issues of diversity:

MHL 364 History of American Popular Music  
MHL 566/MTL 566 Topics in Literature and Analysis  
MUE 416 Psychological and Sociological Aspects of Music  
MHL 466 History of Jazz

### ADMISSION

An audition in person is required for full acceptance into graduate programs. In cases where a live audition is not feasible, a provisional acceptance may be made on the basis of a recorded audition. Recorded auditions are not considered binding and a provisional admission based on a tape audition must be confirmed by a live audition when the student arrives on campus. Applications for graduate assistantships are due by March 1. After admission, the student must take diagnostic examinations in music theory and music history. For information on how to apply to the Setnor School of Music, including scheduling auditions, please visit [vpa.syr.edu/index.cfm/page/graduate-admission-music](http://vpa.syr.edu/index.cfm/page/graduate-admission-music), or contact the college's Office of Recruitment and Admissions at 315-443-2769.

### FACILITIES

The Setnor School of Music is housed in John B. Crouse Memorial College. The ground floor provides practice rooms, studios, and the Music Education Resource Center. More studio and classroom space is located on the upper three floors, as well as the recently upgraded electronic music studio; digital multitrack recording studios specifically geared for recording of concert music and jazz; the Belfer Archive for sound archiving and preservation; and Setnor Auditorium with its 3,823-pipe Holtkamp organ.

### SPECIAL OPPORTUNITIES

The Setnor School of Music holds many faculty and student recitals in Setnor Auditorium as well as concerts sponsored by visiting soloists and ensembles. Also featured are concerts by University-sponsored groups such as the Wind Ensemble, Syracuse University Symphony Orchestra, University Singers, Concert Choir, and the Oratorio Society, a choral group regularly featured in performances with the Syracuse Symphony Orchestra. Digital recordings of the concerts and some student recitals have been prepared for broadcast on local radio stations by the audio facility of the Setnor School of Music.

## Communication And Rhetorical Studies

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### The Department Of Communication And Rhetorical Studies

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.

Opportunities for study abroad experiences include London, England, and Madrid, Spain.

## Drama

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### 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.

## School Of Art And Design

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### The School Of Art And Design

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. The school offers programs of study at the undergraduate level in art, design, and transmedia; it also maintains study programs in Florence, Italy; Prague, Czech Republic; and London, England. In addition, the school works in cooperation with the SU Art Galleries, Syracuse University Library's Special Collections Resource Center; the University's textile and historic costume collections, and COLAB.

## Setnor School Of Music

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### School Of Music

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.

## Academic Offerings

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### Art Photography MFA

Art Photography MFA

Contact Department of Transmedia, 102 Shaffer Art Building, 315-443-1198.

Faculty Yasser Aggour, Doug DuBois, Laura Heyman

<http://vpa.syr.edu/art-design/transmedia/graduate/art-photography>

The M.F.A. program in art photography includes tutorials, group critiques, and courses in history, theory, and criticism. The program is dedicated to experimentation and exploration within a wide range of photographic and conceptual practices. This pluralistic approach to the medium gives graduate students a nuanced understanding of photography as it relates to contemporary art practice.

The program offers darkroom and studio facilities equipped for work in black and white, color, and digital photography. Graduate students have separate darkrooms: a black and white facility and a color lab that includes a 40- inch processor, high resolution film scanners and large- format archival inkjet printers. Digital SLR's, medium- and large-format film cameras, and an extensive array of lighting equipment are available for checkout. A shooting studio is 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 Robert B. Menschel Photography Gallery. In addition, the Department of Transmedia maintains its own gallery space for exhibitions and events organized by graduate students.

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## Art Video MFA

### Art Video MFA

Contact Department of Transmedia, 102 Shaffer Art Building, 315-443-1202.

Faculty Tom Sherman, Emily Vey Duke  
<http://vpa.syr.edu/art-design/transmedia/graduate/art-video>

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. Post-production 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.

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## M.A. In Audio Arts

Contact: Douglas Quin, Co-Director  
315-443-7398, [dhquin@syr.edu](mailto:dhquin@syr.edu)

Ulf Oesterle, Co-Director  
315-443-3119, [uoesterl@syr.edu](mailto:uoesterl@syr.edu)

Faculty: Various faculty from the College of Visual and Performing Arts' Setnor School of Music and Newhouse School's Television, Radio and Film Department.

### M.A. in Audio Arts

Audio Arts is a joint graduate studies program harnessing the experience and strength of the Schools of Music and 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 MA 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 Association for Education in Journalism and Mass Communication.

### Required Coursework (24 credits)

EEE 620 Foundations of Entrepreneurship  
RAE 601 Audio Arts Graduate Survey  
RAE 610 Audio Arts Colloquium (three 1-credit modules)  
RAE 675 Audio Arts Industry Practicum featuring a major market internship in a particular Audio Arts Arena.

TRF 510 Specialized Practice (three 1- credit modules)

TRF 605 Audio Arts Practices

TRF 637 Telecommunications Law and Policy

CAPSTONE in Audio Arts, choose one:

- TRF 600: Emerging Media Incubator
- TRF 642: Television Production Workshop
- TRF 668: Advanced Audio
- TRF 669: Advanced Filmmaking
- RAE650: Special Projects

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 and Policy
- Research Component: both RAE 601 Audio Arts Graduate Survey, and EEE 620

Foundations of Entrepreneurship.

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.

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

3.0 Minimum GPA for Graduation

Total: 36 credits

Degree: Master of Arts

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## Ceramics

Contact Margie Hughto, Department of Art, ComArt Building, 315-443-3700.

Faculty Peter Beasecker, Margie Hughto, Errol Willett

Graduate study in ceramics may be directed toward pottery, sculpture, tile mosaics, or other areas of ceramics. 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 M.F.A. program.

Students work in individual studios within the ceramics facility and maintain active relationships with faculty members, staff members, and other students.

Career possibilities include being a working artist and commercial applications as well. Graduates combine ceramics with work in a gallery or with work on historical restoration projects, in teaching, museum work, or with design consultants.

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## Communication And Rhetorical Studies

Contact: Charles Morris, cemorris@syr.edu  
100 Sims Hall

Faculty Richard W. Buttny, Anne Demo, Cynthia Gordon, Lynn Greenky, Diane Grimes, Kenneth M. Johnson, Amos Kiewe, Amardo Rodriguez, Bradford Vivian

## Communication and Rhetorical Studies

The M.A./M.S. in communication and rhetorical studies requires 33 credits beyond the B.S. or B.A. degree; 24 must be taken in the Department of Communication and Rhetorical Studies, and up to 9 may be taken in areas outside the department. Students qualified to do so are encouraged to take courses outside the major area. All programs include a common core: CRS 601, CRS 603, and CRS 605. No more than 6 credits may be earned in selected readings, experience credit, and independent study courses. At least 9 credits must be 600-level or above. Candidates may choose to write a thesis for 6 credits or take the entire 33 credits in coursework and a comprehensive examination on this work. Successfully completed theses will be archived in the library for patrons' use.

The Department of Communication and Rhetorical Studies offers the student a general background in theory, research methods, and context areas that include the following such areas as language and social interaction and rhetorical theory and criticism. Programs serve students with a variety of intellectual interests and career objectives.

The department 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 abilities to adapt and respond to the demands of the communication situations they encounter and create. The following courses are explicit in their treatment of diversity issues:

CRS 514 Language and Meaning  
CRS 535 Communication and Community  
CRS 567 Rhetoric and Philosophy  
CRS 568 Rhetoric of Social Change  
CRS 614 Communication, Power and Gender  
CRS 630 Intercultural Communication

### 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.

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## Computer Art

Contact Department of Transmedia, 102 Shaffer Art Building, 315-443-1033.

Faculty Andrew Fedak, Heath Hanlin, Annina Ruest

<http://vpa.syr.edu/art-design/transmedia/graduate/computer-art>

Computer art is experiencing a stormy adolescence. The transformation from a medium governed by novelty to a set of media that weave in and out of other media as diverse as filmmaking and sculpture is a long-term process. The computer art M.F.A. program at Syracuse University has the longevity to see these changes through and to patiently wait for the next round.

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.

### Computer Art

Contact Heath Hanlin, Department of Transmedia, 102 Shaffer Art Building, 315-443-1033.

Faculty Heath Hanlin, Annina Rüst, Andy Fedak

Computer art is experiencing a stormy adolescence. The transformation from a medium governed by novelty to a set of media that weave in and out of other media as diverse as filmmaking and sculpture is a long-term process. The computer art M.F.A. program at Syracuse University has the longevity to see these changes through and to patiently wait for the next round.

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## Conducting

### hPerformance, Composition and Conducting

Performance: John Laverty, Professor, [jmlavert@syr.edu](mailto:jmlavert@syr.edu)

Composition: Andrew Waggoner, Associate Professor, [abwaggon@syr.edu](mailto:abwaggon@syr.edu)

Conducting String Assistantships: James Tapia, Associate Professor, [jrtapia@syr.edu](mailto:jrtapia@syr.edu)

Setnor School of Music, 215 Crouse College, 315-443-5892.

Contact: Harriett Conti, Assistant Dean, [hmconti@syr.edu](mailto:hmconti@syr.edu)

Admissions and Recruiting, College of Visual and Performing Arts, 202 Crouse College,  
315-443-2769.

<http://vpa.syr.edu/music/programs/graduate/performance>

<http://vpa.syr.edu/music/programs/graduate/composition>

<http://vpa.syr.edu/music/programs/graduate/conducting>

The Setnor School of Music offers programs leading to the M.Mus. in performance, composition, or conducting. The M.Mus. degree program in performance is offered with the following emphases: keyboard, keyboard accompaniment, strings, voice, woodwinds, brass, or percussion. 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 the following: 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. The terminal requirement in composition is at least one large-scale composition and the presentation of one public recital of selected compositions. Written and oral comprehensive examinations must be completed during the final semester. Conducting majors are required to present two graduate-level recitals and complete written and oral comprehensive examinations.

Convocation attendance and ensemble participation are required for all full-time graduate students.

### MASTER OF MUSIC COMPOSITION, ORGAN, PERCUSSION, PIANO , STRINGS, VOICE, WIND INSTRUMENTS

Requirements Research (core) 3 MTC 646 (core) 3 History (core) 3 Major 8

Recitals 2(1) Special courses\* 4

Music literature, music electives and free 11-12 electives (varying with emphases)

34-36

### MASTER OF MUSIC CONDUCTING Requirements

Research (core) 3

MTC 646 (core) 3

History (core) 3

Major 8

Recitals 2

Electives 15-16 34-35

\*Special courses for various emphases: (examples) Orchestral Repertoire (strings) Accompaniment (ENC 520)

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## Certificate Of Advanced Study In Cultural Heritage Preservation

Certificate of Advanced Study in Cultural Heritage Preservation

Contact Kenneth Lavender, Program Director, 226 Hinds Hall, 315-443-6890, [igrad@syr.edu](mailto:igrad@syr.edu); [ischool.syr.edu/culturalheritage](http://ischool.syr.edu/culturalheritage)

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 archaeological 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

#### Required Course (3 credits)

IST 622 Introduction to Cultural Heritage Preservation

#### 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

ANT 682 Life Histories/Narratives

ANT 645/NAT 645 Public Policy and Archaeology

ANT 461/ANT 661/NAT Museums and Native Americas

ANT 781 Ethnographic Methods

IST 616 Information Resources: Organization and Access

IST 624 Preservation of Library and Archival Collections

IST 628 Management and Organization of Archival Collections

IST 632 Management and Organization of Special Collections

IST 677 Creating, Managing, and Preserving Digital Assets

MUS 500 Museums & Contemporary Practice

MUS 506 Introduction to Curatorship

MUS 607 Collections Management

MUS 703 Advanced Curatorship

With consent of program advisors, a student may petition to substitute other courses for elective credit towards the CAS.

#### 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, or IST 971, or upon approval of the appropriate program advisor. By petition, the student may receive 150 hours of credit upon completion.

### Summation

In their final semester students will:

- 1) 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;
- 2) 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.

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## Drama

### The Department Of Drama

As a conservatory-style theater training program that is both directly partnered with a professional theater company and part of a major American university, SU Drama is uniquely positioned to train the next generation of professional theater artists. Students learn from faculty members who themselves are practicing professionals in every aspect of theater. The Department provides students with the opportunity to draw upon the unparalleled theater and art resources of London, England, or Florence, Italy, through study abroad. It also offers a unique drama experience through the Tepper Semester, a rigorous artistic training program in the culturally rich setting of New York City. Many of the alumni who have gone on to become highly respected writers, actors, directors, producers and designers return to campus occasionally to lecture, advise, and participate in informal discussions. Visiting artists working at Syracuse Stage or other professional venues in the area often conduct workshops or discussions with Drama students.

### Drama

Timothy J. Bond, Producing Artistic Director, Department of Drama and Syracuse Stage

Ralph Zito, Chair

820 East Genesee Street, 315-443-2669

Please note that the Department of Drama is not accepting new applications for graduate study at this time.

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## Film

Contact Department of Transmedia, 102 Shaffer Art Building, 315-443-1033.

Faculty Sharon Greytak, Owen Shapiro, Miso Suchy, Kimi Takesue

<http://vpa.syr.edu/art-design/transmedia/graduate/film>

The M.F.A. in film is an advanced degree for filmmakers, earned in preparation for a professional career. The program emphasizes two things equally: creative production in dramatic, experimental, and documentary forms, and film studies (notably theory, criticism, and history). Production courses and academic courses are integrated throughout, and this intense mingling of theory and practical application results in a lively interchange of ideas and a viable transferring of ideas into action.

The program meets professional and educational needs in experimental and dramatic film production. The complementary curriculum structured for the degree in film is unique, and courses are offered throughout the year, including some summer sessions.

A minimum of 60 credits is required in film, including a thesis film and project paper. Prerequisites for all students are two semesters of film history, one semester of film theory, and one semester of 16mm film. Candidates must also take whatever undergraduate courses are needed to correct deficiencies in their previous training. No entrance exams are required, but applicants must submit a portfolio and arrange for a personal interview with the program head if applying for a fellowship or assistantship. Phone interviews may be acceptable when circumstances warrant. A residence of three years is normally required to complete the program.

The physical facilities for film production are among the best in the country. There is a digital sound studio for mixing, foley and music recording, a 1,200-square-foot sound stage, and an animation studio. There are more than 30 16mm cameras ranging from Bolex non-synch cameras to Arri SR- 2s to Super-16mm Aaton cameras and numerous digital sound recording devices. Post facilities include digital edit suites for standard definition film/video as well as HDV. Analog facilities include nine 16mm flatbed editors. A large selection of grip and lighting equipment is also available.

M.F.A. degree candidates are required to produce three films; the third film is their thesis project. Two of these films, one of which must be the thesis project film, must be taken to a faculty approved answer print stage. All M.F.A. degree candidates are required to screen and discuss their work at an annual portfolio review and in original graduate student showcases.

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## Illustration

Contact Department of Art, 102 Shaffer Art Building, 315-443-4613.

Faculty Yvonne Buchanan, Robert Dacey, Roger DeMuth, James Ransome, John Thompson

[vpa.syr.edu/art-design/art/graduate/illustration](http://vpa.syr.edu/art-design/art/graduate/illustration)

This program is well suited for individuals who wish to further their illustration skills, as well as those who desire to teach. The program integrates individual studies with opportunities for the student to sit in on undergraduate illustration classes to observe how illustration is taught. Students will be offered the option to teach.

The program requires a 60-credit degree with a three-year residency. The candidate will also produce a body of work as a thesis requirement and participate in an M.F.A. exhibition.

Candidates for admission are expected to give evidence of superior accomplishment and potential. It is recommended that the applicant have some professional experience in the illustration field. Artwork/slides/portfolio should demonstrate strong drawing 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 and lecturers.

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## Jewelry And Metalsmithing

Contact Department of Art, ComArt Building, 315-443-3700.

The jewelry and metalsmithing program 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. In addition to the metalsmithing faculty, visiting artists and faculty in related areas support the education of metalsmithing students. Visiting artists have included alumni Harriete Estel Berman and Bruce Metcalf as well as Gary Griffin, William Harper, Chris Irick, and Tacey Rosolowski.

Qualified students with backgrounds germane to the area may earn the M.F.A. Candidates have the opportunity to conduct research through individual programs developed in consultation with the department's faculty. While the program is based on traditional jewelry and metalsmithing techniques, mixed media and non-traditional approaches are encouraged. Instruction is one-to-one.

Each graduate student is assigned a small semi-private studio. The program is housed in a well-equipped facility.

JAM 620	1-12 cr.
JAM 720	1-12 cr.
Studio Electives	12 cr.
ART 702	3 cr.
JAM 996	3 cr.
Studio or Academic Elective	3 cr.
Academic Requirement	3 cr.
Art History Electives	9 cr.

## Museum Studies

Contact:  
Edward Aiken, eaaiken@syr.edu , Professor/Program Coordinator Museum Studies  
The Warehouse, 3<sup>rd</sup> Floor, 315-443-4098

The Master of Arts in museum studies prepares individuals to enter the museum profession through a course of study leading to the M.A. degree. The curriculum is grounded in research, scholarship, design, and actual practice. At the center of the program is the belief that the museum professional serves as the liaison between the viewing public and the museum object. Furthermore, the program is structured in a manner that enables our students to develop an understanding of the relationship between theory and practice. The Syracuse University Art Galleries, the Special Collections Research Center, and the Genet Costume Collection and Gallery at The Warehouse provide major settings for education and training, which is enhanced with projects at different off-campus venues around 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 fields, including the Department of Art, the Department of Transmedia, the Department of Art and Music Histories, the School of Education, the School of Information Studies, the Maxwell School of Citizenship, the Newhouse School of Public Communications, and the Department of Anthropology at Syracuse University. A significant number of students pursue concurrent or sequential degrees in such fields as art history, anthropology, arts administration, 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 artist studios to hear from prominent artists, curators, and gallery owners, many of whom are accomplished SU alumni.

The faculty is composed of 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 field trips to museums and conferences and 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.

### Curriculum:

Core requirements: (All courses required, for a total of 18-21 credits)

MUS 503 Introduction to Museum Studies (3cr.)  
MUS 506 Introduction to Curatorship (3cr.)  
MUS 603,604 Practicum I, II (6 cr.)  
MUS 607 Collections Management (3cr.)  
MUS 670 Experience Credit (3-6 cr.)

Concentration Requirements: (Minimum of two, one of which may be selected from courses offered as MUS 600 Selected Topics)

MUS 600 Print History and Processes (3cr.)  
MUS 703 Advanced Curatorship (3cr.)  
MUS 708 Public Learning in Museums (3cr.)  
MUS 709 Museum Management (3cr.)  
MUS 712 Museum Development (3cr.)

General academic or studio electives (6-9 cr., at least 3 credits must be in museum studies)

Completion Requirement: Comprehensive examination 0 cr.

Total Credits: 33

NOTE: In the academic year 2013-14, the program will review its curriculum and may add Selected Topics courses not listed in the current catalogue. Applicants and current students should check with the program for additional information.

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## Music Composition

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.

<http://vpa.syr.edu/music/programs/graduate/composition>

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## Organ

MASTER OF MUSIC COMPOSITION, ORGAN, PERCUSSION,

PIANO, STRINGS, VOICE, WIND INSTRUMENTS

Requirements Research (core) 3 MTC 646 (core) 3 History (core) 3 Major 8

Recitals 2(1) Special courses\* 4

Music literature, music electives and free 11-12 electives (varying with emphases)

34-36

MASTER OF MUSIC CONDUCTING Requirements

Research (core) 3

MTC 646 (core) 3

History (core) 3

Major 8

Recitals 2 Electives 15-16 34-35

\*Special courses for various emphases: (examples) Orchestral Repertoire (strings) Accompaniment (ENC 520)

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## Painting MFA

Contact Department of Art, 102 Shaffer Art Building, 315-443-4613.

Faculty Sharon Gold, Andrew Havenhand, Ludwig K. Stein, Jerome P. Witkin, Stephen Zaima

M.F.A. candidates in painting and drawing have excellent facilities in which to pursue independent work and research. Each student has a studio space and is encouraged to be self-motivated. Students are regularly visited in their studio for critiques by professors each semester. In addition, informal guidance is given by prominent visiting artists and critics during the academic year. Past visiting artists include Gregory Amenoff, Kenneth Baker, Eric Fischl, Paul Georges, Clement Greenberg, Hilton Kramer, Lucy Lippard, Elizabeth Murray, Kenneth Noland, Robert Pincus-Wittin, Susan Rothenberg, David Salle, Robert Storr, Mark Tansey, Wayne Thiebaud, William Wegman, and many others.

Students work in a variety of contemporary styles and media. The faculty is large and diverse; their styles and approaches to painting run the gamut of contemporary expression, and their exhibition records are extensive.

The painting and drawing program has an impressive tradition of excellence, more than 100 years in the making. The student body includes many international students, providing a mix of interests, backgrounds, and cultures.

The program requires a 60-credit degree with a three-year residency and is accompanied by a final research paper and M.F.A. exhibition. Many candidates receive teaching assistantships, fellowships, or remitted tuition assistance.

Alumni include Bradley Walker Tomlin, Robert Goodnough, Sidney Tillim, Charles Hinman, Peter Plagens, Sol Lewitt, Elizabeth Murray, and Rebecca Purdum.

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## Percussion

Percussion

Our master of music (M.M.) degree programs in the performance areas of organ, percussion, piano, strings, voice, and wind instruments promote the attainment of high levels of performance in addition to the skills necessary to enter the professional music world.  
vpa.syr.edu/music/programs/graduate/performance

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## Piano

Performance, Composition, and Conducting

Performance John Laverty, Professor

Conducting String Assistantships James Tapia, Associate Professor

Composition Andrew Waggoner, Associate Professor

Setnor School of Music, 215 Crouse College, 315-443-5892.

Contact Harriett Conti, Assistant Dean, Admissions and Recruiting, College of Visual and Performing Arts, 202 Crouse College, 315-443-2769.

Performance Faculty Alyssa Blount, Cornelia Brewster, Janet Brown, Michael Bull, Ronald Caravan, Edward Castilano, Bonnie Choi, Deborah Coble, John Coggiola, Michael Coldren, Joshua Dekaney, Bill DiCosimo, Jonathan English, Bradley P. Ethington, Jon Garland, William Harris, Amy Giller Heyman, Steven Heyman, Eric Johnson, Fred Karpoff, Adrienne Kim, James Krehbiel, John Laverty, Li Li, Gail Lyons, Philip MacArthur, Jeremy Mastrangelo, Julia McKinstry, Ken Meyer, Donna Miller, Darryl Pugh, Joseph Riposo, Julianna Maria Sabol, Caroline Stinson, Martha Sutter, Barbara Tagg, Patti Thompson-Buechner, Ida Trebicka, John Warren, Carolyn Weber, Gregory Wood

Composition faculty J. Downing, D. Godfrey, N. Scherzinger, A. Waggoner, J. Welsch.

Conducting faculty B. Ethington, J. Laverty, J. Tapia, J. Warren.

The Setnor School of Music offers programs leading to the M.Mus. in performance, composition, or conducting. The M.Mus. degree program in performance is offered with the following emphases: keyboard, keyboard accompaniment, strings, voice, woodwinds, brass, or percussion. 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 the following: 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. The terminal requirement in composition is at least one large-scale composition and the presentation of one public recital of selected compositions. Written and oral comprehensive examinations must be completed during the final semester. Conducting majors are required to present two graduate-level recitals and complete written and oral comprehensive examinations. Convocation attendance and ensemble participation are required for all full-time graduate students.

MASTER OF MUSIC COMPOSITION, ORGAN, PERCUSSION

PIANO, STRINGS, VOICE, WIND INSTRUMENTS

Requirements and Credits

Research (core) 3

MTC 646 (core) 3

History (core) 3

Major 8

Recitals 2(1)

Special courses\* 4

Music literature, music electives and free electives (varying with emphases) 11-12

Total 34-36

MASTER OF MUSIC CONDUCTING

Requirements and Credits

Research (core) 3

MTC 646 (core) 3  
History (core) 3

Major 8  
Recitals 2  
Electives 15-16  
Total 34-35

\*Special courses for various emphases: (examples) Orchestral Repertoire (strings) Accompaniment (ENC 520)

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## Printmaking

Contact Department of Art, ComArt Building, 315-443-3700.

Faculty Holly Greenberg, Dusty Herbig

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 editioned 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.

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## Sculpture

Contact: Department of Art, ComArt Building, 315-443-3700 or 315-443-3619.

Students enrolled in the M.F.A. sculpture program pursue individual creative research and artistic production, guided with courses in graduate critique, seminars, and independent coursework with faculty. Opportunities are provided for working in traditional and contemporary media.

The spacious facilities consist of dedicated workshops for such processes as metal casting, fabrication, and welding; wood and stone carving; clay; plaster; resins; plastic; and a state-of-the-art wood workshop, among others. Ample workspaces 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.

Graduate studies in sculpture are enhanced by an extensive visiting artist, critics and curator program. M.F.A. candidates have the opportunity to have close contact with the artists through lectures and individual studio critiques. Recent visitors include Diana Al-Hadid, Doug Ashford, Petah Coyne, Allan McCollum, Patricia Phillips, Bonnie Collura, Keith Edmier, and Tom Sachs.

### Program Requirements

Major Studio 24  
Studio Electives 12  
Art History or Related Academics 12  
Free Electives 6  
Graduate Seminar 3  
Final Presentation 3

Total Credits: 60

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## Strings

Performance, Composition, and Conducting

Performance John Laverty, Professor

Conducting String Assistantships James Tapia, Associate Professor

Composition Andrew Waggoner, Associate Professor

Setnor School of Music, 215 Crouse College, 315-443-5892.

Contact Harriett Conti, Assistant Dean, Admissions and Recruiting, College of Visual and Performing Arts, 202 Crouse College, 315-443-2769.

Performance Faculty Alyssa Blount, Cornelia Brewster, Janet Brown, Michael Bull, Deete Bunn, Ronald Caravan, Edward Castilano, Bonnie Choi, Deborah Coble, John Coggiola, Michael Coldren, Joshua Dekaney, Bill DiCosimo, Gabriel DiMartino, Jonathan English, Bradley P. Ethington, Jon Garland, William Harris, Amy Giller Heyman, Steven Heyman, Nancy James, Eric Johnson, Fred Karpoff, Adrienne Kim, John Laverty, Li Li, Julia McKinstry, Ken Meyer, Donna Miller, Darryl Pugh, Gregory Quick, Joseph Riposo, Peter Rovit, Julianna Maria Sabol, Anna Stearns, Caroline Stinson, Martha Sutter, Barbara Tagg, Patti Thompson-Buechner, Ida Trebicka, John Warren, Carolyn Weber, Gregory Wood

Composition faculty J. Downing, D. Godfrey, N. Scherzinger, A. Waggoner, J. Welsch.

Conducting faculty B. Ethington, J. Laverty, J. Tapia, J. Warren.

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Convocation attendance and ensemble participation are required for all full-time graduate students. MASTER OF MUSIC COMPOSITION, ORGAN, PERCUSSION, PIANO, STRINGS, VOICE, WIND INSTRUMENTS

Requirements Research (core) 3 MTC 646 (core) 3 History (core) 3 Major 8

Recitals 2(1) Special courses\* 4

Music literature, music electives and free 11-12 electives (varying with emphases)

34-36

MASTER OF MUSIC CONDUCTING Requirements

Research (core) 3

MTC 646 (core) 3

History (core) 3

Major 8

Recitals 2 Electives 15-16 34-35

\*Special courses for various emphases: (examples) Orchestral Repertoire (strings) Accompaniment (ENC 520)

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## Voice

Performance, Composition, and Conducting

Performance John Laverty, Professor

Conducting String Assistantships James Tapia, Associate Professor

Composition Andrew Waggoner, Associate Professor

Setnor School of Music, 215 Crouse College, 315-443-5892.

Contact Harriett Conti, Assistant Dean, Admissions and Recruiting, College of Visual and Performing Arts, 202 Crouse College, 315-443-2769.

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Composition faculty J. Downing, D. Godfrey, N. Scherzinger, A. Waggoner, J. Welsch.

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MASTER OF MUSIC COMPOSITION, ORGAN, PERCUSSION,

PIANO, STRINGS, VOICE, WIND INSTRUMENTS

Requirements

Research (core) 3

MTC 646 (core) 3

History (core) 3

Major 8

Recitals 2(1)

Special courses\* 4

Music literature, music electives and free 11-12 electives (varying with emphases)

34-36

MASTER OF MUSIC CONDUCTING Requirements

Research (core) 3

MTC 646 (core) 3

History (core) 3

Major 8

Recitals 2 Electives 15-16 34-35

\*Special courses for various emphases: (examples) Orchestral Repertoire (strings) Accompaniment (ENC 520)

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## Wind Instruments

Performance, Composition, and Conducting

Performance John Laverty, Professor

Conducting String Assistantships James Tapia, Associate Professor

Composition Andrew Waggoner, Associate Professor

Setnor School of Music, 215 Crouse College, 315-443-5892.

Contact Harriett Conti, Assistant Dean, Admissions and Recruiting, College of Visual and Performing Arts, 202 Crouse College, 315-443-2769.

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Convocation attendance and ensemble participation are required for all full-time graduate students. MASTER OF MUSIC COMPOSITION, ORGAN, PERCUSSION, PIANO, STRINGS, VOICE, WIND INSTRUMENTS

Requirements Research (core) 3 MTC 646 (core) 3 History (core) 3 Major 8

Recitals 2(1) Special courses\* 4

Music literature, music electives and free 11-12 electives (varying with emphases)

34-36

MASTER OF MUSIC CONDUCTING Requirements

Research (core) 3

MTC 646 (core) 3

History (core) 3

Major 8

Recitals 2 Electives 15-16 34-35

\*Special courses for various emphases: (examples) Orchestral Repertoire (strings) Accompaniment (ENC 520)

# Courses

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## Advertising Design

### ADD 540 Offset Printing 3 IR

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 1-12 IR

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 3 Y 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. R1, 3 credits maximum

### ADD 740 Ad Design Research Problems 1-12 SI

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 3 IR

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 0-6 IR

Formal master's thesis. Written document exhibiting substantive and original research. Planned under direction of major departmental advisor.

## Art Education

### AED 510 Special Problems in Art Ed 1-6 S

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 Curric'M 3 IR

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 3 IR

Effective personal communication through art. Choose and define a special population; expmine 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 3 IR

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 3 IR

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 612 Creativity & Its Cultivation 3 Y

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 3 SI

Primarily for graduate students with teaching experience who are interested in the practice of supervision in public schools. Current art practices. States' certification requirements. Curriculum guides. In-service supervisory problems. Art workshops. Improvements of instruction. Selection, induction, supervision, and evaluation of teachers. Procedures for selecting and purchasing art materials and equipment.

### AED 617 Philosophy of Art Educatn 3 Y

Place of art in contemporary life and the opportunities and responsibilities of teachers at all levels of art instruction. Readings in literature of art criticism and art education.

AED 618 Seminar in Art Education 3 Y  
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 710 Problems/Teacher As Artist 2-18 SI

Technical problems in art education. Limited to students working toward master's degree in art education. R

### AED 896 Final Presentation 3 SI

Final presentation accompanied by written statement, culminating in oral examination. Taken during final semester upon advisor's approval.

### AED 990 Independent Study 1-6 R

## Applied Music

### AMC 525 Keyboard Skills 2 SI

Sight reading. Score reading. Transposition. Basic ensemble techniques. Two-piano and four-hand repertoire emphasized. Permission of instructor.

### AMC 526 Technq of Accompaniment 2 SI

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 0-1 S

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.

### AMC 545 Diction in Singing 2 Y

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 2 Y

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.

## Art Photography

APH 561 Art Photography: Contemporary Art and Photography 3 Y  
Contemporary artists working with photographic images are studied through slides, readings, lectures, and discussions.

APH 562 Art Photography: Contemporary Critical & Theoretical Texts on Art & Photography 3 Y  
Recent and contemporary critical theories and applications studied through readings, lectures, and discussion. Emphasis on student research papers.

APH 563 Art Photography: Non-Traditional Modes 3 Y

Exploring the possibilities and reasons for producing work outside the parameters of traditional practice, looking at artists whose work co-opts, challenges and eschews the gallery system, using those artists as models for their own production.

PREREQ: APH 261 AND 262.

APH 564 Image/Sequence: Photo Book 3 Y

Theoretical and critical discussion of photographs in series, sequences and books. Software for editing and layout introduced to produce photo-based artist books. Specific attention paid to how the photo-book expands the meaning of individual images.

APH 565 Art Photography: Performance Art 3 Y

This course introduces the concepts, techniques, and variations of performance art. Special emphasis on performances made expressly for the camera will be considered. Many examples of performance art are analyzed.

PREREQ: APH 261 AND 262.

APH 566 Art Photography: Photography and Cinema 3 Y

Students explore the interplay between contemporary photography and cinema. By constructing sets, scouting locations, studying images and films, and appropriating cinematic language, students will create photographic works influenced by moving images.

PREREQ: APH 261 AND 262.

APH 640 Art Photography 3-12 SI

Intensive workshop geared toward individual student requirements within the context of the development of an extended body of work. Individual and group critique. R

APH 740 Art Photography 3-12 SI

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. R

APH 996 Final Presentation 3 S

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 1-6 S

Formal master's thesis. Written document exhibiting substantive and original research. Planned under direction of major departmental advisor.

## Art

ART 500 Selected Topics 1-3 SI

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

ART 511 Aesthetics, Advanced 3 SI

An examination of the main theories of art, classical and contemporary.

ART 531 Professional Practices in Visual Arts 3 Y

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 3 Y

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 3 S

Double Numbered with: ART 361  
Seminar discussions from artist's point of view on issues, theories, criticism in contemporary art. Visiting artists, critics, faculty participation. Reading and paper required. Individual research in conjunction with course expectations for students taking ART 561.

ART 563 Art in America I 3 Y

Evolution of modernist trends in American art from 1890 to 1945. Some music and literary trends also featured.

ART 564 Art in America II 3 Y

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 3 Y

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. R2, 9 credits maximum

ART 610 Topics in the History of Art 3

Double Numbered with: ART 410

A seminar in the history of and theory of the visual arts from ancient times to the present. Topics vary. Discussions incorporate current theory, recent scholarship, and problems addressed in contemporary art. Additional work required of graduate students. R1, 6 credits maximum

ART 631 Art Nouveau Design and Architecture: Studies in Material Culture 4

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 1 S

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 inter-disciplinary connections. Additional work required of graduate students. R5, 6 credits maximum

ART 690 Independent Study 1-6 SI

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. R

ART 701 Graduate Seminar 3 SI

ART 702 Graduate Seminar 3 SI

## Bassoon

BSN 560 Bassoon/Non Music Majors 1-4 S  
For non-music students.

BSN 565 Bassoon/Music Majors 1-4 S  
For music students.

BSN 566 Bassoon/Music Majors 1-4 S  
For music students.

BSN 665 Bassoon/Music Majors 1-4 S  
For performance majors.

BSN 666 Bassoon/Music Majors 1-4 S  
For performance majors.

BSN 765 Bassoon/Music Majors 1-4 S  
For performance majors.

BSN 766 Bassoon/Music Majors 1-4 S  
For performance majors.

## Tuba

BTB 550 Tuba/Non Music Majors 1-4 S  
For non-music students.

BTB 555 Tuba/Music Majors 1-4 S  
For music students.

BTB 556 Tuba/Music Majors 1-4 S  
For music students.

BTB 655 Tuba/Music Majors 1-4 S  
For performance majors.

BTB 656 Tuba/Music Majors 1-4 S  
For performance majors.

BTB 755 Tuba/Music Majors 1-6 S  
For performance majors.

BTB 756 Tuba/Music Majors 1-6 S  
For performance majors.

## Computer Art

CAR 501 Animation Workshop II 3 Y  
Building on the collaborative animation experience from the first semester of the animation workshop, students step into supervisor roles helping to manage all aspects of the production of an animated short film.  
PREREQ: CAR 401.

CAR 502 Visual Effects Workshop II 3 Y  
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 3 IR

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.  
PREREQ: CAR 211. R1, 6 credits maximum

CAR 530 Special Topics in Computer Art 3-12 IR

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. R

CAR 630 Computer Art Studio 3-12 S  
Research problems. Counseling and permission of advisor to determine area of study. Permission of Instructor. R

CAR 730 Computer Art Studio 3-12 S  
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. R3, 12 credits maximum

CAR 996 Final Presentation 3 S  
Written statement to accompany final project, culminating in oral examination for M.F.A. degree. Taken during final semester upon advisor's approval.

CAR 997 Final Presentation 0-6 S  
Formal master's thesis. Written document exhibiting substantive and original research. Planned under direction of major departmental advisor.

## Ceramics

CER 520 Raku Workshop 3 S  
Use of the Potter's wheel and production of various basic forms. Raku decorating and glazing techniques. R

CER 524 Ceramic Research 1-6 S  
Advanced research.  
PREREQ: CER 423 AND 424.

CER 527 Ceramic Technology Research 1-6 O  
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 528 Ceramic Technology Research 1-6 O

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 1-6 SI  
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 1-12 SI  
Professional problems in ceramics; advanced study in technique and theory. Development of a consistent body of work. Permission of Instructor. R

CER 720 Ceramic Research Problems 1-12 SI  
Continuation of CER 620. Permission of Instructor. R

CER 996 Final Presentation 3 S  
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 1-6 S  
Formal master's thesis. Written document exhibiting substantive and original research. Planned under direction of major departmental advisor.

## Clarinets

CLR 540 Clarinet/Non Music Majors 1-4 S  
For non-music students.

CLR 545 Clarinet/Music Majors 1-4 S  
For music students.

CLR 546 Clarinet/Music Majors 1-4 S  
For music students.

CLR 645 Clarinet/Music Majors 1-6 S  
For performance majors.

CLR 646 Clarinet/Music Majors 1-6 S  
For performance majors.

CLR 745 Clarinet/Music Major 1-6 S  
For performance majors.

CLR 746 Clarinet/Music Major 1-6 S  
For performance majors.

## Communication Design

### CMD 550 Communication Design Problems 1-6 S

Individual instruction in various areas of editorial design. In mixed-level groups, students develop projects according to individual interests and abilities. Strategic planning based on research and marketing principles. CMD 450 students also develop writing and presentation skills. R

### CMD 650 Commun Design Research Problem 1-12 S

Individual projects in selected areas of communications design. Emphasizes professional problems. R

## Communication And Rhetorical Studies

CRS 514 Language & Meaning 3 IR  
Analysis of language and social interaction in various contexts; language and social identity.

CRS 531 Advances in Interpersonal Communication 3 IR  
Introduction to contemporary theories and research in the field of interpersonal communications; array of theoretical models and research exemplars.  
PREREQ: CRS 331.

CRS 532 Family Communication 3 IR  
Examination of communication processes which constitute and reflect family functioning. Power and conflict, predictable and unpredictable stress, paradoxes and double binds, family life cycle, and communication competence. Permission of Instructor.

CRS 535 Communication & Community 3 IR  
Examines current concepts of interpersonal communication and their historical development. Demonstrates how interpersonal communication influences and is influenced by community contexts.  
PREREQ: CRS 331.

CRS 538 Advances in Organizational Speech Communication 3 IR  
Concepts and theoretical perspectives. Organizational dynamics; communication issues and problems. Permission of Instructor.  
PREREQ: CRS 338.

CRS 545 Issues in Argumentation 3 IR  
Emerging perspectives of the field theory of argument, constructivist approaches, cognitive approaches, against traditional models of argumentation. Permission of Instructor.  
PREREQ: CRS 334.

### CRS 546 Seminar in Legal Communication 3 IR

Legal communication as it defines a field-dependent context for argumentation. Variables which inform legal argument from the field of communication including nonverbal, language, role, and environmental influences. Permission of instructor

### CRS 551 History of British Public Address 3 IR

Public address as an influence in the political, legal, social, and religious history of England. Permission of instructor

CRS 552 History of Rhetorical Theory 3 IR  
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 3 IR  
Public address as an influence in the political, social, legal, and religious history of America. Permission of instructor

CRS 567 Rhetoric and Philosophy 3 IR  
Examines the quarrel between philosophy and rhetoric and the way it has affected the development of Western thought. Permission of instructor

CRS 568 Rhetoric of Social Change 3 IR  
Through a critical examination of public discourses, the student's critical understanding of the scope and function of rhetoric will be enhanced. Permission of instructor

CRS 600 Selected Topics in Communication and Rhetorical Studies 1-3 SI  
Selected topics that vary each semester. R

CRS 601 Proseminar in Communication 3 Y  
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 3 Y  
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 3 Y  
British, American, and Continental rhetorical thought in 19th and 20th centuries.

CRS 604 Qualitative Communication Research Methods 3 Y  
A survey of qualitative research methods including logic, philosophy, innovations, and controversies in these methods.

CRS 605 Communication and Cosmopolitan Studies 3 Y  
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 3 SI  
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 3 IR  
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 3 Y  
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 624 Business Communication 1.5  
Communication skills for oral presentations including effective public speaking, group presentation, committee reports, and critical assessments.

CRS 625 Oral Communication Skills for Engineers 3  
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 3 SI  
Theories formulated by medieval and modern rhetoricians. Decay of classical tradition in the Middle Ages. The Renaissance.

CRS 627 Speech writing 3 Y  
Double Numbered with: CRS 327  
Principles and practices of writing ceremonial and persuasive speeches for clients.

CRS 630 Intercultural Communication 3 Y  
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) 3  
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 3 Y  
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 670 Experience Credit 1-6 SI  
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 3 Y  
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 1-6 SI  
Guided independent reading, performance, and/or direction geared to interest and development of individual student. Permission of instructor R5, 6 credits maximum

CRS 744 African American Rhetorics 3 E  
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 3 SI  
Analyzing research studies; conducting a study to develop a methodology for graduate theses.

CRS 746 Queer Rhetorics 3 E  
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 3 SI  
Analysis and criticism of contemporary research in principles and methods of persuasion.

CRS 835 Seminar in Discussion 3 SI  
Analysis of contemporary research in principles and methods of discussion. Permission of instructor

CRS 862 Seminar in Rhetoric and Public Address 3 SI  
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 3 Y  
Student writes a research paper on a project negotiated with a faculty member based on area of expertise.

CRS 997 Master's Thesis 6 Y

## Conducting

CTG 545 Basic Conducting 2 S  
Baton technique: beat patterns, tempo indication, preparation and release, style, dynamics, cueing and eye contact.

CTG 546 Intermediate Conducting Choral 2  
Hand techniques. Vocal music techniques. Score analysis. Warm-ups. Choral literature. Elements of ensemble performance. PREREQ: CTG 545.

CTG 548 Intermediate Conducting, Instrumental 2 Y  
Hand techniques. Instrumental music techniques. Score analysis. Warm-ups. Instrumental literature. PREREQ: CTG 545.

CTG 615 Applied Music, Conducting 2  
For graduate music students with emphasis in conducting.

CTG 616 Applied Music, Conducting 2  
For graduate music students with emphasis in conducting.

CTG 640 Advanced Conducting 2 SI  
For advanced students whose technical knowledge and musical scholarship is established.

CTG 715 Applied Music, Conducting 2  
For graduate music students with emphasis in conducting.

CTG 716 Applied Music, Conducting 2  
For graduate music students with emphasis in conducting.

## Double Bass

DBS 540 Double Bass/Non Mus Major 1-4 S  
For non-music students.

DBS 545 Double Bass/Music Majors 1-4 S  
For music students.

DBS 546 Double Bass/Music Majors 1-4 S  
For music students.

DBS 645 Double Bass/Music Majors 1-6 S  
For performance majors.

DBS 646 Double Bass/Music Majors 1-6 S  
For performance majors.

DBS 745 Double Bass/Music Majors 1-6 S  
For performance majors.

DBS 746 Double Bass/Music Majors 1-6 S  
For performance majors.

## Design

DES 561 Furniture and Light Workshop 3 Y  
Design and development of experimental furniture and light fixtures. Experiences in prototype construction and industrial production methods.

DES 562 Advanced Detailing and Construction 3 Y  
Advance detailing and construction techniques, documentation, shop drawings, computer-aided construction methods for fabrication.

DES 601 Design Thinking and Strategies 3 SS

Introduction to design thinking as primary mode of solving problems to arrive at creative and alternative solutions.

DES 602 Design Reading & Writing 3 S  
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 3 S  
Double Numbered with: DES 305

Explores the capabilities of industry-standard design software to develop and preflight multi-page 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 3 S  
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.

DES 607 Digital Design Techniques III 3 S  
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 3 Y

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 3 Y

Double Numbered with: DES 342  
Introduction to computer generation construction techniques for design fabrication. Additional work required of graduate students.

DES 647 Design Research 3 Y

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 3 SS

Introduction to the processes and techniques of design communication and presentation including both computer generated and manual applications.

DES 652 Branding and Marketing Works 3 Y

Double Numbered with: DES 452  
Interdisciplinary design studio focused on branding and marketing. Additional work required of graduate students.

DES 672 Introductory Design Studio 3 SS

Introduction to design processes and the application of design thinking, language, and methods to introductory level projects.

DES 748 Design Communication 3 Y

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 3 Y

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 6 Y

Developing and completing a comprehensive design project, including essential illustrations, technical drawings, models, and prototypes.

DES 996 Final Presentation 6 Y

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, 772.

## Drama

DRA 515 Play Analysis and Introduction to Mise-en-Scène 3 Y

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 0-3 S  
Problems in characterization, period, and language posed by masterworks of prose drama. Scenes from Ibsen, Chekhov, Shaw, etc.

DRA 521 Acting Workshop (London) 3 S  
Training sessions with British adjunct teachers in areas of skills and technique not available on the Syracuse campus. Each teacher offers several sessions in a special area.

DRA 522 Acting Workshop (London) 3 S  
Training sessions with British adjunct teachers in areas of skills and technique not available on the Syracuse campus. Each teacher offers several sessions in a special area.

DRA 523 Audition Technique 3 S  
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. R1, 6 credits maximum

DRA 524 Acting: Drama in the Elizabethan and jRomantic Modes 0-3 Y  
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. R3, 12 credits maximum

DRA 525 Acting: Drama in Classic and Classicist Mode 0-3 Y  
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. R3, 12 credits maximum

DRA 526 Acting: Drama in the Naturalistic Mode 0-3 Y  
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. R3, 12 credits maximum

DRA 527 Dialects 3 IR  
Standard foreign dialects for dramatic purposes using phonograph records and phonetic transcriptions of foreign dialects. Permission of instructor.

DRA 528 Dialects Workshop 3 IR  
Continuation of DRA 527.  
PREREQ: DRA 527.

DRA 529 Acting for the Frame 3 Y  
Acquisition and development of specialist screen acting skills. Techniques are explored and practiced extensively in front of the camera. Offered only in London. Admission to the London Drama Program by permission of department chair.  
PREREQ: DRA 355 AND 356.

DRA 530 Advanced Actors Workshop 3 S  
Scene study. Selection by audition and interview. R3, 15 credits maximum

DRA 531 Introduction to Directing 3 Y  
Basic directing theory and practice. Projects and exercises in fundamental directing skills. Permission of instructor.  
PREREQ: (DRA 105 AND 106) OR (DRA 125 AND 126) AND DRA 515.

DRA 532 Directing: Special Problems 3 Y  
Specific area of directing selected by the department and announced before registration. Direction of assigned scenes with actors from DRA 320. May be repeated for credit, if problems differ.  
PREREQ: DRA 515. R

DRA 539 Directors' Workshop 3 S  
Increasing conceptual skills and rehearsal techniques by directing assigned materials under close faculty supervision. Selection by interview.

DRA 540 Theater Dance Repertory 1-2  
Studio study of significant choreography from the musical theater repertoire. Emphasizing technical accuracy, stylistic integrity, and performance quality. Permission of instructor  
PREREQ: DRA 126.

DRA 550 Professional Practices 3 Y  
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 3 IR  
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 3 SI  
Development of American theater from colonial origins to present. Emergence of a distinctive national tradition.

DRA 560 Music Theater Production 0-3 S  
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. R

DRA 561 Music and Shakespeare 3-4  
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 575 Choreography/Musical Stage 1 SI  
Improvisation and basic rules of dance composition to familiarize future directors and choreographers with dance production in musical theater. Dance films, contributions of important choreographers. Weekly and semester group and solo assignments.

DRA 576 Choreography/Musical Stage 1 SI  
Improvisation and basic rules of dance composition to familiarize future directors and choreographers with dance production in musical theater. Dance films, contributions of important choreographers. Weekly and semester group and solo assignments.

DRA 581 Intro to Playwriting 3 SI  
Structure, characterization, dialogue. Practice in writing the short play.  
PREREQ: DRA 315 OR 515.

DRA 582 Play Writing 3 SI  
Continuation of DRA 581.  
PREREQ: DRA 581.

DRA 585 Creative Dramatics 0-3 IR  
Theater activities for young children and adolescents in educational and community settings. Readings, discussion, practice, and supervised field experience in theater games, improvisation, and play-making techniques.

DRA 586 Creative Dramatics 0-3 IR  
Theater activities for young children and adolescents in educational and community settings. Readings, discussion, practice, and supervised field experience in theater games, improvisation, and play-making techniques.  
PREREQ: DRA 585.

DRA 591 Development of the Full-Length Play 3 Y  
Building on principles learned in DRA 391 and 392, student playwrights will investigate genre, structure, magnitude and voice in developing the full-length play.  
PREREQ: DRA 392.

DRA 592 Writing and Revising the Full-Length Play 3 Y  
Building on the knowledge and skills developed in DRA 391, 392, and 591 students will complete and revise a fully realized standard length play.  
PREREQ: DRA 591.

DRA 600 Selected Topics 1-3 SI  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester.

DRA 620 Graduate Scene Study II 0-3 SI  
Problems in acting the classic repertoire, especially masterworks of poetic drama. Assignments selected from Shakespeare and other Elizabethans, French neoclassical tragedy and comedy, and more modern works presenting similar problems. R

DRA 622 Interp Shakespeare/Perform 3 SI  
An intensive study of tonal qualities and motivation in three of Shakespeare's plays as well as discriminating oral interpretation of passages from these plays.  
PREREQ: DRA 225.

DRA 631 Advanced Directing 3 SI  
Seminar and practicum. Reading, discussion in directorial concepts, and rehearsal methods. Class discussion and criticism of assigned scenes.  
PREREQ: DRA 531.

DRA 632 Advanced Directing 3 SI  
Continuation of DRA 631.  
PREREQ: DRA 631.

DRA 633 Adaptation and Performance of Nondramatic Literature 3 SI  
Aesthetics and techniques of interpreting drama and nondramatic literature through staged group reading. Permission of instructor

DRA 639 Projects in Directing 1-6 SI  
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 3 SI  
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. R

DRA 652 Graduate Seminars in Modern Theater and Drama 3 SI  
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. R

DRA 655 Dramatic Criticism 3 SI  
Representative forms and exponents of dramatic criticism from major periods of dramatic history. Permission of instructor.

DRA 656 Dramatic Criticism 3 SI  
Representative forms and exponents of dramatic criticism from major periods of dramatic history. Permission of instructor.

DRA 660 Music Theater Practicum 1-3 SI  
Individual coaching in performance techniques. Student-proposed projects in directing and other areas related to musical productions. Permission of instructor.

DRA 670 Experience Credit 1-6 SI  
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 1-6 SI  
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Permission of instructor. R

DRA 710 Graduate Readings 1-6 SI  
R

DRA 715 Seminar in Mise-en-Scène 3 SI  
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, 651, 652, 515, 531.

DRA 996 Graduate Research Project(s) 1-6 SI  
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 into relevant philosophic and historical perspectives and their use in forming production concepts and resultant performance(s). Required of all M.F.A. candidates. R

### Design/Technical Theater

DRD 501 Design for Directors 3 Y  
Basic theory and techniques of design for the stage. Communicating ideas to designers and vice versa. Required of all students in directing.  
PREREQ: DRA 355 AND 356 AND 515 AND 531.

DRD 541 Prjcts/Tech'L Practice 3 S  
Solution of advanced problems in all phases of technical practice, fitted to the needs of the individual student as far as possible. Permission of instructor.

DRD 542 Prjcts/Tech'L Practice 3 SI  
Continuation of DRD 541. Permission of department.  
PREREQ: DRD 541.

DRD 555 Evolution of Stage Design 3 Y  
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.

DRD 599 Internship in Theatrical Design, Technology, or Management 3-9 SI  
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 2 SI  
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 2 Y  
Problems and practices in the procuring or design and construction of stage properties, supervised by Syracuse Stage professional staff. Permission of instructor.

DRD 627 Advanced Practicum in Costume Construction 2 SI  
Problems and practice in costume construction for production, supervised by Syracuse Stage professional staff and faculty advisor. Permission of instructor.

DRD 631 Stage Lighting I 3 Y  
Double Numbered with: DRD 331  
Elementary physics of lighting and electricity. Lighting instruments and controls. Function of theatrical lighting. Outstanding lighting designs of past and current productions. Students design complete light plots.

DRD 632 Stage Lighting II 3 Y  
Double Numbered with: DRD 332  
Continuation of DRD 631/331. Required of all majors in design/technical theater, and graduate students in stage design.  
PREREQ: DRD 631/331.

DRD 637 Advanced Practicum in Stage Lighting 2 SI  
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 2 SI  
Problems and practice in theater sound for production, supervised by Syracuse Stage professional staff and faculty advisor. Permission of instructor.

DRD 641 Advanced Projects in Design and Technical Theater 3-6 SI  
Individual projects in design of sets, lights, or costumes for actual production, assigned and supervised by faculty advisor. Permission of instructor. R

DRD 692 Production Management 3 Y  
The role of the production manager in the process of producing a theatrical season and administering a production department. Student will develop a mock seasonal production plan as a final project.  
PREREQ: DRD 251, 340, 450.

DRD 711 Scene Design III 3 Y  
Double Numbered with: DRD 411  
Individual problems in scene design. At least three completely designed plays prepared as if for actual production.  
PREREQ: DRD 612/312.

DRD 721 Theatr'l Cost. Des. III 3 Y  
Double Numbered with: DRD 421  
Advanced studio problems in theatrical  
costume design.  
PREREQ: DRD 622/322.

### Drama Management

DRM 640 Stage Management Rehearsal  
Techniques 2 Y  
Double Numbered with: DRM 340  
Exploration of techniques used by stage  
manager in rehearsal process. Topics include  
technical script analysis, blocking, prompting,  
scheduling, and effective use of assistants.  
Additional work required of graduate students.

### Drawing

DRW 503 Drawing and Painting for Non-  
Art Majors 1-3 S  
Crosslisted with: PTG 503  
Fundamental concepts and techniques of  
painting and drawing.

DRW 504 Drawing and Painting for Non-  
Art Majors 1-3 S  
Crosslisted with: PTG 504  
Fundamental concepts and techniques of  
painting and drawing.

DRW 555 Drawing Research 1-6 S  
Crosslisted with: PTG 555  
Drawing as an expression and creative art  
form.  
PREREQ: PTG 455 AND 456.

DRW 650 Drawing, Graduate 1-12 S  
Crosslisted with: PTG 650  
Drawing as self-contained expression through  
contemporary and historical investigation of  
materials and techniques.

### Environmental Arts

ENA 627 Field Study in Clothing and  
Textiles: Design, Construction, and  
Distribution 3 IR  
Study in selected countries of specialized areas  
in design, construction, and distribution of  
clothing and textiles. Aspects of applicable  
cultural history. Lectures by authorities in  
each area visited.

ENA 628 Principles of Clothing Design:  
Draping and Flat Pattern 3 IR  
Special problems in draping and flat patterns.

ENA 637 Costume in Contemporary  
Society 3 IR  
Twentieth-century clothing forms: origins,  
evolution, current modes. Fashion and style as  
reflections of contemporary cultural trends  
and attitudes.

ENA 660 Readings in Environmental Arts  
1-4 S  
Permission of Instructor. R

ENA 670 Experience Credit 0-6 S  
Participation in a discipline- or subject-related  
experience. Students must be evaluated by  
written or oral reports or an examination.  
Limited to those in good academic standing. R

ENA 690 Independent Study 1-6 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. R

ENA 897 Graduate Project 0-6 S  
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 0-6 S  
R

### Ensemble (Chamber Music)

ENC 510 Chamber Music Mixed 0-1 S  
R7, 8 credits maximum

ENC 520 Chamber Music/Piana 0-1 S  
R7, 8 credits maximum

ENC 530 Chamber Music/Strings 0-1 S  
R7, 8 credits maximum

ENC 540 Chamber Music/Woodwinds 0-1  
S  
R7, 8 credits maximum

ENC 550 Chamber Music/Brass 0-1 S  
R7, 8 credits maximum

ENC 560 Chamber Music/Percussion 0-1  
S  
R, 8 credits maximum

### Ensemble (Instrumental)

ENI 510 Large Bands 0-1 S  
R7, 8 credits maximum

ENI 520 Small Bands 0-1 S  
R7, 8 credits maximum

ENI 530 Reading Band 0-1 IR  
R7, 8 credits maximum

ENI 540 University Orchestra 0-1 S  
R7, 8 credits maximum

ENI 550 Small Orchestra 0-1 IR  
R7, 8 credits maximum

ENI 560 Reading Orchestra 0-1 IR  
R7, 8 credits maximum

### Ensemble (Vocal)

ENV 510 Large Chorus 0-1 S  
R7, 8 credits maximum

ENV 520 Small Chorus 0-1 S  
R7, 8 credits maximum

ENV 530 Reading Chorus 0-1 IR  
R7, 8 credits maximum

ENV 540 Hendricks Chapel Choir 0-1 S  
R7, 8 credits maximum

### Euphonium

EUP 530 Euphonium Instruction 1-4 S  
For non-music students. R

EUP 535 Euphonium Instruction 1-4 S  
For music students.

EUP 536 Euphonium Instruction 1-4 S  
For music students.

EUP 635 Euphonium Instruction 1-6 S  
For performance majors.

EUP 636 Euphonium Instruction 1-6 S  
For performance majors.

EUP 735 Euphonium Instruction 1-6 S  
For performance majors.

EUP 736 Euphonium Instruction 1-6 S  
For performance majors.

### Fashion Design

FAS 526 Cultural Aspects of Clothing 3  
IR  
Global cultures; how dress and adornment  
enhance understanding of these cultures.

FAS 530 Problems in Environmental Arts  
3 IR  
Research in design, color, historic backgrounds  
applied to costume. Permission of Instructor.  
R

### French Horn

FHN 520 French Horn Instruction 1-4 S  
For non-music students.

FHN 525 French Horn Instruction 1-4 S  
For music students.

FHN 526 French Horn Instruction 1-4 S  
For music students.

FHN 625 French Horn Instruction 1-6 S  
For performance majors.

FHN 626 French Horn Instruction 1-6 S  
For performance majors.

FHN 725 French Horn Instruction 1-6 S  
For performance majors.

FHN 726 French Horn Instruction 1-6 S  
For performance majors.

## Fiber Arts

FIB 520 Fiber Arts Research Problems for  
Nonmajors 1-12 Y  
For nonmajor graduate students. Individual  
projects undertaken with the instructor's  
consultation and guidance. R

FIB 620 Fiber Arts Research Problems 1-  
12 Y  
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. R

FIB 720 Fiber Arts Research Problems 1-  
12 Y  
Continuation of FIB 620.

FIB 996 Final Presentation 3 S  
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 0-6 S  
Formal master's thesis. Written document  
exhibiting substantive and original research.  
Planned under direction of major departmental  
advisor.

## Film

FIL 520 Film Studies Seminar 3 S  
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 523 Cinema Acting&Directing 3 Y  
Exercises in filming fictional dramatic scripts.  
Required of B.F.A. acting students and all film  
drama directors.

FIL 527 Critical Problems Film&Video 3  
IR  
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 0-  
6 SI  
First-year graduate filmmaking. Required of all  
M.F.A. film candidates. Meets weekly.  
Individual and group filmmaking projects.  
Permission of Instructor.

FIL 623 Film Script Writing 3 SI  
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 3 SI  
Individual and group graduate research projects  
in topics of film theory and criticism.  
Permission of Instructor.

FIL 626 Problems of Film Perception 3 SI  
Additional graduate research in topics of film  
theory. Required of all M.F.A. candidates.  
PREREQ: FIL 625.

FIL 720 Filmmaking:Graduate Project 0-  
6 S  
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 3 Y

FIL 726 Film Theory: Topics 3 Y

FIL 996 Final Presentation 3 S  
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 0-6 S  
Formal master's thesis. Written document  
exhibiting substantive and original research.  
Planned under direction of major departmental  
advisor.

## Flute

FLT 510 Flute Instruction 1-4 S  
For non-music students.

FLT 515 Flute Instruction 1-4 S  
For music students.

FLT 516 Flute Instruction 1-4 S  
For music students.

FLT 615 Flute Instruction 1-6 S  
For performance majors.

FLT 616 Flute/Music Majors 1-4 S

FLT 715 Flute Instruction 1-6 S  
For performance majors.

FLT 716 Flute Instruction 1-6 S  
For performance majors.

## Fashion Illustration

FSH 570 Fashn Illustratn Res Prob 3 SI  
Individual development in specialized areas of  
fashion illustration.  
PREREQ: FSH 471.

## Guitar

GTR 521 Survey of Classical Guitar  
History and Literature 3 O  
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 3

GTR 523 Transcribing and Arranging for  
Classical Guitar 3

GTR 524 Classical Guitar Pedagogy 3

GTR 560 Classical Guitar Instruction 1-4  
S  
For non-music students.

GTR 565 Classical Guitar Instruction 1-4  
S  
For music students.

GTR 566 Classical Guitar Instruction 1-4  
S  
For music students.

GTR 665 Classical Guitar Instruction 1-4  
S  
For performance majors.

GTR 666 Classical Guitar Instruction 1-4  
S  
For performance majors.

### GTR 671 Classical Guitar Performance Seminar 0

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 0

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 1-4 S  
For performance majors.

GTR 766 Classical Guitar Instruction 1-4 S  
For performance majors.

### GTR 771 Classical Guitar Performance Seminar 0

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 0

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.

## Harpsichord

HPD 530 Harpsichord Instruction 1-4 S  
For non-music students.

HPD 535 Harpsichord Instruction 1-4 S  
For music students.

HPD 536 Harpsichord Instruction 1-4 S  
For music students.

## Harp

HRP 550 Harp Instruction 1-4 S  
For non-music students.

HRP 555 Harp Instruction 1-4 S  
For music students.

HRP 556 Harp Instruction 1-4 S  
For music students.

HRP 655 Harp Instruction 1-6 S  
For music majors.

HRP 656 Harp Instruction 1-6 S  
For music majors.

HRP 755 Harp Instruction 1-6 S  
For music majors.

HRP 756 Harp Instruction 1-6 S  
For music majors.

## Illustration

ILL 561 Illustration Concept 3 Y  
Visiting faculty. The creative process, working procedures from concept to finish, and relationship between illustrator and client. Studio assignments.  
PREREQ: ILL 361 AND 362.

ILL 562 Illustration Concept 3 Y  
Visiting faculty. The creative process, working procedures from concept to finish, and relationship between illustrator and client. Studio assignments.  
PREREQ: ILL 361 AND 362.

ILL 565 Electronic Illustration 3 S  
Double Numbered with: ILL 365  
Exploration of contemporary aspects of computer applications to visual problem solving in electronic, film, and print communications as they apply to the field of illustration.  
PREREQ: ILL 261 AND 283.

ILL 660 Illustration Research Problems 1-18 SI  
Research into application of illustration.

ILL 760 Illustration Communication 1-12 SI  
Historical and contemporary aspects of illustration as they relate to the communication process.  
PREREQ: ILL 660.

ILL 996 Final Presentation 3 S  
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 0-6 S  
Formal master's thesis. Written document exhibiting substantive and original research. Planned under direction of major departmental advisor.

## Industrial Design

IND 571 Industrial Design: Product Practicum 3 Y  
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 472 AND 476; COREQ: IND 573 AND (IND 577 OR 578).

IND 572 Industrial Design: Advanced Problems 3 Y  
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 573 AND (IND 577 OR 578); COREQ: IND 574.

IND 573 Industrial Design: Thesis Research 3 Y  
Comprehensive design document showing both critical and creative thinking. Both written and visual information are stressed in the final product.  
PREREQ: IND 472 AND 476; COREQ: IND 571 AND (IND 577 OR 578).

IND 574 Industrial Design: Thesis 6 Y  
Research, analysis, and solution of a major design problem selected by the student to further his or her professional career.  
PREREQ: IND 571 AND 573 AND (IND 577 OR 578); COREQ: IND 572.

IND 577 Industrial Design: Philosophy and Ethics 3 Y  
Historical perspective. Contemporary position and responsibilities of the industrial designer in a technological/electronic society. Interplay with associated disciplines.  
PREREQ: IND 472.

**IND 578 Industrial Design: Professional Practices 3 Y**

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.  
PREREQ: IND 472.

**IND 671 Design Information Research 1-12 Y**

Acquisition of available information and academic resources as the basis for a design project or thesis.

**IND 672 Basic Data Research 1-12 Y**

Systematic investigations using conceptual and/or physical models.

**IND 673 Human Factors For Designers 3 Y**

Double Numbered with: IND 375

Human factors, ergonomics, and anthropometric considerations in the human-product-environment relationship.

**IND 676 Digital Surface Modeling 3 Y**

Double Numbered with: IND 376

The use of three-dimensional surface modeling as visual communication. Design exploration and production tools as used to communicate intent to clients, modelers, engineers, and manufacturers.

**IND 679 Industrial Design Interface 3 S**

Double Numbered with: IND 479

Development of time-based interactions promoting expanding paradigms, better understanding, greater productivity, and ease of use through the use of adaptive interfaces. Additional work required of graduate students.

**IND 996 Final Presentation 3 Y**

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 0-6 Y**

Formal master's thesis. Written document exhibiting substantive and original research. Planned under direction of departmental thesis advisor.

**Interior Design**

**ISD 553 Interior Design: Philosophy and Research 3 Y**

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 1-12 SI**

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. R

**ISD 648 Design Analysis 1-12 Y**

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 3 Y**

Focus on a specific category of environmental design: residential, commercial, hospitality, institutional, retail, and health care for the purpose of development of expertise in focus area.

PREREQ: ISD 352.

**ISD 654 Advanced Detailing and Construction 3 Y**

Advance detailing and construction techniques, documentation, shop drawings, computer-aided construction methods for fabrication.

PREREQ: ISD 653/ 453.

**ISD 747 Design Synthesis 1-12 Y**

Development of two- or three-dimensional interior design solutions to the thesis problem with accompanying original research and testing documentation.

PREREQ: ISD 648.

**Jewelry And Metalsmithing**

**JAM 600 Selected Topics 1-3 SI**

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

**JAM 620 Jewelry and Metalsmithing Research Problems 1-12 S**

Involves student in program of personal creative research in jewelry and metalsmithing. Broadens technical background and applies experience in jewelry and metalsmithing to individual visual issues and critical thinking. R

**JAM 671 History of Jewelry and Metalsmithing 3 E**

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 3 E**

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 1-9 S**

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. R

**JAM 996 Final Presentation 3 S**

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 1-6 S**

Formal master's thesis. Written document exhibiting substantive and original research. Planned under direction of major departmental advisor.

**Music History And Literature**

**MHL 500 Selected Topics 1-3 SI**

Selected aspect of music history or literature. Content and method of instruction may vary for each workshop. R

**MHL 525 Survey of Keyboard Literature: 1650 to 1850 3 O**

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 3 O

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 2

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 2 Y

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 3 O

For pianists and singers. Historical survey of art song repertoire through performance, listening, and research.  
PREREQ: MHL 545.

MHL 548 Instrumental Literature 3 E

For pianists and instrumentalists. Historical survey of major chamber music repertoire through performance, listening, and research.  
PREREQ: MHL 545.

MHL 557 Survey of Choral Literature I 2 O

A survey of predominantly western sacred choral literature from the Renaissance to present, focusing on masses, requiems, motets and anthems.  
PREREQ: MHL 266.

MHL 558 Survey of Choral Literature II 2 O

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 266.

MHL 566 Topics in Music Literature and Analysis 3 Y

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. R2, 12 credits maximum

MHL 567 Choral Literature 2 IR

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 2-3 Y

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 3 IR

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 1-6 SI

Preparation of a project paper under guidance of a member of the appropriate faculty, who introduces student to tools of research. Presented for reading and grading to a group of three faculty, one of whom is the advisor. R

MHL 664 History of American Popular Music 3 Y

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 666 History of Jazz 3 Y

Chrono- logical survey of the roots of jazz through the present. Open to all graduate students.

MHL 671 Weekly Student Convocation Graduate 0 Y

MHL 672 Weekly Student Convocation Graduate 0 Y

MHL 771 Weekly Student Convocation Graduate 0 Y

MHL 772 Weekly Student Convocation Graduate 0 Y

## Music Theory

MTC 500 Workshop In Music Theory 1-3 SI

Selected aspect of music theory. Content and method of instruction may vary for each workshop. R1, 6 credits maximum

MTC 535 Orchestration 3 O

Scoring for individual instruments and small ensembles. Analysis of selected instrumental compositions.  
PREREQ: MTC 246.

MTC 540 Survey of Basic Theory 1-3 Y

Review of music fundamentals, tonal harmony, and aural skills. Entering graduate students failing written portion of theory diagnostic exam attend classes on fundamentals and harmony. Those failing aural skills portion attend ear training classes. Passing this course satisfies diagnostic exam requirements. Not applicable to any degree.

MTC 545 Counterpoint 3 SI

Grounding in species counterpoint and 16th-century practice, moving into a comprehensive study of contrapuntal techniques through the 20th century.  
PREREQ: MTC 246.

MTC 546 Analysis of Contemporary Music 3 Y

Twentieth-century compositional methods, analysis of selected works. Introduction to 12-tone set theory.  
PREREQ: MTC 246.

MTC 550 Composition 1-2 S

For students not majoring in composition. Permission of instructor

MTC 551 Songwriting 3 Y

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 3 IR

Scoring and arranging for film, video, and recording. Popular genres. Miking, mixing, overdubbing, studio effects, synchronization with visual media.  
PREREQ: MTC 535.

MTC 554 Jazz Composing and Arranging 3 SI

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 1 S

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 1 S

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 1 S

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 1 S

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 3 S

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. R

MTC 562 Performing with Computers 3 IR

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 3 Y

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. R2, 12 credits maximum

MTC 590 Independent Study 1-6 SI

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 625 Evolution of Harmony 3 IR

Origins and development of harmony from organum to music of the present.

MTC 626 Evolution of Form 3 IR

Origins and development of musical forms from the period of Gregorian chants to present.

MTC 635 Advanced Orchestration 3 Y  
Contemporary techniques. Innovative forms of instrumentation and nonstandard use of instruments.

PREREQ: MTC 535, 536.

MTC 636 Advanced Orchestration 3 Y  
Contemporary techniques. Innovative forms of instrumentation and nonstandard use of instruments.

PREREQ: MTC 535, 536.

MTC 646 Advanced Tonal Analysis 3 Y  
Tonal harmony and its extensions from circa 1830 to the present. Introduction to Schenker analysis. Required of all graduate students in the School of Music.

MTC 651 Composition Seminar,  
Graduate 0 S

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 652 Composition Seminar,  
Graduate 0 S

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 655 Composition 1-2 S

Individual instruction emphasizing larger forms and works for larger ensembles.

MTC 656 Composition 1-2 S

Individual instruction emphasizing larger forms and works for larger ensembles.

MTC 657 Contemporary Techniques in Composition 2 SI

Styles of representative twentieth-century composers. Techniques through composition.

MTC 690 Independent Study 1-6 SI

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. R

MTC 746 Advanced Topics in Music Theory 3 SI

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 0 S

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 0 S

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 1-2 S  
Continuation of MTC 655,656.

MTC 756 Composition 1-2 S  
Continuation of MTC 655,656.

MTC 997 Thesis in Music Theory 0-3 SI  
R

## Music Education

MUE 510 Practicum in Children's Choir 1-3

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 3

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 2 Y  
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 1-2

Laboratory in guitar, emphasizing performance techniques, care of instrument, acoustical considerations, elementary ensemble performance, and practical demonstration of methods and materials for individual/group instruction. Upper division status or permission of instructor. Music majors only.

MUE 604 World Music and the Interdisciplinary Curriculum 3 SS  
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 1-2 S

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. R1, 2 credits maximum

MUE 611 Assessment in Music Education 1 Y

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 3

MUE 615 Introduction to Research in Music 3 Y

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 3 IR

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 2  
Double Numbered with: MUE 415

MUE 618 Current Problems in Music Education 3 Y

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 1-2 Y

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 1-2 Y

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 1-2 Y

Double Numbered with: MUE 325

Laboratory in string instruments, emphasizing performance techniques, care of instruments, acoustical considerations, elementary ensemble performance, and practical demonstrations of methods and materials for individual/group instruction. Upper-division status or permission of instructor.

MUE 626 Teaching of Brass Instruments 1-2 Y

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. R1, 4 credits maximum

MUE 627 Teaching of Woodwind Instruments I 1-2 Y

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 1-2 Y

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 1-2 Y

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 1-2 Y

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 1-6 SI  
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 1-6 SI  
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 700 Selected Topics 1-3 SI  
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 3 SI  
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 instructor.

MUE 712 Advanced Instrumental Teaching 3 SI  
Problems of instrumental training and organization relevant to bands and orchestras in schools. Instrumental music literature in terms of teaching. Musical content and how to teach it. Open to all music majors; nonmusic majors may elect with permission of instructor.

MUE 715 Administration and Supervision in Music Education 3 IR  
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 3 IR

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; non-music majors may elect with permission of instructor.

MUE 731 Mngmt in Music Teaching 1-2 Y  
Double Numbered with: MUE 431

MUE 735 Choral Rehearsal Techniques 2-3 Y  
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 2-3 Y  
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 1-6 SI  
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 1-6 SI  
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 1-6 SI  
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 1-6 S

## Music Industry

MUI 610 Soyars Leadership Lecture Series 1  
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. R7, 8 credits maximum

## Museum Studies

MUS 500 Selected Topics 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

MUS 503 Introduction to Museum Studies 3 Y  
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 3 SS  
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 3 Y  
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 1-3 IR  
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

MUS 603 Practicum I 3 Y  
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 3 Y  
Continuation of MUS 603. Students assume greater responsibility in all aspects of exhibition preparation and installation.  
PREREQ: MUS 603.

MUS 607 Collections Management 3 Y  
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 670 Experience Credit 1-6 IR  
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. R

MUS 703 Advanced Curatorship 3 Y  
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 0  
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 3 SI  
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 708 Public Learning in Museums 3 Y  
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 3 Y  
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 3 Y  
Double Numbered with: MUS 412  
Understanding philanthropy and the fundamentals of successful fundraising, articulating a case for support, building endowment, capital campaigns, special events, planned giving, corporate and foundational support, practicing stewardship, the development profession. Additional work required of graduate students.

MUS 750 Advanced Problems in Museum Studies 1-6  
Individual projects of substantial complexity addressing specific problems in the field. Permission of instructor R1, 6 credits maximum

MUS 896 Graduate Research Project 3  
Final presentation of research project accompanied by written statement and oral examination. Taken in final semester upon advisor's approval. Permission of chair

### Oboe

OBO 530 O boe Instruction 1-4 S  
For non-music students.

OBO 535 O boe Instruction 1-4 S  
For music students.

OBO 536 O boe Instruction 1-4 S  
For music students.

OBO 635 O boe Instruction 1-6 S  
For performance majors.

OBO 636 O boe Instruction 1-6 S  
For performance majors.

OBO 735 O boe Instruction 1-6 S  
For performance majors.

OBO 736 O boe Instruction 1-6 S  
For performance majors.

### Organ

ORG 510 O rgan Instruction 1-4 S  
For non-music students.

ORG 515 O rgan Instruction 1-4 S  
For music students.

ORG 516 O rgan Instruction 1-4 S  
For music students.

ORG 615 O rgan Instruction 1-6 S  
For Performance majors.

ORG 616 O rgan Instruction 1-6 S  
For Performance majors.

ORG 715 O rgan Instruction 1-6 S  
For Performance majors.

ORG 716 O rgan Instruction 1-6 S  
For Performance majors.

### Pedagogy Of Theory

PDG 519 Vocal Pedagogy 2 Y  
Voice science: structure of the vocal tract, acoustics, special equipment. Voice building: breath management, positioning of vocal tract, registration, placement, voice types, exercises. Laboratory experience. Four semesters of applied voice.

PDG 520 Piano Pedagogy Workshop 1 IR  
Philosophy and psychology in piano teaching through analysis and performance of elementary and secondary materials. Music by recognized composers.

PDG 527 Piano Pedagogy 2 IR  
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 1-2 IR  
Principles, methods, and problems associated with teaching string instruments to young people individually and in groups. R

PDG 538 Violin Pedagogy 1 IR  
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 3 Y  
Teaching of music theory. Various standard texts. Contemporary trends. Supervised teaching at freshman and sophomore levels.

### Performance Recital

PER 994 Graduate Recital I 0-1 S  
Solo recital required of all matriculated students in M.Mus. program with performance major.

PER 995 Graduate Recital II 0-1 S  
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 0-1 S  
Lecture demonstration recital on topic appropriate to the candidate's major area of specialization.

## Piano

PNO 520 Performance Honors in Piano 1-4 S

For non-music students.

PNO 525 Piano Instruction 1-4 S

For music students.

PNO 526 Piano Instruction 1-4 S

For music students.

PNO 625 Piano Instruction 1-6 S

For performance majors.

PNO 626 Piano Instruction 1-6 S

For performance majors.

PNO 725 Piano Instruction 1-6 S

For performance majors.

PNO 726 Piano Instruction 1-6 S

For performance majors.

## Percussion

PRC 510 Percussion Instruction 1-4 S

For non-music students.

PRC 515 Percussion Instruction 1-4 S

For music students.

PRC 516 Percussion Instruction 1-4 S

For music students.

PRC 615 Percussion Instruction 1-6 S

For performance majors.

PRC 616 Percussion Instruction 1-6 S

For performance majors.

PRC 715 Percussion Instruction 1-6 S

For performance majors.

PRC 716 Percussion Instruction 1-6 S

For performance majors.

## Printmaking

PRT 551 Hand Papermaking Workshop 3 Y

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 3 Y

Continued investigation in hand papermaking, simple bookbinding, and letterpress printing.

PRT 650 Printmaking Research Problems 1-12 S

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 R

PRT 750 Printmaking Research Problems 1-12 S

Continuation of PRT 650. R

PRT 996 Final Presentation 3 S

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 0-6 S

Formal master's thesis. Written document exhibiting substantive and original research. Planned under direction of major departmental advisor.

## Painting

PTG 503 Drawing and Painting for Non-Art Majors 1-3 S

Crosslisted with: DRW 503

Fundamental concepts and techniques of painting and drawing.

PTG 504 Drawing and Painting for Non-Art Majors 1-3 S

Crosslisted with: DRW 504

Fundamental concepts and techniques of painting and drawing.

PTG 555 Drawing Research 1-6 S

Crosslisted with: DRW 555

Drawing as an expression and creative art form.

PREREQ: PTG 455 AND 456.

PTG 582 Painting Research 1-6 S

Advanced research.

PREREQ: PTG 481 AND 482.

PTG 585 Painting Materials Techniques 1-3 IR

Advanced study in use of studio materials and techniques used by painters; pigments, binders, for oil paint, acrylics, polymer resins, casein, pastels, water color, egg tempera, fresco. Independent research problems are assigned.

PTG 650 Drawing, Graduate 1-12 S

Crosslisted with: DRW 650

Drawing as self-contained expression through contemporary and historical investigation of materials and techniques.

PTG 660 Painting, Graduate 1-12 S

Studio work and in-depth examination of professional practice through individual and group critiques with faculty and visiting artists. Includes scholarly investigations through readings in contemporary and historical criticism. Permission of instructor R

PTG 661 Color and Pictorial Design Research Problems 3 IR

Color focused pictorial design projects or paintings directed by student/faculty interaction and guidance. Emphasis on personal research in chromatic space and form, either two- or three-dimensional, utilizing pigments or colored light. Permission of instructor

PTG 666 Materials and Techniques Research Problems 3 IR

A program of individual technical research that delves into the diverse methods and materials of both the past and present, used in the production of two dimensional art forms. Permission of instructor

PTG 760 Painting, Graduate 1-12 S

Continuation of PTG 660.

PTG 996 Final Presentation 3 S

Final presentation accompanied by written statement, culminating in an oral examination for M.F.A. or M.I.D. degree. Taken during final semester upon advisor's approval.

PTG 997 Masters Thesis 0-6 S

Formal master's thesis. Written document exhibiting substantive and original research. Planned under direction of major departmental advisor.

## Recording And Allied Entertainment

RAE 500 Selected Topics 1-3 IR

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

RAE 601 Audio Arts Graduate Survey 3 SS

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 1 S

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. R2, 3 credits maximum

**RAE 675 Audio Arts Industry Practicum 3 SS**

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 1-6 SI**

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. R

**Recorder**

**RDR 520 Recorder Instruction 1-4 S**  
For non-music students.

**RDR 525 Recorder Instruction 1-4 S**  
For music students.

**RDR 526 Recorder Instruction 1-4 S**  
For music students.

**Sculpture**

**SCU 507 Sculpture Survey 1-9 S**  
Modeling from life, casting, composition problems.  
PREREQ: SCU 207 AND 208.

**SCU 508 Sculpture Survey 1-9 S**  
Modeling from life, casting, composition problems.  
PREREQ: SCU 207 AND 208.

**SCU 591 Wood and Mixed-Media Research 1-9 S**  
Double Numbered with: SCU 391  
Sculptural uses of wood. Lathe work, lamination, and carving. Combination of wood and other sculptural materials. Individual research in conjunction with course expectations for students taking SCU 591.

**SCU 592 Plastics Techniques Research 1-9 S**  
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 1-9 S**  
Advanced research.  
PREREQ: SCU 295 AND 296.

**SCU 660 Sculpture, Research Problems 1-12 S**

Professional problems in sculpture; advanced study in technique and theory. Development of a consistent body of work. Permission of instructor

**SCU 760 Sculpture, Research Problems 1-12 S**

Continuation of SCU 660. R

**SCU 996 Final Presentation 3 S**

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 0-6 S**

Formal master's thesis. Written document exhibiting substantive and original research. Planned under direction of major departmental advisor.

**Surface Pattern Design**

**SPD 527 Advanced Textile Printing 3**  
Individual research of advanced dyeing and printing methods.  
PREREQ: T^XT 314.

**SPD 643 Design Analysis&Synthesis I 1-12 Y**  
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 and Synthesis II 1-12 Y**  
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 3 S**  
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 0-6 S**  
Formal master's thesis. Written document exhibiting substantive and original research. Planned under direction of major departmental advisor.

**Saxophone**

**SXP 550 Saxophone/Non Music Maj 1-4 S**  
For non-music students.

**SXP 555 Saxophone/Music Majors 1-4 S**  
For music students.

**SXP 556 Saxophone/Music Majors 1-4 S**  
For music students.

**SXP 655 Saxophone/Music Majors 1-4 S**  
For performance majors.

**SXP 656 Saxophone/Music Majors 1-4 S**  
For performance majors.

**SXP 755 Saxophone/Music Majors 1-4 S**  
For performance majors.

**SXP 756 Saxophone/Music Majors 1-4 S**  
For performance majors.

**Trombone**

**TRB 540 Trombone/Non Music Majors 1-4 S**  
For non-music students.

**TRB 545 Trombone/Music Major 1-4 S**  
For music students.

**TRB 546 Trombone/Music Major 1-4 S**  
For music students.

**TRB 645 Trombone/Music Major 1-6 S**  
For performance majors.

**TRB 646 Trombone/Music Major 1-6 S**  
For performance majors.

**TRB 745 Trombone/Music Major 1-6 S**  
For performance majors.

**TRB 746 Trombone/Music Major 1-6 S**  
For performance majors.

**Transmedia**

**TRM 601 Practicing in Public 3 Y**  
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. R2, 9 credits maximum

TRM 610 Literacy, Community and Media 3

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.

### Trumpet

TRP 510 Trumpet/Non Music Majors 1-4 S  
For non-music students.

TRP 515 Trumpet/Music Major 1-6 S  
For music students.

TRP 516 Trumpet/Music Major 1-6 S  
For music students.

TRP 615 Trumpet/Music Major 1-6 S  
For performance majors.

TRP 616 Trumpet/Music Major 1-6 S  
For performance majors.

TRP 715 Trumpet/Music Major 1-6 S  
For performance majors.

TRP 716 Trumpet/Music Major 1-6 S  
For performance majors.

### Textiles

TXT 537 Advanced Computer-Aided Pattern Design 3 Y

Individual research of advanced computer-aided design methods. R1, 6 credits maximum

TXT 600 Selected Topics 1-3 IR

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. R

TXT 612 Interior Furnishings 3 Y

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 Textile Handprinting 3 Y

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 3 S

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 3 S

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 3 Y

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 3 Y

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. R1, 6 credits maximum

### Violoncello

VCO 530 Cello/Non Music Majors 1-4 S

For non-music students.

VCO 535 Cello/Music Majors 1-4 S

For music students.

VCO 536 Cello/Music Majors 1-4 S

For music students.

VCO 635 Cello/Music Majors 1-6 S

For performance majors.

VCO 636 Violoncello/Music Majors 1-6 S

For performance majors.

VCO 735 Cello/Music Majors 1-6 S

For performance majors.

VCO 736 Cello/Music Majors 1-6 S

For performance majors.

### Art Video

VID 510 Video Art History 3 Y

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 3-9 SI

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 3 Y

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 3-12 SI

Production of videotapes in the context of independent art related to concerns. Crew experience required. Directed readings, group critiques with weekly meetings. R

VID 996 Final Presentation 3 S

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 0-6 S

Formal master's thesis. Written document exhibiting substantive and original research. Planned under direction of major departmental advisor.

### Viola

VLA 520 Viola/Non Music Majors 1-4 S

For non-music students.

VLA 525 Viola/Music Majors 1-4 S

For music students.

VLA 526 Viola/Music Majors 1-4 S

For music students.

VLA 625 Viola/Music Majors 1-6 S

For performance majors.

VLA 626 Viola/Music Majors 1-6 S

For performance majors.

VLA 725 Viola/Music Majors 1-6 S

For performance majors.

VLA 726 Viola/Music Majors 1-6 S  
For performance majors.

### Violin

VLN 510 Violin/Non Music Majors 1-4 S  
For non-music students.

VLN 515 Violin/Music Major 1-4 S  
For music students.

VLN 516 Violin/Music Major 1-4 S  
For music students.

VLN 615 Violin/Music Major 1-6 S  
For performance majors.

VLN 616 Violin/Music Major 1-6 S  
For performance majors.

VLN 715 Violin/Music Major 1-6 S  
For performance majors.

VLN 716 Violin/Music Major 1-6 S  
For performance majors.

### Voice

VOC 510 Voice/Non Music Majors 1-4 S  
For non-music students.

VOC 515 Voice/Music Majors 1-4 S  
For performance majors.

VOC 516 Voice/Music Majors 1-4 S  
For performance majors.

VOC 615 Voice/Music Majors 1-6 S  
For performance majors.

VOC 616 Voice/Music Major 1-6 S  
For performance majors.

VOC 625 Grad Voc Prfrmnc Sem I 1 IR  
Weekly seminar in studio and department-wide sessions on those aspects of being a professional singer not covered in normal coursework or lessons.

VOC 626 Grad Voc Prfrmnc Sem II 1 IR  
Weekly seminar in studio and department-wide sessions on those aspects of being a professional singer not covered in normal coursework or lessons.

VOC 627 Grad Voc Prfrmnc Sem III 1 IR  
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 1 IR  
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 1-6 S  
For performance majors.

VOC 716 Voice/Music Majors 1-6 S  
For performance majors.

# Faculty

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James S. Abbott, Affiliate Artist  
B.M., University of Miami School of Music,  
1992

Recording engineering

Yasser Aggour, Assistant Professor  
M.F.A., Yale University, 1999  
Art photography

Edward Aiken, Associate Professor  
Ph.D., Northwestern University, 1981  
Art history, museum studies

Joseph Alberti, Assistant Professor  
Ph.D. University of Texas  
Voice and acting

Janet H. Ambrose, Associate Professor  
M.A., Syracuse University, 1990  
Textile design

Carol Babiracki, Associate Professor  
Ph.D., University of Illinois, 1991  
Ethnomusicology, South Asian music and  
dance, ethnic and immigrant music and dance  
in the U.S., music of the Middle East

Karen M. Bakke, Associate Professor  
M.F.A., Syracuse University, 1969  
Textile design, cultural studies

Matthew Barlow,

Kyle Bass, Adjunct  
M.F.A., Goddard College, 2006  
Playwriting, theater history

Kathleen Baum, Adjunct  
M.F.A., Syracuse University, 2000  
Movement-based theater, Meyerhold's  
Theatrical Biomechanics

Peter Beasecker, Associate Professor  
M.F.A., Alfred University, 1987  
Ceramics

Anne Beffel, Associate Professor  
M.F.A., University of Iowa, 1998  
2-D creative processes, dimensional arts

Alyssa Blount, Affiliate Artist  
M.M., Syracuse University, 2007  
Violin

David Bowman, Adjunct  
B.F.A., Syracuse University, 1993  
Lighting design, theater technology

Cornelia Brewster, Affiliate Artist  
M.M., University of Wisconsin-Madison,  
1965  
Flute

Janet Brown, Affiliate Artist  
M.Mus., Syracuse University, 1993  
Voice

Yvonne Buchanan, Assistant Professor  
B.F.A., Parsons School of Design, 1977  
Illustration

Michael Bull, Affiliate Artist  
M.M., Syracuse University, 1977  
Percussion

Don Buschmann, Adjunct  
M.A., Southwest Missouri State University,  
1977  
Advanced practicum in stage management

Richard W. Buttny, Professor  
Ph.D., University of Massachusetts, 1983  
Intercultural communication, language, and  
social interaction

Ronald Caravan, Affiliate Artist  
D.M.A., Eastman School of Music, 1980  
Saxophone, clarinet

Stephen Carlson, Associate Professor  
M.F.A., Yale University, 1976  
Dimensional arts

Donald Carr, Associate Professor  
M.F.A., Cranbrook Academy of Art, 1992  
Industrial and Interaction design

Edward Castilano, Affiliate Artist  
B.M., Eastman School of Music, 1976  
Symphonic repertory (double bass)

Bonnie Choi, Affiliate Artist  
D.M.A., University of Michigan, 1993  
Harpsichord

Gerardine M. Clark, Laura J. and L.  
Douglas Meredith Professor  
Ph.D., Indiana University, 1977  
Acting, directing, dramatic literature, play  
analysis

James Clark, Associate 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

Deborah Coble, Affiliate Artist  
M.M., University of Texas, 1974  
Flute

Felix Cochren, Assistant Professor  
Design/technical theater

Felix Cochren,

Jill Coggiola, Affiliate Artist  
D.M., Florida State University, 1994  
Music education, saxophone, flute

Michael Coldren, Affiliate Artist  
M.M., Arizona State University, 1988  
Tuba, euphonium

Diana Coles, Adjunct  
M.A., University of Missouri, Kansas City,  
1967  
Theater management

Todd Conover, Assistant Professor  
B.S., Syracuse University, 1995  
Fashion design

Robert Cooney, Associate Professor  
B.F.A., Syracuse University, 1972  
Communications design

Leo Crandall,

Stephen Cross,

Susan D'Amato, Assistant Professor  
M.F.A., University of North Carolina at  
Chapel Hill, 2000  
Drawing

Robert Dacey, Associate Professor  
B.F.A., Art Center College, Los Angeles, 1975  
Drawing, illustration

Gretchen Darrow, Adjunct  
University of Connecticut, 1995  
Costume and design technology

Timothy Davis-Reed, Professor of Practice  
B.F.A., Syracuse University, 1985  
Acting

Joshua Dekaney, Affiliate Artist  
M.Mus., University of Missouri-Kansas City,  
1998  
Drumset, Brazilian Ensemble, drumline

Anne Demo, Assistant Professor  
Ph.D., Pennsylvania State University, 2000  
Visual rhetoric, immigration rhetoric,  
rhetorical theory

Roger DeMuth, Associate Professor  
B.F.A., Rochester Institute of Technology,  
1970  
Illustration

Bill DiCosimo, Assistant Professor  
M.Mus., University of Southern California,  
1976  
Jazz studies, music industry

Gabriel DiMartino, Instructor of Trumpet  
M.M., Wichita State University, 2008  
Trumpet, Brass Choir

Emily Dittman,

Deborah Dohne, Associate Professor; Chair  
M.F.A., Ohio State University, 1990  
Dimensional arts, sculpture

Marion Yvonne Dorfer, Associate Professor  
M.F.A., Syracuse University, 1992  
Surface pattern design

Joseph Downing, Associate Professor  
D.M., Northwestern University, 1985  
Composition, music theory

Doug DuBois, Associate Professor  
M.F.A., San Francisco Art Institute, 1988  
Photography

Dennis Earle, Adjunct Professor  
M.Arch., University of Pennsylvania, 1990  
Interior design

Jonathan English, Affiliate Artist  
M.Mus., Eastman School of Music, 1984  
Voice

Bradley P. Ethington, Associate Professor,  
Chair, Setnor School of Music; Associate  
Director of Bands  
D.M.A., University of Texas at Austin, 1995  
Conducting

Andrew Fedak,

Elizabeth J. Fowler, Assistant Professor  
Ph.D., University of Minnesota, 2005  
Art history

Thomas Friedmann, Adjunct  
M.F.A., New York University, 1970 Film

Jon Garland, Affiliate Artist  
B.Mus., The Julliard School, 1995  
Horn

Mary Giehl, Adjunct  
M.F.A., Syracuse University, 1992  
Sculpture

Daniel S. Godfrey, Professor  
Ph.D., University of Iowa, 1982  
Music theory, composition

Sharon Gold, Associate Professor  
B.F.A., Pratt Institute of Technology, 1976  
Drawing, painting, art theory

Jeffrey Good,

Cynthia Gordon, Associate Professor  
Ph.D., Georgetown University, 2003  
Language and social interaction, family  
communication

Eileen Gosson, Assistant Professor  
B.F.A., Syracuse University, 1984  
Surface pattern design

Holly Greenberg, Assistant Professor  
M.F.A., The School of the Art Institute of  
Chicago, 1994  
Printmaking

Donna Smith Greene,  
B.F.A., Syracuse University, 1987  
Advertising design

Lynn Greenky, Assistant Professor  
J.D., Emory University School of Law, 1982  
Argumentation and Advocacy, Legal  
Communication

Sharon Greytak,

Diane Grimes, Associate Professor  
Ph.D., Purdue University, 1996  
Organizational communication

Bob Halligan Jr., Adjunct Instructor  
B.A., Hamilton College, 1975  
Songwriting

Jennifer Hamilton,

Heath Hanlin, Associate Professor  
M.F.A., Ohio State University, 1998  
Computer art

William Harris, Affiliate Artist  
M.M., Syracuse University, 1979  
Trombone

Andrew Havenhand, Assistant Professor  
M.F.A., Virginia Commonwealth University,  
1984  
Painting

Lucinda Kaukas Havenhand, Associate  
Professor, Chair  
Ph.D., Virginia Commonwealth University,  
2007  
Interior design, design history

Denise Heckman, Assistant Professor  
M.F.A., Cranbrook Academy of Art, 1995  
Industrial design

Dusty Herbig, Assistant Professor  
M.F.A., University of Wisconsin, Madison,  
2002  
Printmaking

Jonathan Herter, Adjunct  
B.A., SUNY Geneseo  
Sound design

Amy Giller Heyman, Affiliate Artist  
M.Mus., University of Wisconsin-Madison,  
1986  
Piano

Laura Heyman, Assistant Professor  
M.F.A., Cranbrook Academy of Art, 1998  
Photography

Steven Heyman, Affiliate Artist  
M.Mus., Julliard School of Music, 1982  
Piano

David Hicock, Adjunct  
B.F.A., Syracuse University, 1972 Film

Kenneth Hine, Associate Professor  
Art Institute of Chicago  
Communications design

Gail Hoffman, Adjunct Professor  
M.F.A., Indiana University, 1980  
2-D creative processes

Bradley Hudson, Adjunct, Exhibition  
Facilitator  
M.F.A., Kent State University, 1982  
Museum studies

Rodney S. Hudson, Assistant Professor  
M.A., University of South Dakota, 1973  
Musical theater performance, scene study

Margie Hughto, Professor  
M.F.A., Cranbrook Academy of Art, 1971  
Ceramics

Elizabeth Ingram, Assistant Professor  
London Academy of Music and Dramatic Art,  
1964  
Voice, acting, scene study

Malcolm Ingram, Associate Professor  
Central School of Speech and Drama, London,  
1963  
Voice/verse, scene study

Felix Ivanoff, Assistant Professor  
Diploma, Central School of Speech and  
Drama, London, 1963  
Voice/verse, scene study

Felix Ivanov,

Nancy B. James, Affiliate Artist  
M.M. in Vocal Coaching, New England  
Conservatory of Music, 1987  
Voice

Arthur D. Jensen, Professor  
Ph.D., University of Massachusetts, 1982  
Organizational communication, small group  
communication

Eric Johnson, Assistant Professor  
M.M., Indiana University School of Music,  
1983  
Voice, opera workshop

Kenneth M. Johnson, Assistant Professor  
Ph.D., University of Massachusetts, 1980  
Interpersonal communication, research  
methods

Fred Karpoff, Associate Professor  
D.M.A., Peabody Conservatory of Music,  
1992  
Piano, chamber music, vocal coaching

Marie Kemp, Assistant Professor  
M.F.A., M.Mus, Syracuse University, 1989  
Musical theater performance, scene study

Amos Kiewe, Professor, Chair  
Ph.D., Ohio University, 1984  
Criticism, public address, rhetoric

Adrienne Kim, Affiliate Artist  
M.Mus., Manhattan School of Music, 1992  
Piano

Alex Koziara, Associate Professor  
M.F.A., SUNY at Purchase, 1998  
Lighting and set design, CAD lab

James Krehbiel, Affiliate Artist  
B.Mus., Eastman School of Music  
Violin

Meggan C. Kulczynski, Adjunct  
M.F.A., North Carolina School of the Arts,  
2000  
Design and costume technology

Kevin Larmon, Adjunct  
B.F.A., State University of New York at  
Binghamton, 1978  
Painting

John Laverty, Professor  
Ph.D., Florida State University, 1995  
Conducting, trumpet, arranging

Mary Prichard Laverty, Adjunct Instructor  
M.L.I.S., University of Texas, Austin, 1991  
Graduate Research

Victor Lazarow, Associate Professor  
Ph.D., University of Georgia, 1978  
Acting, theater history, play analysis

Matthew "Zeke" Leonard,

Jude Lewis, Associate Professor  
M.F.A., State University of New York at  
Albany, 1989  
Sculpture, dimensional arts

David Lowenstein, Adjunct  
B.F.A., Syracuse University, 1984  
Musical theater

Holly K. Luedtke, Adjunct  
B.S., Ball State University; Scenic Art  
Internship, Juilliard School  
Scene painting

Craig MacDonald, Associate Professor  
M.F.A., Rutgers University, 1988  
Acting, scene study

Celia Madeoy,

Maria Marrero, Professor  
M.F.A., Rutgers University, 1977  
Costume and set design, stage makeup

Roderick Martinez, Assistant Professor  
M.F.A., Rochester Institute of Technology,  
1993  
Communications design

Roderick Martinez,

Jeffrey Mayer, Associate Professor  
M.A., University of Connecticut, 1989  
Fashion design

Sarah McCoubrey, Associate Professor  
M.F.A., University of Pennsylvania, 1981  
Drawing, painting

Chris McCray, Assistant Professor  
M.F.A., Rhode Island School of Design, 2008  
Industrial design

Craig McDonald,

Julia McKinstry, Affiliate Artist  
M.F.A., Carnegie Mellon University, 1981  
Voice

Judith E. Meighan, Assistant Professor  
Ph.D., Columbia University, 1997  
Art history

Justin J. Mertz, Assistant Director of Bands  
M.Mus., Syracuse University, 2003  
Ensembles, conducting, marching band  
techniques

Ken Meyer, Affiliate Artist  
D.M.A., Eastman School of Music, 2000  
Guitar

Stephen Meyer, Assistant Professor  
Ph.D., SUNY Stony Brook, 1996  
Eighteenth and 19th century music, history of  
opera

Donna Miller, Affiliate Artist  
M.M., Syracuse University, 1982  
Voice

Kathryn Miranda, Adjunct Instructor  
M.AmSAT, American Center for the  
Alexander Technique, 1990  
Alexander Technique; movement, posture, and  
breathing coordination

Kevin M. Moore, Studio Associate  
Ph.D., New York University, 1979  
Performance and theory; J.D., Syracuse  
University College of Law, 1986

Charles Morris,

Robert Moss, Adjunct  
Director, Playwrights Horizons Theatre  
School Directing

Carmel Nicoletti, Adjunct  
M.F.A., Syracuse University, 1986  
Drawing, 2-D creative processes

Ulf Oesterle, Assistant Professor  
Ph.D., Syracuse University, 2007  
Record labels, management, music technology

Olukola Owolabi, Assistant Professor,  
University Organist  
M.A., Eastman School of Music, 2007  
Organ, music theory

William Padgett, Associate Professor  
B.F.A., Washington University, 1970  
Communications design

Anna Peterson Stearns, Instructor of Oboe  
B.M. with Performer's Certificate, Eastman  
School of Music, 2007

Kendall Phillips, Professor  
Ph.D., Pennsylvania State University, 1995  
Rhetoric, American film, public sphere

Darryl Pugh, Affiliate Artist  
M.M., Eastman School of Music, 2000  
Jazz bass

Erin Rand, Assistant Professor  
Ph.D., University of Iowa, 2006  
Rhetoric, social movements, gender and queer  
theory

James Ransome, Assistant Professor  
B.F.A., Pratt Institute  
Illustration

Sarah Gillen Redmore, Assistant Professor  
B.F.A., Syracuse University, 1990  
Interior design

David M. Rezak, Affiliate Artist  
Founder and president, DMR Booking Agency  
Music industry

Joseph Riposo, Affiliate Artist  
M.M., Syracuse University, 1969  
Jazz improvisation, music education

Amaro Rodriguez, Laura J. and L. Douglass  
Meredith Professor  
Ph.D., Howard University, 1995  
Organizational communication,  
communication theory, postcolonial theory

Annina Ruest,

Julianna Maria Sabol, Associate Professor  
D.M.A., University of Cincinnati, 1992  
Voice, diction

Anthony Salatin, Associate Professor  
B.F.A., Juilliard School, 1969  
Ballet, tap, performance styles, movement

Andrew Saluti, Adjunct  
M.F.A., Louisiana State University, 2002  
Drawing

Sarah Saulson, Adjunct  
B.A., Wellesley College, 1976  
Fibers

Nicolas Scherzinger, Assistant Professor  
D.M.A., Eastman School of Music, 2001  
Composition, electronic music

Owen Shapiro, Professor  
M.F.A., Brooklyn College, 1966  
Film, media theory

Sam Sheehan, Adjunct  
Props, crafts, construction, research

Tom Sherman, Professor  
B.F.A., Eastern Michigan University, 1970  
Video, media theory

Elizabeth Shorrock,

Joanna Spitzner, Assistant Professor  
M.F.A., Ohio State University, 2001  
Time arts

Randy Steffen, Adjunct  
M.F.A., Yale University  
Technical design and production

Ludwig K. Stein, Professor  
M.F.A., Tyler School of Art, 1969  
Drawing, painting

Caroline Stinson, Affiliate Artist  
M.M., Hochschule für Musik Köln, Germany,  
2000  
Cello

Miso Suchy, Associate Professor  
M.F.A., Academy of Performing Arts,  
Bratislava, Czechoslovakia, 1990  
Film

Barbara Tagg, Affiliate Artist  
Ed.D., Syracuse University, 1997  
Music education

Kimi Takesue,

James Tapia, Associate Professor  
D.M.A., University of Texas at Austin, 1997  
Orchestral studies, conducting

John Thompson, Professor  
B.F.A., Miami University of Ohio, 1962  
Illustration, painting

Patti Thompson-Buechner, Affiliate Artist  
B.M., Curtis Institute; Diploma, Academia di  
Santa Cecilia, Rome, Italy, 1960  
Voice

Ida Tili-Trebicka, Affiliate Artist  
M.Mus., Syracuse University, 1996  
Piano, chamber music

Long-Nam To,

Toni Toland, Associate Professor  
M.F.A., Syracuse University, 1982  
Advertising design

Emily Vey Duke,

Bradford Vivian, Associate Professor  
Ph.D., Pennsylvania State University, 2001  
Rhetorical theory, public memory, continental  
philosophy

Andrew Waggoner, Associate Professor  
D.M.A., Cornell University, 1986  
Composition, music theory, music history

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

John Warren, Assistant Professor  
D.M.A., University of Miami  
University Singers, Hendricks Chapel Choir,  
conducting, choral literature

Carolyn Weber, Affiliate Artist  
M.Mus., Syracuse University, 1990  
Voice

Ruth Westervelt,

Joseph Whelan, Adjunct  
B.A., Empire State College  
Theater history

Errol Willett, Assistant Professor  
M.F.A., Pennsylvania State University, 1993  
Ceramics

Amanda Winkler, Associate Professor,  
Chair, Art and Music Histories  
Ph.D., University of Michigan, 2000  
Seventeenth century music, music in England

Jerome P. Witkin, Professor  
M.F.A., University of Pennsylvania, 1970  
Painting, drawing

Gregory Wood, Affiliate Artist  
B.M., Cincinnati College, Conservatory of  
Music, 1978  
Cello

Robert Wysocki, Assistant Professor  
M.F.A., Yale University, 1995  
Sculpture

Stephen Zaima, Professor  
M.F.A., University of California, Davis, 1971  
Painting, art theory

Ralph Zito, Chair

# University College

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Bethaida Gonzalez, Dean  
700 University Ave.  
uc.syr.edu/

## About The College

Welcome to University College (UC), the home of part-time and summer studies at Syracuse University.

UC offers credit and noncredit programs in flexible formats that allow our part-time students to build their academic schedule around their commitments at home and at work. UC's Summer@Syracuse partners with other SU schools and colleges to offer a variety of courses that meet the needs and interests of full-time, part-time, and visiting students who wish to lighten their course load or take courses they could not get into during other terms. UC's academic and community programs serve our constituents throughout their life span – from elementary school students to retired professionals, and act as a bridge between the academic purposes of the University and the interests and needs of the community. Community programs apply the knowledge and resources of higher education to enrich individual lives by studying, discussing, and making recommendations on community issues and problems. Our mission is to offer a quality education to both nontraditional and traditional students in order to help them continue their personal and professional growth, development, and career advancement. I wish you much success wherever you are in your educational journey.



## Graduate Education

### Part-Time Graduate Education at UC

If you would like to pursue a graduate degree but are unsure of the area of study, meet with a UC academic advisor to get an overview of SU programs. You will then be referred to the appropriate academic department. If you want to take SU graduate courses as a non-matriculated graduate student, you must enroll through UC.

### Important Note for Non-matriculated Graduate Students

The SU Graduate School's regulations strongly encourage anyone enrolling at the graduate level to take no more than two courses (six credits) before being admitted to a graduate program of study. There are limitations on credits completed on a non-matriculated basis that may later be applied toward a specific graduate program. Students should consult the specific academic department. If you are about to enroll for courses that will take you beyond an accumulated total of 12 graduate credits (four three-credit courses), you should (1) take immediate steps to become a matriculated degree candidate, and (2) secure written permission from the appropriate academic department to continue to take its graduate courses as a non-matriculated student.

For an application for graduate study, call 315-443-4492 or visit the web site.

## 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)

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 8-9 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](mailto: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, University-wide study clinics, 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](mailto: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 4-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, visit the web site.

## 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, visit the web site.

## Talent And Education Development Center (TEDCenter)

### Talent & Education Development Center (TEDCenter)

The TEDCenter is dedicated to improving the knowledge and capabilities of the existing and emerging workforce. The Center offers noncredit programming to build competency for career growth in the region's critical business sectors. Register for open enrollment programs or request a custom program at the TEDCenter web site.

For information call 315-443-5241 or e-mail [TEDCtr@syr.edu](mailto:TEDCtr@syr.edu).

## University College Honors

University College celebrates the accomplishments of those students who achieve extraordinary success in their studies with the following forms of recognition.

**Alpha Sigma Lambda** - Matriculated part-time candidates for the bachelor's degree may be invited to join Alpha Sigma Lambda, the national honor society for continuing education students, represented at SU by the Beta Delta chapter. To qualify, part-time students who have earned at least 24 credits, have maintained a 3.2 GPA, and are in the top 10-20% of the class may be selected as initiates.

**Dean's List** - Matriculated part-time students enrolled at University College are selected for the dean's list at the end of the fall or spring semester, if they have enrolled in consecutive semesters with a total of 12 or more credits and earned a 3.4 GPA.

**University Honors** - Students who achieve superior cumulative GPAs are eligible to receive their degree with University Honors. This honor is based on a minimum of 60 credits of letter-graded classes taken at Syracuse University.

Degree Honors            GPA Requirement

Cum laude - 3.2 for Architecture / 3.4 for all other colleges

Magna cum laude - 3.5 for Architecture / 3.6 for all other colleges

Summa cum laude - 3.8

These honors will be imprinted on transcripts and diplomas after graduation. Students should check with the office of the dean of his/her home college to determine how the GPA is calculated. Generally, physical education skills classes and ROTC credit are not included in calculating University honors. Cumulative GPA requirements for these honors must be exactly at or above those noted: no rounding off is permitted. See the current issue of Academic Rules and Regulations for a complete statement of University policies and requirements.

# Faculty

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Walter Bowler, Adjunct, Legal Studies  
J.D., Syracuse university College of Law, 1988

Daniel G. Cantone, Adjunct, Organizational  
Leadership  
J.D., Syracuse University College of Law,  
1981

Renee V. Downey, Adjunct, Organizational  
Leadership  
Ph.D., Syracuse University, 1996

Brian Keith Haynes, Adjunct, Legal Studies  
LL.M., New York University School of Law,  
1984;  
J.D., Western New England College School of  
Law, 1983

Virginia A. Leasure, Interim Director of  
Legal Studies, Adjunct, Legal Studies  
J.D., Syracuse University College of Law,  
1986

Bartholomew Murphy, Adjunct,  
Professional Studies  
B.S., University of Missouri/Columbia College,  
1981

Paula Pratt, Adjunct, Legal Studies  
M.E., SUNY Oswego

James T. Snyder, Adjunct, Legal Studies  
J.D., Albany Law School of Union University,  
1983

Marcene S. Sonneborn, Adjunct,  
Professional Studies  
M.B.A., Syracuse University, 1989

Charles M. Sprock Jr., Adjunct, l  
J.D., University of Notre Dame Law School,  
1989

# SUNY-ESF (Partner Institution)

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1 Forestry Drive, Syracuse, NY 13210  
[www.esf.edu/](http://www.esf.edu/)

## About The College

State University of New York  
College of Environmental Science and Forestry (ESF)

Cornelius B. Murphy Jr., President  
223 Bray Hall, 470-6681

S. Scott Shannon  
Associate Provost for Instruction and Dean of the Graduate School  
227 Bray Hall, 470-6599

Susan H. Sanford  
Director of Undergraduate Admissions  
218 Gateway Center, 470-6600

The State University of New York College of Environmental Science and Forestry (ESF) adjoins the Syracuse University campus and is closely associated with the University. The College is a doctoral-granting institution of the State University of New York. ESF enrolls approximately 2,350 students, including 550 at the graduate level.

The College has extensive modern laboratories, classrooms, and equipment and instrumentation. Off-campus facilities include 25,000 acres of forest land at eight locations — four in the Adirondacks, three elsewhere in New York state and one in Costa Rica, used for instruction, demonstration, and research. Two-year programs leading to the associate's degree in forest technology, surveying technology, and environmental and resources conservation are offered at The Ranger School in Wanakena, New York.

A variety of master's and doctoral programs are also available at ESF. Syracuse University juniors and seniors are invited to learn more about these programs and about ways to accelerate admission into graduate programs by inquiring at 227 Bray Hall.

ESF students have the same privileges as SU students with regard to health services and the use of dining halls, library facilities, testing services, and athletic and recreational facilities. They also share the wide range of social and cultural resources available at the University. Students at ESF and Syracuse University take courses on both campuses to enrich and complement their major programs.

## Undergraduate Programs

### ESF – Undergraduate Programs

The College offers undergraduate study in the following areas:  
Degree Programs and Areas of Study

The College is authorized to award the following undergraduate degrees. Enrollment in programs that are not registered or otherwise approved programs may jeopardize a student's eligibility for certain financial aid programs. Further descriptions and coursework requirements of the individual academic programs may be found online at [www.esf.edu/admissions/programs.htm](http://www.esf.edu/admissions/programs.htm)

Associate in Applied Science (A.A.S.)  
Environmental and Resources Conservation (HEGIS Code 5403)  
Forest Technology (HEGIS Code 5403)  
Land Surveying Technology (HEGIS Code 5309)

Bachelor of Landscape Architecture (B.L.A.)  
Landscape Architecture (HEGIS Code 0204)

Bachelor of Science (B.S.)  
Aquatic and Fisheries Science (HEGIS Code 0115)  
Bioprocess Engineering (HEGIS Code 0905)  
Biotechnology (HEGIS Code 0499)  
Chemistry (HEGIS Code 1905) with options in biochemistry and organic chemistry of natural products, environmental chemistry, or natural and synthetic polymer chemistry.  
Conservation Biology (HEGIS Code 0420)  
Construction Management (HEGIS Code 0599) with an elective concentration in sustainable construction and renewable materials.

Environmental Biology (HEGIS Code 0420)  
Environmental Education and Interpretation (HEGIS Code 0499)

Environmental Health (HEGIS Code 0420, beginning fall 2014)

Environmental Resources Engineering (HEGIS Code 0999)

Environmental Science (HEGIS Code 0420) with options in renewable energy, environmental information and mapping, watershed science, health and the environment, earth and atmospheric systems science, environmental analysis, or environmental engineering science.

Environmental Studies (HEGIS Code 0201) with options in biological science applications; environmental policy, planning and law; or environmental communication, culture and writing.

Forest Ecosystem Science (HEGIS Code 0114)

Forest Engineering (HEGIS Code 0999)

Forest Health (HEGIS Code 0114)

Forest Resources Management (HEGIS Code 0115)

Natural Resources Management (HEGIS Code 0115)

Paper Engineering (HEGIS Code 0999) with a minor in management.

Paper Science (HEGIS Code 0999) with a minor in management.

Sustainable Energy Management (HEGIS Code 0115)

Wildlife Science (HEGIS Code 0107)

Wood Products Engineering (HEGIS Code 0999)

Bachelor of Landscape 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.

## Graduate Programs

ESF Graduate Programs

The College offers graduate study in the following areas:

The College is authorized to award the following graduate degrees. Enrollment in programs that are not registered or otherwise approved programs may jeopardize a student's eligibility for certain financial aid programs. Further descriptions and coursework requirements of the individual academic programs may be found online at [www.esf.edu/graduate/acadprog.htm](http://www.esf.edu/graduate/acadprog.htm)

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.P.S.)

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.

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 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)

Forest Resources Management (HEGIS Code 0115) 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; and 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.