2017-2018
GRADUATE CATALOG

Published by
Office of Graduate Studies
4202 East Fowler Avenue, ALN226
Tampa, FL 33620-5816

813-974-2846
http://www.grad.usf.edu
### 2017-2018 USF Graduate Catalog Updates

**USF Graduate Council (GC) and/or the Office of Graduate Studies (GS) approved on the date noted.**

#### POLICY REVISIONS
- **Accelerated Majors**: revised language for clarity; sent to Undergrad Council (UGC) for agreement (approved) 11/7/16
- **Accelerated Majors**: added language to allow option with Honors College; retained GPA; sent to UGC for agreement (approved) 3/6/17
- **Admission Deadlines**: created a priority major deadline and a final University Deadline 3/6/17
- **Admissions Criteria**: clarified acceptance of graduate versus bachelor’s degree credentials and equivalency for 3-year bachelor’s 4/3/17
- **Admissions Fee**: revised language to allow application to multiple majors, based on admission to University, with only one fee 5/1/17
- **Admissions Policy**: added language to clarify priority versus University final deadlines 5/15/17
- **Continuous Enrollment**: confirmed a course with a “W” does not fulfill the requirement 9/12/16
- **Dual Degree**: revised language for dual degree to “concurrent” degrees for SACSCOC compliance – OGS Approval 5/22/17
- **Institutional Enrollment**: clarified language to reflect State requirement of admission for one semester prior to graduation 5/1/17
- **Major Professor**: reverted to previous language which specifies the “Academic Area” instead of “Department” 5/1/17
- **Time Limitations**: corrected course currency language for doctorate section 4/3/17
- **USF Regulation 3.038**: reviewed and recommended; affects curriculum terminology – resulted in “programs” changing to “majors” 4/3/17

#### CURRICULUM

**New Major**

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<th>Degree</th>
<th>Action</th>
<th>GC Approved</th>
<th>Effective Date</th>
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<tr>
<td>Cybercrime (CBRC)</td>
<td>M.S.</td>
<td>New Major under Existing CIP (45.0401)</td>
<td>5/8/17</td>
<td>Fall 2017</td>
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**Terminated Majors**

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<th>Action</th>
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<tbody>
<tr>
<td>Journalism</td>
<td>M.A.</td>
<td>Major Termination CIP 09.0401</td>
<td>1/9/17</td>
<td>Fall 2017</td>
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<tr>
<td>Engineering Science (EGC)</td>
<td>M.S.E.S.</td>
<td>Major Termination CIP 14.0101- Major (EGC) and concentrations: Chem &amp; Biomedical Eng (CHB); Electrical Eng (EE); Environmental Eng (EE); Transportation Eng (TPE)</td>
<td>1/17/17</td>
<td>Fall 2017</td>
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</tbody>
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**New Concentrations**

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<th>Concentration</th>
<th>GC Approved</th>
<th>Effective Date</th>
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</thead>
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<tr>
<td>Political Science (POL)</td>
<td>M.A.</td>
<td>Africana Studies (AFA)</td>
<td>5/8/17</td>
<td>Fall 2017</td>
</tr>
<tr>
<td>Management (MAN)</td>
<td>M.S.</td>
<td>Human Resources (HRM)</td>
<td>5/8/17</td>
<td>Fall 2017</td>
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<tr>
<td>Civil Engineering (ECE)</td>
<td>Ph.D.</td>
<td>Engineering for International Development (EFD)</td>
<td>5/15/17</td>
<td>Fall 2017</td>
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<tr>
<td>Health Informatics (HIF)</td>
<td>M.S.H.I.</td>
<td>Health Analytics (BHAP)</td>
<td>11/7/16</td>
<td>Fall 2017</td>
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<tr>
<td>Public Health (MPH)</td>
<td>M.P.H.</td>
<td>Occupational Medicine Residency (POM) Advanced</td>
<td>5/1/17</td>
<td>Fall 2017</td>
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<tr>
<td>Public Health (DPH)</td>
<td>Dr.Ph.</td>
<td>Practice Leadership in Public Health (APR)</td>
<td>5/8/17</td>
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<tr>
<td>Pharmacy (PRY)</td>
<td>Pharm.D.</td>
<td>Pharmacy and Health Education (RXHE)</td>
<td>5/8/17</td>
<td>Fall 2017</td>
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**Terminated Concentrations**

<table>
<thead>
<tr>
<th>Major</th>
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<th>Concentration</th>
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<tr>
<td>Engineering Science (EGC)</td>
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<tr>
<td>Engineering Science (EGC)</td>
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<td>Electrical Eng. (EE)</td>
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<tr>
<td>Engineering Science (EGC)</td>
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<td>Environmental Eng. (EE)</td>
<td>1/17/17</td>
<td>Spring 2017</td>
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<tr>
<td>Chemical Engineering (ECH)</td>
<td>M.S.Ch.</td>
<td>Biomedical and Biotechnology (BEB)</td>
<td>11/7/16</td>
<td>Spring 2017</td>
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<tr>
<td>Chemical Engineering (ECH)</td>
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<td>Biomedical and Biotechnology (BEB)</td>
<td>12/5/16</td>
<td>Spring 2017</td>
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<tr>
<td>Chemical Engineering (ECH)</td>
<td>Ph.D.</td>
<td>Manufacturing (MFT)</td>
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<td>Spring 2017</td>
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<tr>
<td>Mechanical Engineering (EME)</td>
<td>Ph.D.</td>
<td>Manufacturing (MFT)</td>
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<tr>
<td>Medical Sciences (MSG)</td>
<td>M.S.M.S.</td>
<td>Health Informatics (HIN)</td>
<td>11/7/16</td>
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<tr>
<td>Public Administration (MPA)</td>
<td>M.P.A.</td>
<td>Executive MPA</td>
<td>11/7/16</td>
<td>Fall 2017</td>
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<td>Public Health (MPH)</td>
<td>M.P.H.</td>
<td>Socio-Health Sciences (SHS)</td>
<td>3/6/17</td>
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<tr>
<td>Public Health (PPh)</td>
<td>Ph.D.</td>
<td>Environmental Health (EVH)</td>
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<td>Public Health (PPh)</td>
<td>Ph.D.</td>
<td>Industrial Hygiene (IH)</td>
<td>5/8/17</td>
<td>Fall 2017</td>
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<tr>
<td>Public Health (PPh)</td>
<td>Ph.D.</td>
<td>Occupational Health for Health Professionals (OHP)</td>
<td>5/8/17</td>
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<tr>
<td>Public Health (PPh)</td>
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<td>Toxicology and Risk Assessment (TRX)</td>
<td>5/8/17</td>
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**Inactivation/Reactivation for Admissions**

<table>
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<tr>
<td>Curriculum and Instruction (CUR)</td>
<td>Ph.D.</td>
<td>Early Childhood Ed (DNK) – Reactivate</td>
<td>5/1/17</td>
<td>Spring 2017</td>
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<tr>
<td>Curriculum and Instruction (CUR)</td>
<td>Ph.D.</td>
<td>Educational Psych (EPC) – Reactivate</td>
<td>5/1/17</td>
<td>Spring 2017</td>
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<tr>
<td>Curriculum and Instruction (CUR)</td>
<td>Ph.D.</td>
<td>Social Science Ed (DSO) – Reactivate</td>
<td>5/1/17</td>
<td>Spring 2017</td>
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<tr>
<td>Medical Sciences (MSG)</td>
<td>M.S.M.S.</td>
<td>Metabolic and Nutritional Medicine (MNW)</td>
<td>11/7/16</td>
<td>Spring 2017</td>
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*Questions about these updates may be directed to cdh@usf.edu in the Office of Graduate Studies*
The policies and procedures herein have been approved, as appropriate, by the USF Graduate Council Policy Committee and by the full USF Graduate Council, a Standing Committee of the Faculty Senate.

The policies, procedures, and requirements herein are applicable to students admitted to a graduate degree program or graduate certificate, and/or non-degree seeking students taking graduate coursework. Undergraduate students should refer to the Undergraduate Catalog, even if taking graduate coursework. It is the student level that dictates which publication governs, not the level of coursework.

USF Office of Graduate Studies, 4202 E. Fowler Avenue, ALN226
Tampa, FL 33620~ www.grad.usf.edu
Office of Graduate Studies Mission Statement

The mission of the Office of Graduate Studies is to serve as the center of leadership for graduate education at the University of South Florida.

Office of Graduate Studies Diversity Statement

The Office of Graduate Studies at the University of South Florida is committed to the full engagement, empowerment and encouragement of all of the members and constituents we serve; these include students, faculty, staff, academic departments, aspirants, and affiliates.

In recognizing that a university serves a diverse population, we strive not only to serve, but to lead the future in which we “stimulate, encourage and support graduate education efforts that build national distinction...” We understand that in order to realize this future, we must remain steadfast to the policies and practices that emphasize achievement, equal opportunity, trust, respect, and collaboration. Hence, equity and excellence are not merely espoused, but rather are the “lived” values that we strive for and advocate for members of the community of universities and a global workforce.

USF’s Office of Graduate Studies Administration Policy Statement

For information on the University’s Policy on the Office of Graduate Studies Administration, Refer to USF Policy 11.001, at http://regulationspolicies.usf.edu/policies-and-procedures/pdfs/policy-11-001.pdf

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This catalog is effective for the 2017-2018 academic year. This catalog includes all policies, procedures, and major and course descriptions in effect at the time of publication. USF reserves the right to repeal, change, or modify the policies, procedures, majors, and course descriptions at any time.

The University of South Florida is committed to the principles of equal education, equal access, and equal employment opportunities without regard to race, color, marital status, sex, religion, national origin, disability, age, or Vietnam or disabled veteran status as provided by law and in accordance with the University’s respect for personal dignity. These principles are applied in the conduct of University programs and activities and the provision of facilities and services.

Archives online: http://www.grad.usf.edu/catalog.php
Archived copies are available online. Paper copies are also archived at the USF Library.
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Section 1

Welcome to Graduate Studies!

A MESSAGE FROM THE PRESIDENT, DR. JUDY GENSHAFT

Thank you for your interest in graduate education at the University of South Florida System. We welcome you to explore USF’s globally recognized academic programs and the many opportunities to learn and work alongside some of the world’s most accomplished scholars, scientists and inventors. At USF, our graduate students play active and important roles in our growing national and international research success, and are part of many significant projects that contribute to our rising institutional prestige. We are proud that the USF System is first in Florida in the percent of bachelor’s and graduate degrees awarded in programs of strategic emphasis, including STEM, health, accounting and education. USF also ranks fifth among American public universities and 11th among universities worldwide in generating new U.S. patents.

Our strong interdisciplinary academic programs are coupled with a global focus to place USF on the leading edge of a number of disciplines, including the health fields and critically needed science, technology, engineering and math fields. USF continuously works to build a strong and vibrant research enterprise, which each year is recognized in the Top 10 of American public universities in producing new United States patents. Our entrepreneurial spirit encourages our graduate students to have an immediate impact with their education. For example, the Student Innovation Incubator in the USF’s Office of Research & Innovation is home to more than 24 student-led companies, and graduate students are regularly found leading hands-on projects that directly serve our community, such as environmental research, urban design, music and the arts, and public health. For those looking to link their interest in high-demand disciplines with new skills to start a business, USF has created several programs that couple a Master of Business Administration with STEM degrees.

USF offers a variety of opportunities for postgraduate study through our many Master’s and Graduate Certificate programs, many of which include online learning and are designed to prepare graduates to make immediate and relevant contributions in their professions and fields of study. We work in partnership with our region’s top international corporations, such as Nielsen, Raymond James, TechData, Jabil Circuit Corp., and Home Shopping Network to connect our talented students to these global powerhouses where they find exciting and rewarding careers.

USF is situated in the heart of one of the nation’s fastest growing and most diverse metropolitan regions, and our university is deeply connected to all aspects of the community. USF graduate students are creative, energetic and working to build a bright and successful future for themselves and their families. We look forward to being a partner in your educational, professional and personal journey.

Sincerely yours,

Judy Genshaft, Ph.D.
President
Office of the President
http://system.usf.edu/president/about-president-genshaft.asp

http://www.grad.usf.edu/
A MESSAGE FROM THE PROVOST AND EXECUTIVE VICE PRESIDENT, DR. RALPH WILCOX

As one of the nation’s best and fastest-growing research universities, the University of South Florida is attracting in ever-growing numbers many of the world’s best and brightest students, which today, as you read this, includes you. Thank you for considering USF to be your academic home as you prepare to embark on the challenging yet ultimately rewarding journey of graduate education.

It is a serious commitment, and one to which the dedicated faculty and staff at USF attach utmost importance. Our shared promise is to engage you in meaningful programs and initiatives that support the educational, health, and socio-economic wellbeing of the local, national, and global communities we all serve — efforts that embrace interdisciplinary inquiry and collaboration as the keys to success not only within our academic programs, but also in the globally interwoven world of 21st century business, communications, and culture.

At USF, we encourage students and faculty to forge real relationships that replace the more academic department-centered experience common of most other graduate schools. We believe, too, that interdisciplinary partnerships between students, faculty, and researchers across campus, in the community, and around the world strengthen both the university and the graduate student experience at USF, creating a “collaboration for competition” that often leads to new knowledge and exciting, innovative solutions to pervasive and emerging problems.

Continuing to deliver top-quality graduate programs remains a leading priority for USF as it enhances further its position as a premier research university with state, national, and global impact. The University of South Florida is a place where you can challenge yourself and focus on how you are able to contribute to your chosen discipline, your community, and the world-at-large in a meaningful and sustainable way. Whether your career aspirations are to remain in academe or to pursue professional positions in the public sector, business or industry, I am confident that your investment of time, talent, and energy as a graduate student at USF will present you with wonderful and exhilarating prospects for the future.

Ralph Wilcox

Ralph C. Wilcox, Ph.D.
Provost and Executive Vice President
www.acad.usf.edu

http://www.grad.usf.edu/
A MESSAGE FROM THE DEAN OF THE OFFICE OF GRADUATE STUDIES

It gives me great pleasure to welcome you to the University of South Florida (USF) Graduate Studies Catalogue. As you will see, we are a vibrant University providing opportunities for student success and outstanding achievement (see USF Points of Pride at http://www.usf.edu/about-usf/points-of-pride.aspx). USF has nearly 170 masters and doctoral majors, several concurrent degree options, and over 130 graduate certificates. We also have many opportunities for non-degree seeking students. At the three institutions across the USF System, we serve more than 48,000 students. Of these, over 10,000 are a geographically, demographically, socially, and disciplinarily diverse body of students pursuing their graduate education. USF has student success, research and innovation, community engagement, global literacy and impact, and integrated, interdisciplinary inquiry as its strategic priorities. Our tuition provides affordability and we also offer a number of financial aid options. We recognize that graduate students have very different responsibilities and needs, so many of our majors offer flexible day, evening, and weekend classes in addition to online course and degree program offerings.

The mission of the Office of Graduate Studies is to serve as the center of leadership for graduate education at the University of South Florida. As a graduate student at the University of South Florida, you can be proud that USF is one of the nation’s top public research universities and one of only 40 public research universities nationwide that holds both very high research and community engaged designations by the Carnegie Foundation for the Advancement of Teaching. Graduate students at USF can apply for research, teaching, and graduate assistantships, enhancing their educational experiences by putting knowledge into action. At the same time, a number of our Masters majors, as well as Graduate Certificates, offer varied opportunities for professional development and advancement. As a perusal of the Catalogue will show, there’s something for everyone!

We urge you to become the leader you are destined to be, so I personally invite each of you to learn more about graduate education at the University of South Florida. Welcome to our community of scholars and family of learners!

M. Dwayne Smith, Ph.D.

Senior Vice Provost & Dean, Office of Graduate Studies
www.grad.usf.edu

http://www.grad.usf.edu/
Section 2

About USF

The University of South Florida is a large, public 4-year university offering undergraduate, graduate, specialist and doctoral level degrees. The USF System includes three, separately accredited institutions: USF; USF St. Petersburg; and USF Sarasota-Manatee. Serving more than 49,000 students, the USF System has an annual budget of $1.6 billion and is ranked 41st in the nation for research expenditures among all universities, public or private.

USF is comprised of 14 colleges offering more than 180 undergraduate majors and concentrations—with some of the most populated colleges being USF Health, Arts & Sciences, Business and Engineering. We also have numerous degree programs at the graduate, specialist and doctoral levels, including the doctor of medicine. USF prides itself on being a high-impact global research university dedicated to student success.

USF Vision, Mission, Goals, Values, and, Accreditation


Mission
The University of South Florida's mission is to deliver competitive undergraduate, graduate, and professional programs, to generate knowledge, foster intellectual development, and ensure student success in a global environment.

Vision
The University of South Florida is a global research university dedicated to student success and positioned for membership in the Association of American Universities (AAU).

As Florida's leading metropolitan research university, USF is dedicated to:

- Student access, learning, and success through a vibrant, interdisciplinary, and learner-centered research environment incorporating a global curriculum

- Research and scientific discovery to strengthen the economy, promote civic culture and the arts, and design and build sustainable communities through the generation, dissemination, and translation of new knowledge across all academic and health-related disciplines

- Partnerships to build significant locally- and globally-integrated university-community collaborations through sound scholarly and artistic activities and technological innovation

- A sustainable economic base to support USF's continued academic advancement
Values
The University of South Florida values:

- High-quality education and excellence in teaching and learning.
- High-impact scholarship, research, and creative activities
- Diversity of students, faculty, and staff
- Affordable and accessible education
- Global research, community engagement, and public service
- Social, economic, and environmental sustainability
- Focus and discipline in aligning the budget with institutional priorities
- A campus life with broad academic, cultural, and athletic opportunities
- Success and achievement of its students, faculty, staff, and alumni
- Shared governance within all components of the institution
- Collegiality, academic freedom, and professional responsibility
- Entrepreneurial spirit, partnerships, and innovation
- Efficiency and transparent accountability
- First-class physical infrastructure and a safe campus environment

Linked Goals and Strategies
Goal 1
Well-educated and highly skilled global citizens through our continuing commitment to student success:

- Provide the highest quality, comprehensive, interdisciplinary educational programs and student research opportunities to foster critical thinking and intellectual inquiry through a variety of pedagogical and delivery methods
- Develop diverse, dynamic global citizens and leaders to strengthen communities and improve quality of life
- Enhance opportunities for all students by providing transformational learning — including an increased commitment to science, technology, engineering, and mathematics (STEM) and health fields — that is intellectually, scientifically, and technologically sound and produces relevant applied skills and engaged outcomes
- Educate competitive, highly skilled students prepared to excel in the global job market and to make meaningful and lasting contributions to society
- Deliver a globalized curriculum utilizing emerging technologies to increase accessibility and cultural understanding

Goal 2
High-impact research and innovation to change lives, improve health, and foster sustainable development and positive societal change:

- Engage in high-impact research, scholarship, and creative activities that generate new knowledge
- Increase global research opportunities and partnerships at all levels within the university
- Develop strategic interdisciplinary research initiatives that solve critical problems
- Promote community-engaged scholarship and creative activities to benefit all members of society

http://www.grad.usf.edu/
Goal 3
A highly effective, major economic engine, creating new partnerships to build a strong and sustainable future for Florida in the global economy:

- Pursue entrepreneurial endeavors and partnerships that augment revenue and maximize institutional effectiveness
- Establish mutually beneficial partnerships (internal and external) that enhance student access to academic programs, research, and employment opportunities
- Provide university stewardship that represents the cornerstone of economic and cultural significance for Florida, the nation, and beyond
- Promote a stimulating campus life through diverse academic, economic, cultural, and athletic opportunities

Goal 4
Sound financial management to establish a strong and sustainable economic base in support of USF’s continued academic advancement:

- Align budget and fiscal resources with academic priorities that support the recruitment and retention of intellectual talent at USF
- Refine business practices to ensure a strong and sustainable economic foundation for the university
- Promote and sustain a positive working environment, high service quality, and strong staff support through competitive salary structures and professional development opportunities
- Build USF’s fundraising enterprise and endowment by completing a comprehensive campaign to support capital projects, endowed professorships and scholarships, and ongoing operating needs
- Expand USF’s international identity through design and implementation of a comprehensive, powerful branding campaign
- Expand the commercialization of emerging technologies to enhance regional and state economic development
- Enhance the physical infrastructure of campus through fiscally responsible investments
Accreditation
The University of South Florida is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award degrees at the baccalaureate, masters, and doctoral level. Inquiries to the Commission should relate only to the accreditation status of the institution and not to general admission information. The Commission is to be contacted only if there is evidence that appears to support an institution’s significant non-compliance with a requirement or standard. Contact the Commission on Colleges at: 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of the University of South Florida.

DEGREES* OFFERED BY THE UNIVERSITY

Undergraduate Degrees
Bachelor of Arts B.A.
Bachelor of Fine Arts B.F.A.
Bachelor of General Studies B.G.S.
Bachelor of Music B.M.
Bachelor of Science B.S.
Bachelor of Science in Applied Science B.S.A.S.
Bachelor of Science in Biomedical Engineering B.S.B.E.
Bachelor of Science in Chemical Engineering B.S.C.H.
Bachelor of Science in Civil Engineering B.S.C.E.
Bachelor of Science in Computer Engineering B.S.C.P.
Bachelor of Science in Computer Science B.S.C.S.
Bachelor of Science in Electrical Engineering B.S.E.E.
Bachelor of Science in Industrial Engineering B.S.I.E.
Bachelor of Science in Information Technology B.S.I.T.
Bachelor of Science in Mechanical Engineering B.S.M.E.
Bachelor of Social Work B.S.W.

Graduate Degrees
Master of Accountancy M.Acc.
Master of Architecture M.Arc.
Master of Arts M.A.
Master of Arts in Teaching M.A.T.
Master of Business Administration M.B.A.
Master of Civil Engineering M.C.E.
Master of Education M.Ed.
Master of Environmental Engineering M.E.V.E
Master of Fine Arts M.F.A.
Master of Health Administration M.H.A.
Master of Mechanical Engineering M.M.E.
Master of Music M.M.
Master of Physician Assistant Studies M.P.A.S.
Master of Public Administration M.P.A.
Master of Public Health M.P.H.
Master of Science M.S.
Master of Science in Bioinformatics and Computational Biology M.S.B.C.B.
Master of Science in Biomedical Engineering M.S.B.E.
Master of Science in Biotechnology M.S.B.
Master of Science in Chemical Engineering M.S.C.H.
Master of Science in Civil Engineering M.S.C.E.
Master of Science in Computer Engineering M.S.C.P.
Master of Science in Computer Science M.S.C.S.
Master of Science in Electrical Engineering M.S.E.E.
Master of Science in Engineering Management  M.S.E.M.
Master of Science in Environmental Engineering  M.S.E.V
Master of Science in Health Informatics  M.S.H.I.
Master of Science in Industrial Engineering  M.S.I.E.
Master of Science in Information Technology  M.S.I.T.
Master of Science in Marketing  M.S.M.
Master of Science in Materials Science and Engineering  M.S.M.S.E.
Master of Science in Mechanical Engineering  M.S.M.E.
Master of Science in Medical Sciences  M.S.M.S.
Master of Science in Pharmaceutical Nanotechnology  M.S.P.N.
Master of Science in Public Health  M.S.P.H.
Master of Science in Real Estate  M.S.R.E.
Master of Social Work  M.S.W.
Master of Urban and Community Design  M.U.C.D.
Master of Urban and Regional Planning  M.U.R.P.

Advanced Graduate Degrees
Education Specialist  Ed.S.
Doctor of Audiology  Au.D.
Doctor of Business Administration  D.B.A.
Doctor of Education  Ed.D.
Doctor of Philosophy  Ph.D.
Doctor of Public Health  Dr.P.H.
Doctor of Nursing Practice  D.N.P.

Professional Degrees
Doctor of Medicine  M.D.
Doctor of Pharmacy  Pharm.D.
Doctor of Physical Therapy  D.P.T.

Additional Accreditation:
Muma College of Business  Association to Advance Collegiate Schools of Business (AACSB)
College of Education  National Council for Accreditation of Teacher Education (NCATE)
College of Engineering  Engineering Accreditation Commission of ABET
College of Nursing  Commission on Collegiate Nursing Education (CCNE)
College of Public Health  Council on Education in Public Health (CEPH)
Lynn Pippenger School of Accountancy  Association to Advance Collegiate Schools of Business (AACSB)
School of Art & Art History  National Association of Schools of Art and Design (NASAD)
School of Music  National Association of Schools of Music (NASM)
School of Social Work  Council on Social Work Education (CSWE)
School of Theatre & Dance  National Association of Schools of Theatre (NAST),
                        National Association of Schools of Dance (NASD)

The University of South Florida and all colleges, departments and degree programs therein establish certain academic requirements that must be met before a degree is granted. These requirements concern such things as curricula and courses, majors and minors, and academic residence. Advisors, directors, department chairs, and deans are available to help the student understand and arrange to meet these requirements, but the student is responsible for fulfilling them. At the end of a student’s course of study, if requirements for graduation have not been satisfied, the degree will not be granted. For this reason, it is important for all students to acquaint themselves with all regulations and to remain currently informed throughout their college careers and to be responsible for completing requirements. Courses, majors, and requirements described in the Catalog may be suspended, deleted, restricted, supplemented, or changed in any other manner at any time at the sole discretion of the University and the USF Board of Trustees.
University Administration

The University of South Florida is a member of the State University System (SUS) of Florida and is governed by the Florida Board of Governors and the University Board of Trustees.

Florida Board of Governors
For a current list of the Board of Governors (BOG), please refer to their website: http://www.flbog.org/

University Board of Trustees
The USF Board of Trustees was created in 2001 and is responsible for cost-effective policy decisions appropriate to the system mission and the implementation and maintenance of high quality education programs within the laws and rules of the State. The legislature also mandated a Campus Board for each of the following USF System institutions and campuses: USF St. Petersburg and USF Sarasota-Manatee. The members of each Campus Board are appointed by the USF Board of Trustees.

The 13 trustees include distinguished figures in the law, commerce, medicine, education, philanthropy and public policy leadership. Six trustees are appointed by Florida’s governor and five trustees are appointed by the Board of Governors. The USF System Faculty Council President and USF System Student Advisory Council President also serve as trustees. The University of South Florida System President and President of the University of South Florida serves as Corporate Secretary. Information about each Trustee is available online at: http://system.usf.edu/board-of-trustees/index.asp

Brian D. Lamb, Chair
Jordan B. Zimmerman, Vice Chair
Mike Carrere
James Garey
Stephanie E. Goforth
Moneer Kheireddine
Stanley I. Levy
Harold W. Mullis, Esq., Chair
John B. Ramil
Byron E. Shinn
James Stikeleather
Nancy H. Watkins

Chief Executive Officer of the USF System and President of USF
Judy Genshaft, Ph.D.

Provost and Executive Vice President of the USF System and USF Campus
Ralph Wilcox, Ph.D.

Office of Graduate Studies Administration:

Sr. Vice Provost and Dean, Office of Graduate Studies
Dwayne Smith, Ph.D.
Associate Dean, Office of Graduate Studies
Ruth Bahr, Ph.D.

USF System Graduate Liaisons:

USF
Dwayne Smith, Ph.D.
USF
Ruth Bahr, Ph.D.
USF St. Petersburg
Mark Durand, Ph.D.
USF Sarasota-Manatee
Terry Osborn, Ph.D.
USF Health
Charles J. Lockwood, M.D., MHCM
College Deans

College of Arts and Sciences
Eric Eisenberg, Ph.D.

College of Behavioral and Community Sciences
Julianne Serovich, Ph.D.

Muma College of Business
Moez Limayem, Ph.D.

College of Education
Roger Brindley, Ph.D. (Interim)

College of Engineering
Robert Bishop, Ph.D., P.E.

College of Global Sustainability
Govindan Parayil, Ph.D.

College of Graduate Studies
Dwayne Smith, Ph.D.

College of Marine Science
Jacqueline Dixon, Ph.D.

Morsani College of Medicine
Charles J. Lockwood, MD, MHCM

College of Pharmacy
Kevin Sneed, Ph.D.

College of Nursing
Victoria Rich, Ph.D.

College of Public Health
Donna Petersen, Ph.D.

College of The Arts
James Moy, Ph.D.

Honors College
Charles Adams, Ph.D.

Library
William Garrison, Ph.D.

Undergraduate Studies
William Cummings, Ph.D. (Interim)

College Graduate Associate Deans (EGAD) - http://www.grad.usf.edu/graduate-coordinators.php

College of Arts and Sciences
Bob Potter, Ph.D.

College of Behavioral and Community Sciences
Catherine Batsche, Ph.D.

Muma College of Business
Jackie Reck, Ph.D.

College of Education
Anna Cranston-Gingras, Ph.D.

College of Engineering
Jose Zayas-Castro, Ph.D.

College of Global Sustainability
TBA

College of Graduate Studies
Ruth Bahr, Ph.D.

College of Marine Science
David Naar, Ph.D.

Morsani College of Medicine – Graduate Studies
Michael Barber, D.Phil.

Morsani College of Medicine – Rehabilitation Sciences
Laura Swisher, Ph.D.

College of Nursing
Victoria Rich, Ph.D.

College of Pharmacy
Shyam Mohapatra

College of Public Health
Kay Perrin, Ph.D.

College of The Arts
Barton Lee

USF Graduate Council:

For the most current list members, please refer to the website: http://www.grad.usf.edu/graduate-council.php

College of Arts and Sciences (4)
Lindsay Shaw

College of Arts and Sciences
Bin Xue

College of Arts and Sciences
TBA

College of Behavioral and Community Sciences (2)
Donna Cohen

College of Behavioral and Community Sciences
TBA

Muma College of Business (2)
Patrick Wheeler

Muma College of Business
Richard Plank

College of Education (2)
Steve Permuth, Council Chair

College of Education
Vonzell Agosto

College of Engineering (2)
Rasim Guldiken

College of Engineering
Alex Savachkin

College of Marine Science (2)
College of Marine Science TBA

Morsani College of Medicine (3)
Vrushank Dave
Morsani College of Medicine
Morsani College of Medicine
College of Nursing (2)
College of Nursing
College of Public Health (2)
College of Public Health
College of The Arts (2)
College of The Arts
Libraries (1)

Ingrid Bahner
Lynn Wecker
Cheryl Burkey-Wilson
TBA
TBA
Russell Kirby, Council Vice-Chair
Sang-Hie Lee
TBA
Tomaro Taylor

USF Institution Locations

University of South Florida
4202 E. Fowler Avenue
Tampa, Fl 33620
(813) 974-2011
Website: www.usf.edu
Catalog: http://www.grad.usf.edu/catalog.php

University of South Florida Sarasota-Manatee
5700 N. Tamiami Trail
Sarasota, FL 34243-2197
(941) 359-4200
Website: www.sarasota.usf.edu
Catalog: http://usfsm.edu/catalog/

University of South Florida St. Petersburg
140 Seventh Avenue S.
St. Petersburg, FL 33701
(727) 87-1142
Website: www.usfsp.edu
Catalog: http://www.usfsp.edu/catalog/
Office of Graduate Studies Directory
4202 E. Fowler Ave., ALN226, Tampa, FL 33620 813-974-2846  www.grad.usf.edu

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Ruth Bahr, Ph.D., Associate Dean  (813) 974-7161  rbahr@usf.edu

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Matt Cordner, Administrative Specialist  (813) 974-2623  mcordner@usf.edu
Kokita Wilson, HR Liaison and Office Manager  (813) 974-3810  kwilson@usf.edu
Jessica Sonnenschein, Receptionist  (813) 974-2846  sonnenschein@usf.edu

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Joseph Butts, Assistant Director, Academics  (813) 974-3586  tron@usf.edu
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Mathdany Clark, Academic Services Administrator  (813) 974-2847  mnoel@usf.edu
David Hamilton, Academic Services Administrator, Cybersecurity  (813) 974-9415  Dhamilton1@usf.edu

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Javier Rodriguez, Fiscal and Business Specialist  (813) 974-9328  jrodriguez@usf.edu

Student Affairs
Gary Oliver, Assistant Director, Student Success  (813) 974-7935  goliver@usf.edu

Office of Postdoctoral Affairs (OPA)
Eric Hoyer, Ph.D., Associate Director of Postdoctoral Affairs and Graduate Student Development  (813) 974-7359  ehoyer@usf.edu
Marci Sanders, M.B.A., Academic Program Specialist  (813) 974-3655  Msadner1@usf.edu

Graduate and Professional Student Council  (813) 974-2846  gpsc@grad.usf.edu

Office of Admissions - Graduate Admissions Contact:
Admissions: Sean Gilmore, Interim Director  (813) 974-3350  admissions@usf.edu
Graduate Admissions: Paul Crawford, Associate Director  (813) 974-5075  pjcrawford@usf.edu

http://www.grad.usf.edu/
## Academic Calendar

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FALL 2017 SEMESTER</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>August 21</td>
<td>Monday</td>
<td>First day of classes</td>
</tr>
<tr>
<td>August 25</td>
<td>Friday</td>
<td>Last day to drop/add or late register</td>
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<tr>
<td>August 25</td>
<td>Friday</td>
<td>Last day to pay fees</td>
</tr>
<tr>
<td>September 4</td>
<td>Monday</td>
<td>Labor Day Holiday; No classes &amp; USF offices closed</td>
</tr>
<tr>
<td>September 22</td>
<td>Friday</td>
<td>Graduation application deadline</td>
</tr>
<tr>
<td>October 28</td>
<td>Saturday</td>
<td>Last day to drop or withdraw with &quot;W&quot; without academic penalty</td>
</tr>
<tr>
<td>November 10</td>
<td>Friday</td>
<td>Veteran's Day Holiday - USF closed</td>
</tr>
<tr>
<td>November 21 &amp; 22</td>
<td>Tuesday &amp; Wednesday</td>
<td>Reading Days</td>
</tr>
<tr>
<td>November 23 &amp; 24</td>
<td>Thursday &amp; Friday</td>
<td>Thanksgiving Holiday - USF closed</td>
</tr>
<tr>
<td>December 1</td>
<td>Friday</td>
<td>Last day of classes</td>
</tr>
<tr>
<td>December 2</td>
<td>Saturday</td>
<td>Final exams begin</td>
</tr>
<tr>
<td>December 7</td>
<td>Thursday</td>
<td>Fall 2017 final exams end (End of Term)</td>
</tr>
<tr>
<td>December 8 &amp; 9</td>
<td>Friday &amp; Saturday</td>
<td>Tampa Commencement</td>
</tr>
<tr>
<td><strong>SPRING 2018 SEMESTER</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>January 8</td>
<td>Monday</td>
<td>First day of classes</td>
</tr>
<tr>
<td>January 12</td>
<td>Friday</td>
<td>Last day to drop/add or late register</td>
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<tr>
<td>January 12</td>
<td>Friday</td>
<td>Last day to pay fees</td>
</tr>
<tr>
<td>January 15</td>
<td>Monday</td>
<td>Martin Luther King JR. Holiday - USF closed</td>
</tr>
<tr>
<td>February 2</td>
<td>Friday</td>
<td>Spring 2018 graduation application deadline</td>
</tr>
<tr>
<td>March 12 – 18</td>
<td>Monday – Sunday</td>
<td>Spring Break 2018</td>
</tr>
<tr>
<td>March 24</td>
<td>Saturday</td>
<td>Last day to drop or withdraw with &quot;W&quot; without academic penalty</td>
</tr>
<tr>
<td>April 25</td>
<td>Wednesday</td>
<td>Last day of classes</td>
</tr>
<tr>
<td>April 26 &amp; 27</td>
<td>Thursday &amp; Friday</td>
<td>Designated reading days</td>
</tr>
<tr>
<td>April 28</td>
<td>Saturday</td>
<td>Final exams begin</td>
</tr>
<tr>
<td>May 3</td>
<td>Thursday</td>
<td>Spring 2018 final exams end (End of Term)</td>
</tr>
<tr>
<td>May 4 &amp; 5</td>
<td>Friday &amp; Saturday</td>
<td>Tampa Commencement</td>
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<tr>
<td><strong>SUMMER 2018 SEMESTER</strong></td>
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<tr>
<td><strong>Session A and C</strong></td>
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<tr>
<td>May 14</td>
<td>Monday</td>
<td>First day of classes Sessions A &amp;C</td>
</tr>
<tr>
<td>May 18</td>
<td>Friday</td>
<td>Last day to drop/add or late register. Tuition</td>
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<tr>
<td>May 18</td>
<td>Friday</td>
<td>Last day to pay fees</td>
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<tr>
<td>May 28</td>
<td>Monday</td>
<td>Memorial Day Holiday - USF closed</td>
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<tr>
<td>June 8</td>
<td>Friday</td>
<td>Graduation application deadline</td>
</tr>
<tr>
<td>June 9</td>
<td>Saturday</td>
<td>Last day to drop or withdraw with &quot;W&quot; without academic penalty</td>
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<tr>
<td>June 22</td>
<td>Wednesday</td>
<td>Last day of classes Session A</td>
</tr>
<tr>
<td>July 4</td>
<td>Monday</td>
<td>Independence Day Holiday - USF closed</td>
</tr>
<tr>
<td>July 20</td>
<td>Friday</td>
<td>Last day of classes Session C</td>
</tr>
<tr>
<td>Aug 4</td>
<td>Saturday</td>
<td>Tampa Commencement (tentative)</td>
</tr>
<tr>
<td><strong>Session B</strong></td>
<td></td>
<td></td>
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<tr>
<td>June 8</td>
<td>Friday</td>
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<tr>
<td>June 25</td>
<td>Monday</td>
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<tr>
<td>June 29</td>
<td>Friday</td>
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<td>Saturday</td>
<td>Tampa Commencement (tentative)</td>
</tr>
</tbody>
</table>

**Academic Calendar**


**Cultural/Diversity Calendar** [http://www.usf.edu/diversity/about-diego/upcoming-events.aspx](http://www.usf.edu/diversity/about-diego/upcoming-events.aspx)


**FALL 2017 SEMESTER**

- **August 21**: Monday, First day of classes
- **August 25**: Friday, Last day to drop/add or late register
- **August 25**: Friday, Last day to pay fees
- **September 4**: Monday, Labor Day Holiday; No classes & USF offices closed
- **September 22**: Friday, Graduation application deadline
- **October 28**: Saturday, Last day to drop or withdraw with "W" without academic penalty
- **November 10**: Friday, Veteran's Day Holiday - USF closed
- **November 21 & 22**: Tuesday & Wednesday, Reading Days
- **November 23 & 24**: Thursday & Friday, Thanksgiving Holiday - USF closed
- **December 1**: Friday, Last day of classes
- **December 2**: Saturday, Final exams begin
- **December 7**: Thursday, Fall 2017 final exams end (End of Term)
- **December 8 & 9**: Friday & Saturday, Tampa Commencement

**SPRING 2018 SEMESTER**

- **January 8**: Monday, First day of classes
- **January 12**: Friday, Last day to drop/add or late register
- **January 12**: Friday, Last day to pay fees
- **January 15**: Monday, Martin Luther King JR. Holiday - USF closed
- **February 2**: Friday, Spring 2018 graduation application deadline
- **March 12 – 18**: Monday – Sunday, Spring Break 2018
- **March 24**: Saturday, Last day to drop or withdraw with "W" without academic penalty
- **April 25**: Wednesday, Last day of classes
- **April 26 & 27**: Thursday & Friday, Designated reading days
- **April 28**: Saturday, Final exams begin
- **May 3**: Thursday, Spring 2018 final exams end (End of Term)
- **May 4 & 5**: Friday & Saturday, Tampa Commencement (tentative)

**SUMMER 2018 SEMESTER**

**Session A and C**

- **May 14**: Monday, First day of classes Sessions A &C
- **May 18**: Friday, Last day to drop/add or late register. Tuition
- **May 18**: Friday, Last day to pay fees
- **May 28**: Monday, Memorial Day Holiday - USF closed
- **June 8**: Friday, Graduation application deadline
- **June 9**: Saturday, Last day to drop or withdraw with "W" without academic penalty
- **June 22**: Wednesday, Last day of classes Session A
- **July 4**: Monday, Independence Day Holiday - USF closed
- **July 20**: Friday, Last day of classes Session C
- **Aug 4**: Saturday, Tampa Commencement (tentative)

**Session B**

- **June 8**: Friday, Graduation application deadline
- **June 25**: Monday, First day of classes Session B
- **June 29**: Friday, Last day to drop/add or late register
- **June 29**: Friday, Last day to pay fees
- **July 4**: Monday, Independence Day Holiday - USF closed
- **July 21**: Saturday, Last day to drop or withdraw with "W" without academic penalty
- **Aug 3**: Wednesday, Last day of classes Session B
- **Aug 4**: Saturday, Tampa Commencement (tentative)

[http://www.grad.usf.edu/](http://www.grad.usf.edu/)
Section 3

Graduate Faculty and Research Interests

The University of South Florida recognizes Graduate Faculty and Affiliate Graduate Faculty. Only Graduate Faculty, and Affiliate Graduate Faculty approved for such purposes, may serve as the Instructor of Record for graduate level courses.

Graduate Faculty Definition

Graduate Faculty is defined to consist of all tenure-track or tenured faculty appointed at the Assistant, Associate, or Professor rank, who holds a terminal degree or equivalent in their discipline. Graduate Faculty members are eligible to teach graduate courses and may direct and serve on masters, specialist, and doctoral level committees. To chair a doctoral level committee, a Graduate Faculty member must engage in current and sustained scholarly, creative, or research activities, such as publications, performances, exhibitions, patents, inventions and research grants.

Affiliate Graduate Faculty membership may be granted by the Office of Graduate Studies Dean to individuals who do not meet the University definition of Graduate Faculty, but whose skills or expertise meet criteria established by the College. Affiliate Graduate Faculty membership is in effect for a specified period of time and specific purposes. Affiliate members may be eligible to serve on masters, specialist, and doctoral level committees, to direct master’s and specialist’s level committees, and to co-direct doctoral level committees, at the discretion of the College.

Affiliate Graduate Faculty can only serve as the Instructor of Record when they have a terminal degree in the discipline and are approved to teach graduate courses in that field. Emeritus Professors and retired or recently resigned professors may also be appointed as Affiliate Graduate Faculty with the approval of the College and Office of Graduate Studies Dean. For approval, a current CV and request for approval, including the reason for the request (e.g. serving on a master’s student supervisory committee), is submitted through the Major, the College, and the Office of Graduate Studies. For procedures, contact the Office of Graduate Studies.

Graduate Faculty Approval — Graduate faculty is defined as noted above; Colleges and Departments may have additional requirements. The Office of Graduate Studies will maintain a list of Graduate Faculty along with approval guidelines from the Colleges and Departments.

References:

Also, note, per USF Policy 10-115 — Faculty Credentials for Teaching Undergraduate and Graduate Courses - http://regulationspolicies.usf.edu/policies-and-procedures/pdfs/policy-10-115.pdf
Section 4

Office of Admissions

University of South Florida
Office of Admissions
4202 East Fowler Avenue, SVC1036
Tampa, FL 33620-5816

Website: http://www.usf.edu/admissions/graduate/index.aspx
E-mail: GradAdmissions@usf.edu
Phone: 813-974-3350
Fax: 813-974-9689

Interim Director Sean Gilmore
Associate Director for Graduate Admissions Paul Crawford

University Admissions Criteria and Policies

USF Regulation USF3-008: http://regulationspolicies.usf.edu/regulations/pdfs/regulation-usf3.008.pdf

Statement of Principles
In graduate admission decisions, multiple sources of information should be used to ensure fairness, promote diversity and balance the limitations of any single measure of knowledge, skills, or abilities. The sources may include: undergraduate grade point average, letters of recommendation, personal statements, samples of academic work, portfolios, auditions, professional experience related to proposed graduate study, as well as nationally known, standardized test scores. It is the responsibility of each graduate major to select admissions criteria that best predict success in their specific field and to determine the weight given to each measure.

None of the sources of information, particularly standardized test scores, should be used in isolation nor should such scores be used in combination or separately to establish minimum or “cut off” scores. Major specific guidelines for the use of standardized test scores should be developed based on the experience of a given department with its pool of applicants.¹

¹ Adapted from the GRE “Guide to the Use of Scores” 2003-2003
Admission Requirements

Each applicant to a graduate degree program at the University of South Florida is required to meet the following minimum requirements:

1. An applicant must have one of the following (a, b, or c):
   
   a. A bachelor’s degree from a regionally accredited institution and satisfying at least one of the following criteria:
      
      i. “B” average or better in all work attempted while registered as an undergraduate student working for a degree, or
      
      ii. “B” average or better in all work attempted while registered as an upper division undergraduate student working for a baccalaureate degree.
   
   b. A bachelor’s degree with a “B” average or better from a regionally accredited institution and a previous graduate degree with a “B” average or better from a regionally accredited institution. In cases where an applicant has a bachelor’s and a graduate degree at the time of admission, the credentials and GPA of the graduate degree will be the determining factor for admission.
   
   c. The equivalent bachelors and/or graduate degrees from a foreign institution. Bachelor’s degrees from institutions in the European Higher Education Area (EHEA) are considered equivalent based on the Bologna Accord. For applicants with a 3-year Bachelor’s Degree with less than 120 hours, from Non-Bologna Accord Institutions, a transcript evaluation from a NACES member is required to confirm equivalency.

2. Submission of standardized test scores if required by the graduate degree program. For Graduate Majors that require the GRE, the Personal Potential Index (PPI) may be required. Refer to individual major admission requirements for information.

3. Applicants from countries where English is not the official language must also demonstrate proficiency in English* in one of the following ways:
   
   a. By providing a score of 79 or higher on the Internet based Test of English as a Foreign Language (TOEFL iBT)
   
   b. By providing a score of 6.5 or higher on the International English Language Testing System (IELTS).
   
   c. By providing a score of 53 or higher on the Pearson Test of English Academic (PTE-A)
   
   d. By Earning a score of 153 (or equivalent) on the GRE-Verbal exam
   
   e. By earning a baccalaureate or higher degree at a regionally accredited institution in the US

Applicants who earn a baccalaureate or equivalent degree at a foreign institution where English is the language of instruction (for the institution and not just the major) may meet this requirement. However, other related factors (including test scores) will also be considered. Medium of Instruction must be documented on the transcript or on an official Certificate of Medium of Instruction from the Institution.

4. All specific and additional requirements of the graduate major to which admission is sought (including requirements to submit standardized test scores) consistent with the above Statement of Principles.
The Department Chair and College Dean must approve any exceptions to these requirements before they will be considered by the Office of Graduate Studies. The reason for the waiver and related documentation must be included on the Graduate Application Referral form.

*International students who are seeking employment as a teaching assistant (in departments that offer them) must meet additional English Language Requirements.

Application Process (How it works)

Graduate applicants are urged to submit accurate and complete information as early as possible. Applications and supporting documents received after the application deadline will only be acted upon at the discretion of the graduate major. They will be kept on file for up to one year. At the request of the applicant or graduate major, they will be processed for the next available term.

Please consult with your graduate department to determine if it is a Direct Receipt major. For Direct Receipt Majors application materials should be uploaded with the on-line application AND the hard copies should be sent directly to the department (NOT to the Office of Graduate Admissions.) All inquiries regarding application status should also be directed to the department.

The Graduate Admissions Office and the Graduate Department review your application for admission to graduate study at USF. Once the Graduate Department reviews your eligibility for its graduate major they will forward their decision to the Graduate Admissions Office which, in turn, will issue the official decision.

If you are a foreign graduate applicant, the International Services Office ([http://global.usf.edu/is/](http://global.usf.edu/is/)) will evaluate your financial and immigration documents after you are admitted to determine your eligibility for a student visa. Your financial statement must be dated within 12 months of the starting the degree program. Each of these offices may request additional documents from you to make a decision.

For a complete list of graduate majors and deadline dates please visit the Office of Graduate Studies website at [http://www.grad.usf.edu/programs.php](http://www.grad.usf.edu/programs.php)
Graduate Admission Application Deadlines

<table>
<thead>
<tr>
<th>MASTER’S AND EDUCATION SPECIALIST DEGREES</th>
<th>Admission for Fall Semester</th>
<th>Admission for Spring Semester</th>
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<tr>
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<tr>
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<td>October 15</td>
<td>February 15</td>
</tr>
<tr>
<td>Final University Deadline International Applicants</td>
<td>June 1</td>
<td>September 15</td>
<td>February 15</td>
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Additional Requirements for International Applicants

In addition to meeting the published application deadline for the Major of interest, all immigration documents should be submitted as soon as possible, but must be on file at USF no later than the deadlines listed above.

Foreign applicants who are outside the U.S. are required to apply for a visa. Depending on the country of origin, this may take a few months. So the deadlines for these international applicants may be earlier than the deadline for the Major and these applicants must apply no later than the posted International deadline. They are strongly encouraged to apply as early as possible. Foreign applicants who are in the U.S. and are currently on a visa may use the domestic application deadline dates.

http://www.grad.usf.edu/
Application Checklist (To-Do-List)

To assist you in the admissions process the following is your To-Do-List. To expedite the processing of your application please upload a copy of all of your supporting documents when you submit your application online. You will also need to send official transcripts and test scores. If you are admitted to a graduate major.

1. Fill out the Graduate Application online and upload all supporting documents
2. List all post-secondary institutions you have attended on the application
3. Pay the Application Fee
4. Upload through the online application a copy of transcripts of all prior post-secondary courses taken (including translations and evaluations for international transcripts). If you are admitted, you must also have official and final transcripts sent to the Office of Admissions.
5. Upload through the online application a copy of your test score reports. If you are admitted, you must also have official Test Scores sent to USF
6. Review and respond to Conduct Clearance Policy (Legal Disclosure Statement)
7. Review Florida Residency Policy for Tuition Purposes and provide documents, if needed

☐ 1. Graduate Application: [https://secure.vzcollegeapp.com/usf/](https://secure.vzcollegeapp.com/usf/)

   Applicants should also check with the Graduate Major to determine if they require any additional, supporting documents beyond the ones listed here. Admission requirements may be found in the Major listing in the Catalog. Applicants should upload a copy of each supporting document required by the major through the online application when it is submitted. However, they may upload additional documents after the application has been submitted. For instruction on uploading, go to [http://www.usf.edu/admissions/documents/how-to-upload-grad-adm-docs.pdf](http://www.usf.edu/admissions/documents/how-to-upload-grad-adm-docs.pdf)

☐ 2. Application Fee:

   All applicants are required to submit an application fee of $30.00 USD for admission to the University of South Florida. Students may apply for multiple majors, with only one application fee being required per every 12 month period from the date of initial application. (USF Regulation USF4-0107: Fees, Fines and Penalties [http://regulationspolicies.usf.edu/regulations/pdfs/regulation-usf4.0107.pdf](http://regulationspolicies.usf.edu/regulations/pdfs/regulation-usf4.0107.pdf). If you attended USF as a former degree seeking student or non-degree student then you will also be required to submit the application fee. Applicants have the option to pay their application fee by credit card (Discover, Master Card, Visa) or by E-Check (personal checking/savings account) through the Graduate Online Application. The Online Graduate Application will not be processed if the application fee is not paid. ALL APPLICATION FEES SUBMITTED ARE NON-REFUNDABLE.

☐ 3. Transcripts:

   One (1) complete official transcript from all institutions of higher learning attended by the applicant is required of all students who are admitted and matriculate at USF (reference USF Policy 10-044). At least one transcript must show that the bachelor’s degree was completed prior to the start of the graduate major at USF. Former USF students should not submit their USF transcript; it is already on file. However, they must list USF as a post-secondary institution on the application. Applicants should upload copies of all other transcripts to expedite the processing of their applications. These uploaded transcripts are considered unofficial.

   Please upload them through the on-line application. Any offer of admission based on unofficial transcripts is considered “provisional” and will not be finalized until official transcripts are received in a sealed envelope from the Office of the Registrar where the applicant attended. All transcripts must be in English; International applicants must submit original language transcripts and a certified English translation. It is the applicant’s responsibility to have transcripts translated and evaluated* before submitting them as part of the graduate application packet. If they are applying while still completing an undergraduate degree, they must submit transcripts of at least six (6) semesters of completed undergraduate work.

[http://www.grad.usf.edu/](http://www.grad.usf.edu/)
*All foreign transcripts that are not in English must be accompanied by a certified English translation. Documents signed by a notary or other public official with no affiliation to the institution of higher learning will not be accepted. Some graduate majors require a course-by-course evaluation. In the event that the university receives documentation that is questionable, or suspicious in any way, the university will require the applicant to obtain a course-by-course evaluation from a foreign transcript evaluation service. Refer to the Graduate Admissions’ website for a list of evaluation services (http://www.usf.edu/admissions/graduate/application-requirements/transcripts-foreign.aspx)

**Bologna Process – Applications from the European Higher Education Area**

USF accepts applications from prospective graduate students with undergraduate degrees from countries that subscribe to the Bologna Process. Applicants with three-year degrees from universities in the European Higher Education Area (EHEA) may be considered for admission to graduate majors, at the discretion of the Department (or equivalent) and College that offer the Major and with the approval of the Office of Graduate Studies, under the following condition:

Official documentation is presented to demonstrate that a three-year degree (at least 180 ECTS) has been awarded prior to USF matriculation by an institution within the European Higher Education Area (EHEA), defined by the Bologna Declaration of 1999. Where applicable, diploma supplements should be included with transcripts and other documents required to demonstrate degree completion. An up-to-date, official listing of Bologna signatory countries may be found at www.ehea.info.

**Non-Bologna Institutions**

Transcripts for applicants from non-Bologna Accord Institutions must be accompanied by an evaluation of the bachelor’s degree by an independent third-party member of the National Association of Credential Evaluation Services (NACES). Confirmation of the baccalaureate degree as equivalent is determined by relevant major faculty, with the assistance of the office of International Admissions, and the Office of Graduate Studies.

### 4. Test Scores

**GRE (Graduate Record Examination)**: http://www.gre.org

Applicants to graduate majors requiring the GRE must submit GRE test scores earned within five (5) years of the desired term of entry. Official scores must be submitted to USF directly from the Educational Testing Service, but applicants should upload with the application unofficial copies of their test scores to expedite the processing of their applications. Any offer of admission based on unofficial scores is considered “provisional” and will not be finalized until official scores from ETS are received. The institution code for USF is 5828 and applies to all tests administered by ETS.

* The GRE requirement is determined by the individual graduate majors. Please contact your major of interest directly for additional information. **Editor’s Note:** GRE has a new score scale; scores listed on the Major pages in this catalog may reflect the old scale. Refer to the GRE Concordance Tables to see how the scores compare. http://www.ets.org/s/gre/pdf/gre_guide.pdf or http://www.ets.org/s/gre/pdf/concordance_information.pdf

**GMAT (Graduate Management Aptitude Test)**: http://www.gmac.com/gmat.aspx

Applicants to majors in the Muma College of Business should submit GMAT** scores earned within five (5) years of the desired term of entry. Official scores must be submitted to USF directly from the Pearson VUE Testing Service, but applicants may provide unofficial copies of their test scores to expedite the processing of their applications. Any offer of admission based on unofficial scores is considered “provisional” and will not be finalized until official scores from Pearson VUE are received. The following are the Pearson VUE institution codes for USF majors.
Applicants may not have to submit a GMAT if they have taken the GRE. Please contact the major of interest directly for additional information.

MCAT
For those majors that may require or accept the MCAT, the test typically must be taken with the last five (5) years; check with the Graduate Major for specific requirements.

English Proficiency Tests
Applicants whose native language is not English or who have not earned a degree in the United States must demonstrate proficiency in English by submitting acceptable scores on one of the English proficiency tests listed below. They must have been earned within two (2) years of the desired term of entry. Applications submitted with English proficiency scores that do not meet the minimum requirements will be denied.

- Has scored a 79 or higher on the internet-based Test of English as a Foreign Language (TOEFL) or a 550 on the paper-based TOEFL
- Has scored 6.5 or higher on International English Language Testing System (IELTS) [Note: Although the IELTS score may be used to demonstrate English Proficiency for the purpose of admissions, the IELTS score is not acceptable to demonstrate English Proficiency for Teaching Assistant [TA] positions]
- Has scored a 53 or higher on the Pearson Test of English Academic (PTE-A)

The English proficiency requirement may be waived for admission if the applicant meets one of the following conditions (Note that additional documentation may be required):

- The applicant’s native language is English, or
- Has scored the equivalent of 153 or higher on the GRE Verbal Test, or
- Has earned a college bachelors or graduate degree at a regionally accredited U.S. institution of higher learning, or
- Has earned a college bachelor’s degree from an institution whose language of instruction is English (must be noted on the transcript or on an official certificate stating that English is the Medium of Instruction for the institution), However, other related factors (including test scores) will also be considered; or
- Has received a college/university degree from an institution in at least one of the following countries (list was accurate at the time of publication; to check the most current list, go to http://www.usf.edu/admissions/international/graduate/requirements-deadlines/english-proficiency.aspx):
If you are from one of the English speaking countries listed below, you are not required to submit TOEFL scores.

**English Speaking Countries**
- Antigua
- Australia
- Bahamas
- Bahrain
- Barbados
- Barbuda
- Belize
- Bermuda
- Botswana
- Canada, except Quebec (French)
- Cayman Islands
- Commonwealth Caribbean
- Dominica
- England (UK)
- Fiji
- Ghana
- Grenada
- Guyana
- Kenya
- Irish Republic
- Jamaica
- Lesotho
- Liberia
- Malawi
- New Zealand
- Nigeria
- Ireland (UK)
- Papua New Guinea
- Scotland
- Sierra Leone
- South Africa (If Afrikaans is Not listed as native language)
- St. Kitts & Nevis
- St. Lucia
- St. Vincent & Grenadines
- Swaziland
- Tanzania
- Tobago
- Trinidad
- Uganda
- United Kingdom
- United States, except Puerto Rico
- Virgin Islands
- Wales (UK)
- Zambia
- Zimbabwe

International students from countries from predominantly English-Speaking Countries who want to be considered for a teaching assistantship must show proficiency in spoken English even if their English proficiency examination requirement has been waived for admission to a graduate program.

**PLEASE NOTE:** International students from countries other than those listed in Appendix C of the *Policy on Spoken English Proficiency for Graduate Teaching Assistants/Associates/Graduate Instructional Assistants* (http://www.grad.usf.edu/International_Teaching_Assistants_Handbook.php) who want to be considered for a teaching assistantship must show proficiency in spoken English even if their TOEFL has been waived or accepted for admission to a graduate major. They need a minimum score of 26 on the spoken portion of the Internet-based TOEFL (iBT) or 160 on the spoken portion of the TOEIC test administered by ETS http://www.ets.org/toeic.

Please reference [http://www.usf.edu/admissions/international/graduate/requirements-deadlines/english-proficiency.aspx](http://www.usf.edu/admissions/international/graduate/requirements-deadlines/english-proficiency.aspx) for more information on language requirements.

### 5. Conduct Clearance Policy

(Legal Disclosure Statement):

All graduate applicants are required to answer the Conduct Clearance questions of the graduate application. The applicant will not be notified of the admission decision until answers to the two questions have been received. Applicants who meet the criteria for disclosure must provide specified documents and be reviewed by the Vice President of Student Affairs or his/her designee, if warranted.
6. Florida Residency Policy:
Graduate students are typically considered “independent” for tuition purposes. Applicants desiring classification as Florida residents for tuition paying purposes must sign and complete the Florida Residents section of the Florida Residency Classification page of the Graduate Application. **Incomplete or unsigned forms will be classified as non-Florida residents.** The Office of Graduate Admissions will classify applicants as Florida residents if they have provided a minimum of two forms of documentation that verifies they began living in Florida at least twelve months prior to the first day of classes of their admitted term of entry. Additional documentation other than what is required may be requested in some cases. All documentation is subject to verification.

Students are responsible for checking their residency classification when admitted to the University of South Florida. The residency classification is noted on the official acceptance letter. If students feel that their initial classification is in error, they have until the last day of the term to contact the appropriate admissions office and request a re-evaluation. After students have completed their first semester of study they may still seek to have their residency reconsidered; however, they must then submit a Request for Reclassification Form with the Office of the Registrar. This must be filed by the 5th day of classes for the term being requested. For more information on Residency refer to: Independent Student: the Registrar’s webpage. For information on reclassification go to [http://www.registrar.usf.edu/Residency/Deadlines.php](http://www.registrar.usf.edu/Residency/Deadlines.php)

**Application Documents Access/Forward/Return Policy**
No application, test scores, transcripts, letters of recommendations, or other documents submitted with the application packet will be returned to the applicant or forwarded to another institution/third party. The Office of Graduate Admissions applicant file is not to be released to the applicant or other third parties. Requests, subpoenas, or court orders are to be forwarded to the Office of the General Counsel after review by the Assistant Director of Graduate Admissions. Applicants once admitted and enrolled during the term of admission may request access to their student file at the Office of the Registrar. Letters of Recommendation that the applicant has waived the right to view (indicated on Request for Recommendation Form) are not to be given, copied or viewed by the applicant or third parties. Requests for degree/enrollment verification information should be referred to the Office of the Registrar.

The Office of Graduate Admissions graduate application files may be copied and released to USF staff conducting legitimate University business.

**Additional Requirements of Majors** (If applicable)
Many majors require additional application materials such as resumes, writing samples, or letters of recommendation. These items should be uploaded through the online application. Check with the graduate major to see if you should also send the paper documents directly to the appropriate department/major. These materials will be available electronically to the appropriate major if sent with the application packet.

**Final Admission Classification**
Applicants accepted for admission whose final, official documents (transcripts and/or test scores) have been received by the Office of Graduate Admissions are admitted as “Final.” The admission file is complete.

**Provisional Admission Classification**
Applicants accepted for admission whose final, official documents (transcripts and/or test scores) have not been received by the Office of Graduate Admissions are admitted provisionally pending receipt of these missing items. The final, official transcripts documenting completion of the required degree prior to the start of graduate study at USF and test scores must be received before a second semester registration is permitted. During the first semester, the Office of Graduate Admissions will place a registration hold on the student's file. When the missing documents are provided to the Office of Graduate Admissions the registration hold will be removed.
Exception Admission Classification
The University may admit up to 10% of new enrollees as exceptions to the Board of Trustees minimum requirements. To be considered for an exception, applicants should present evidence that might account for the previous academic record and demonstrate potential for academic success. Examples of this evidence include excellent letters of recommendation from trusted academicians, performance in graduate courses taken as a post-bachelor’s student, professional experience in the discipline for a period of time, etc. Each request for a 10% exception must include a statement describing the special circumstances of the applicant. It is the discretion of the Major, College, and Office of Graduate Studies to accept exception application requests.

Conditional Admission Criteria
A major and/or college may admit students conditionally in anticipation of the applicant’s successful completion of additional requirements separate from University minimum requirements. These conditions may include attendance in specific core or remedial courses and/or a specific earned GPA for those courses. Failure to satisfy those conditions by the deadline established by the major will result in academic dismissal from the major. The College/Graduate Major will submit a Dismissal Form (http://www.grad.usf.edu/student-forms.php) to the Office of Graduate Studies to initiate dismissal

Deferment of Admission Request
An applicant’s acceptance is granted for the semester and the particular major specified in the official acceptance notification. In order to validate that acceptance, the applicant must enroll for that semester. Applicants who do not validate their admission may contact the Graduate Director and request a Deferment of Admission. This request must be made in writing within 12 months of the initial requested entry date and prior to the major’s application deadline for the new term. If a request for Deferment of Admission is not activated within the 12 months, a new application and fee must be submitted for future consideration.

Applicants who were admitted provisionally upon receipt of official test scores and/or transcripts must supply those missing items prior to having their deferment decision processed by the Office of Graduate Admissions. International applicants must also provide a new financial statement dated no earlier than 12 months before the requested date of entry.

Special exemption to this policy may be granted to active duty U.S. military personnel who receive military orders that prevent them from beginning a graduate major during the requested term. These applicants may have their admission honored for up to 2 years, pending approval from their academic major, and proper documentation of their deployment. These extensions would be granted on a case by case basis.

Update of Admission Request
If an admission decision has not been offered and the applicant wants to be considered for a future semester, the applicant must request that the Office of Graduate Admissions update the application and specify the new enrollment date. This request must be made in writing within 12 months of the initial requested entry date and must be received no later than the major’s application deadline for the semester desired. Applications are held for only 12 months. If a request for change in entry date is not received in the specified time, a new application and fee must be submitted. The Office of Graduate Admissions will not process any update requests without first receiving all official transcripts and required test scores.

Denial of Admission / Appeal for Reconsideration Criteria
Applicants denied admission will be given timely notice by email or postal service. Denied applicants who meet the minimum standards may request reconsideration in writing to the Graduate Director of the major to which they applied. This must be done within 30 days of the date of denial. The request should present additional evidence of potential for academic success at USF and contain reasons why reconsideration is warranted. Applicants denied admission to a major are eligible to apply as a non-degree seeking student and enroll as special (non-degree seeking) students, although course selection restrictions may apply. Non-degree applications must be submitted online to the Office of the Registrar.

http://www.grad.usf.edu/
Activation of Admission
An applicant’s acceptance is granted for the semester and the particular major specified in the official acceptance notification. In order to validate the acceptance, the applicant must enroll for that semester. Applicants who do not validate their admission may contact the Graduate Director and request a Deferment of Admission. This request must be made in writing within 12 months of the initial requested entry date and before the major’s application deadline for the new term. If a request for Deferment of Admission is not activated within the 12 months, a new application and fee must be submitted for future consideration.

REINSTATEMENT AND RE-APPLICATION FOR ADMISSION POLICIES

A graduate student who is not registered and enrolled for a minimum of six (6) credits in a 12-month period is automatically placed in inactive status (refer to the Continuous Enrollment Policy for more information). Students who wish to continue their studies must be reinstated or re-apply for admission to the major. Both of these are at the discretion of the Major and are not guaranteed. These policies do not apply to students who have been academically dismissed from the University for Academic Dishonesty.

Reinstatement:

For students who the Major anticipates will complete their degree within their original time limit:

- Students must apply for reinstatement using the Graduate Major Reinstatement Form.
- Students who were on academic probation during their last enrollment should consult the Academic Probation Policy for guidance on requirements. Probation will resume on reinstatement.
- Students who were in Doctoral Candidacy will remain at that status.
- Students who are reinstated may choose the original or any subsequent Graduate Catalog.
- Students must enroll for a minimum of six hours graduate credit in their first semester of re-enrollment.

For students who will exceed their time limit for degree completion, but will not be affected by course currency issues (i.e. will finish within ten years of initial admission date in the graduate major)

- Students must apply for reinstatement using the Graduate Major Reinstatement Form and also submit the Time Limit Extension Request, including benchmark information.
- Students who were on academic probation during their last enrollment should consult the Academic Probation Policy for guidance on requirements. Probation will resume on reinstatement.
- Students who were in Doctoral Candidacy will remain at that status.
- Students who are reinstated may choose the original or any subsequent Graduate Catalog.
- Students must enroll for a minimum of six hours graduate credit in their first semester of re-enrollment.
- Students who have been Academically Dismissed from the University for Academic Dishonesty may not apply to any graduate major at USF.

Re-application for Admission:

Students who have exceeded their time limit for degree completion and/or course currency limits (i.e. ten years from their initial admission date in the graduate major) must re-apply for admission. This will require completion of all degree requirements as posted in the Graduate Catalog in effect at the semester of admission, including such elements as comprehensive exams, thesis/dissertation hours. The Major should evaluate the student’s transcript to determine if any of the previous coursework may be
transferred in as part of the admission process (note: only structured courses may be considered for transfer – see Transfer of Credit Policy). This will require documentation of course currency through a syllabus-by-syllabus comparison.

To be admitted, the application and all supporting materials must be submitted by the Major’s posted application deadline as noted in the Graduate Catalog. These materials include:

- **Graduate Application:** to re-apply for admission, students must submit a new graduate application, application fee, and any required supporting materials by the application deadline for the major.

- **Admission Requirements:** Students must meet the Admission Requirements posted in the Graduate Catalog for the Major to which they are reapplying.

- **Catalog Year:** Students who are readmitted must meet the admission standards and degree requirements and policies in the Graduate Catalog in effect at the time of readmission.

- **Prior Coursework taken at USF:** Coursework taken at USF prior to readmission may be accepted toward the degree requirements at the discretion of the Department. Refer to the Course Currency Policy for time limits on coursework applied toward the degree. Students will be required to take new coursework.

- **Enrollment:** A decision to readmit is only applicable to the semester for which it was offered. Students who do not enroll for that term will have to resubmit an application for any future semester.

- **Doctoral Candidacy:** Students who are readmitted to a doctoral major who were previously admitted to doctoral candidacy must retake the Qualifying Exam and be Admitted to Doctoral Candidacy.

**Change of Graduate Major**

A change of graduate major allows a student to withdraw from his/her current graduate major and enter into a different graduate major. A change of graduate major:

- will NOT be considered for graduate students in their first semester of study
- is permissible only for a continuing graduate student enrolled for study in a particular major who wishes to change to another major at the same or lower level
- requires a student to be in good academic standing
- is up to the discretion of the student’s new major (note: some majors may require another admission application to be submitted and reviewed)
- may affect the student’s financial aid status
- restarts the time limit with the admission to the new graduate major.
- requires the submission of a Change of Graduate Major Application
- requires students to meet all requirements of the new Major as specified in the USF Graduate Catalog of their choice as per the Graduate Catalog policy. See policy for full information and restrictions.

Students not in good academic standing must consult with the Office of Graduate Studies prior to initiating a Change of Graduate Major Application. Students may view the procedures and obtain the Change of Graduate Major Application at [http://www.grad.usf.edu/inc/linked-files/GRADUATE_SCHOOL_Chg_of_Program_Application.pdf](http://www.grad.usf.edu/inc/linked-files/GRADUATE_SCHOOL_Chg_of_Program_Application.pdf). Students must consult with the new major and Office of Graduate Studies before completing any paperwork.
Students with Disabilities Policy
Applicants with disabilities apply for admission under the same guidelines as other applicants. Applicants believing that a disability has had an impact on grades, course choice, or standardized admission test scores, should request consideration of this during the admissions process. Applicants requesting substitution of departmental guidelines will need to contact the appropriate department chairperson. Please submit supporting documentation when requesting a disability exception. Applicants bear the responsibility for providing documentation of their disabilities.

The University reviews documentation and determines if students are eligible for services and accommodations because of disabilities. The Office of Student Disability Services is charged with the task of determining eligibility. Accommodations and services are not provided on a retroactive basis. Approval must be given prior to receiving services or accommodations. The process begins when students provide documentation of disability and meet with a coordinator in the Office of Student Disability Services to request in writing services and accommodations. Any faculty members or students who have questions about this process are encouraged to contact the Office of Student Disability Services at (813) 974-4309 or visit the website at http://www.sds.usf.edu/
Section 5
Registration and General Information

Parking Information and Campus Maps

For information on USF Parking Services, policies, and regulations, refer to:

USF Parking and Transportation Services website: [http://www.usf.edu/administrative-services/parking/](http://www.usf.edu/administrative-services/parking/)

Campus maps available: [http://www.usf.edu/administrative-services/parking/maps/index.aspx](http://www.usf.edu/administrative-services/parking/maps/index.aspx)

**USF Regulations:**

Also reference 4.00211 through 4-00219 and 4-0023 through 4-0029, FAC, available at: [http://regulationspolicies.usf.edu/regulations/](http://regulationspolicies.usf.edu/regulations/)

Office of the Registrar

Website: [http://www.registrar.usf.edu/](http://www.registrar.usf.edu/)
E-mail: regquest@admin.usf.edu
Phone: 813-974-2000
TTY: 813-974-4488

The Office of the Registrar maintains the official academic records for all students and course registrations for currently enrolled students. Students are encouraged to contact the Office of the Registrar about general questions concerning academic policies and procedures of their current registration or academic record. Note: Each student must be aware of the University’s academic policies and procedures insofar as they affect him/her.

**OASIS**

Students use a self-selected personal identification number (PIN) in the University’s [Online Access Student Information System](http://www.grad.usf.edu/) (OASIS) to:

- view registration appointment information
- view registration hold information
- view the Schedule of Classes
- register and drop/add courses
- view their grades
- request address changes
- request privacy
- request transcripts
Registration Information

USF Regulation USF4-0101, [http://regulationspolicies.usf.edu/regulations/pdfs/regulation-usf4.0101.pdf](http://regulationspolicies.usf.edu/regulations/pdfs/regulation-usf4.0101.pdf)

Register for Classes

To register for classes students must login to the OASIS system. Current course offerings and registration requirements are listed in the Schedule of Classes. Note that some courses may require permits from the department for registration.

- **OASIS:** [http://usfonline.admin.usf.edu/](http://usfonline.admin.usf.edu/)
- **Schedule:** [http://www.registrar.usf.edu/ssearch/search.php](http://www.registrar.usf.edu/ssearch/search.php)

Late Registration

Degree-seeking students who do not register prior to the first day of classes may late-register the first week of classes. A late registration fee is charged during this week. To avoid cancellation of registration, fees and tuition are due and payable for all registered courses of record on the fifth day of classes (end of drop/add period). Students are responsible for verifying the accuracy of their course registration by the end of the drop/add period (i.e. by the fifth day of classes). In the event there are courses incorrectly listed or missing on the record, students should go into OASIS and make the necessary corrections. Course registration not corrected by the end of the fifth day of classes will result in liability of tuition and fees. If courses need to be added or dropped after the fifth day of classes, refer to the Add / Drop sections of the Catalog.

Medical Requirements for Registration


Student Health Services is charged with the responsibility of evaluating and maintaining medical requirements for registration for all University of South Florida students. Florida law (Section 1006.69 Florida statute) requires that all admitted Florida university students be aware of MENINGOCOCCAL MENINGITIS and HEPATITIS B, two diseases that may be prevented by vaccination. The vaccines for each of these diseases are available at the University of South Florida Student Health Services. Please refer to [http://www.shs.usf.edu/immunizations.aspx](http://www.shs.usf.edu/immunizations.aspx) for further information. In addition, students residing in on-campus housing must present (a) proof of vaccination against MENINGOCOCCAL MENINGITIS, and (b) proof of vaccination against HEPATITIS B or sign a declination of HEPATITIS B proof.

According to Florida Administrative Code Rule 6C-6.001(5) "Each student accepted for admissions shall, prior to registration, submit on a form, provided by the institution, a medical history signed by the student." As a prerequisite to matriculation or registration, the State University System of Florida requires all students born after 1956 to present documented proof of immunity to MEASLES (Rubeola) and RUBELLA (German measles).

In addition, new admits (international students and US citizens living abroad) must show proof of screening for Tuberculosis (TB) within the past year. New admits who have not taken the TB test may do so when they arrive, but will not be allowed to register until the test has been taken. (Reference USF Policy 33.003 - [http://regulationspolicies.usf.edu/policies-and-procedures/pdfs/policy-33-002.pdf](http://regulationspolicies.usf.edu/policies-and-procedures/pdfs/policy-33-002.pdf))

All students new to USF are required to submit a signed copy of the official USF Medical History form and submit immunization documentation for the following:

1. **Medical History Form:** Sign the Mandatory Immunization Health History Form
2. **Measles 1, Measles 2, Rubella (MMR):** Vaccination (2 doses after 1st birthday) OR Titer (lab work) Date & Result
3. **Hepatitis B-1:** Vaccination OR Check the declination box OR Titer (lab work) Date & Result
4. Meningitis: Menactra/MCV4 vaccination at AGE 16 OR OLDER (if living on campus) OR check the declination (if not living on campus)

5. TB Screening: Tuberculosis Screening required for all International Students and U.S. born students residing at an address outside the U.S. at the time of application.

In order to register, this form, including the required documentation, must be completed, signed, and returned to:

Student Health Services
University of South Florida
4202 East Fowler Avenue, SHS 100
Tampa, FL 33620-6750
Fax: (813) 974-5888
Telephone: (813) 974-4056

Administrative Holds
A student may be placed on administrative hold by failure to meet obligations to the University. When a student is on administrative hold, he/she may not be allowed to register, receive a diploma, or receive a transcript. Settlement of financial accounts must be made at the University Cashier’s Office. Each student placed on administrative hold should determine from the Office of the Registrar which office placed him/her in this status and clear the obligation with that respective office. Information for how to remove a hold is online at - http://www.usf.edu/student-affairs/student-health-services/immunizations/immunhold.aspx

Cancellation of Registration for Non-Payment

Equal Opportunity Policy

Diversity and Equal Opportunity: Discrimination and Harassment Policy:
http://regulationspolicies.usf.edu/policies-and-procedures/pdfs/policy-0-007.pdf
DEO website: http://usfweb2.usf.edu/eoa/
Phone: 813-974-4373

The University of South Florida system (USF system) is a diverse community that values and expects respect and fair treatment of all people. The USF system strives to provide a work and study environment for faculty, staff and students that is free from discrimination and harassment on the basis of race, color, marital status, sex, religion, national origin, disability or age, as provided by law. The USF system protects its faculty, staff, and students from discrimination and harassment based on sexual orientation. The USF system is also committed to the employment and advancement of qualified veterans with disabilities and veterans of the Vietnam era. Discrimination, harassment and retaliation are prohibited at the University, and complaints of such conduct must be filed with the Diversity and Equal Opportunity Office (“DEO”). DEO will review such complaints and provide appropriate response including counseling, mediation, and/or referral for disciplinary action, up to and including termination from employment and/or expulsion from the University. A student or employee who believes that he or she has not been treated in accordance with the University’s Equal Educational and Employment Opportunity Policy or its Policy on Sexual Harassment may file an Equal Opportunity Complaint. Additional information about these procedures may be obtained from the Diversity and Equal Opportunity Office or by calling 974-4373 or 813-974-1510 (TDD). It is prohibited for any administrator, supervisor, or other employee of USF to take any retaliatory action against an individual who, in good faith, has made a charge, testified, assisted, or participated in any manner in an investigation, proceeding, or hearing under provisions of applicable law.
Student Ombuds - BOG Regulation 6.011

Location: SVC 2057
Schedule an Appointment: (813) 974-0835
Web Address: http://www.usf.edu/student-affairs/ombuds/

The Ombuds Office at USF is a confidential, impartial, independent and informal resource for students who wish to convey concerns and/or resolve disputes related to the University. The mission of the Ombuds Office is to facilitate fair and equitable resolution processes that promote student success. The Ombuds Office is not an official office of notice for the University of South Florida. The Student Ombuds, as a neutral facilitator, will listen to concerns and help students develop a range of options in an informal attempt to achieve resolution. The Ombuds may also refer students to appropriate individuals and offices and clarify University policies and procedures. All information disclosed in the Ombuds Office will be held confidential unless otherwise authorized by the student or otherwise required by applicable law, including Chapter 119, Florida Statutes.

Center for Victim Advocacy & Violence Prevention

The Center for Victim Advocacy & Violence Prevention (part of the Division of Student Affairs) provides free and confidential services to students, faculty, and staff of all gender identities who have experienced crime, violence, or abuse for incidents occurring on or off campus, recently or in the past. Services are provided by professional Victims Services Practitioners and may include: crisis intervention, emotional support, personal and systems advocacy, court accompaniment, victim helpline, safety planning, and assistance filing for injunctions (protective orders) and crime victim’s compensation claims. We also provide prevention and education presentations, programs and events.

Appointments are available in our office or other safe locations on campus. Walk-ins are welcomed, Monday – Friday, 8:00 a.m. to 5:00 p.m. After hours, weekends and holidays, an advocate is available for victims of violent crimes through the Victim Helpline.

Important Contact Information
Victim Helpline: (813) 974-5757; Office: (813) 974-5756; Student Services Building (SVC) 0067; www.sa.usf.edu/advocacy/

Students with Disabilities Services

In accordance with Section 504 of the Rehabilitation Act, The Americans with Disabilities Act and The ADA Amendments Act, the University of South Florida provides reasonable classroom accommodations for otherwise qualified students who have documented disabilities. Students seeking accommodations must register with the Services for Students with Disabilities Office. See http://www.usf.edu/student-affairs/student-disabilities-services/ for a list of common accommodations and more information on the accommodations process. Admissions: Students with disabilities apply under the same guidelines as all students through the Offices of Undergraduate or Graduate Admissions.

Course Substitution: Students with disabilities requesting substitution of coursework for General Education, or Foreign language requirements should contact Students with Disabilities Services. Students with declared majors requesting substitution of departmental graduation requirements will need to contact the chair of their department. In either case, students will be requested to submit documentation to SDS to support their request for an exception. Parking: Students with state parking privileges need only supply their state card as documentation for eligibility to Parking and Transportation Services. Students without state privileges need medical documentation to be considered for on-campus parking. Contact: http://www.usf.edu/administrative-services/parking/ Housing: Accessible on-campus residence hall housing is available for students with special
needs. Specific information is available through Housing and Residential Education. Contact: http://www.usf.edu/student-affairs/housing/

Diversity Inclusion and Equal Opportunity:

Students with disabilities are encouraged to participate fully in all University events, programs, and other campus activities. Information on whom to contact to request accommodation or assistance should be listed on program information and advertisements. If unable to secure the requested assistance or if additional help with accessibility is needed, contact the ADA Coordinator in Diversity Inclusion and Equal Opportunity (DIEO) at http://www.usf.edu/diversity/

USF - Reasonable Academic Accommodations and Services for Students
Ms. Deborah McCarthy, Director
4202 E. Fowler Avenue, Student Services Building (SVC) 1133, Tampa, FL 33620-6500
(813) 974-4309 (Voice), Email Contact: dmccarthy@usf.edu,
Web Contact: http://www.usf.edu/student-affairs/student-disabilities-services/

Office of Veteran Success

Location/Phone: John and Grace Allen Building (ALN) 130
(813) 974-2291

USF is approved for the education of veterans, eligible dependents/spouses, members of the selected reserve, and active-duty personnel who are eligible for benefits under public laws now in effect. All majors currently offered at USF are approved by the Department of Veterans Affairs. Students who may be eligible for benefits are urged to contact the Office of Veteran Success, (813) 974-2291 or vetserve@usf.edu, for information, procedures, and forms as early as possible.

USF Veteran Success website: http://www.usf.edu/student-affairs/veterans/
VA toll free number is 1-888-442-4551.

Career Services

Location/Phone: Student Services Building (SVC) 2088; (813) 974-2171
Web Address: http://www.usf.edu/career-services/

Career Services provides USF students with comprehensive career planning and job search services. A staff of experienced professionals is available to help students choose a career; gain career-related work experience and plan their job search. Career Services also provides information on employment opportunities and creates venues where students can network and interview with local, state, national and international employers.

Tobacco and Smoke Free University

USF is committed to providing a safe, healthy and enjoyable learning, living and working environment. The USF Tampa Campus is entirely tobacco and smoke free. Smoking and use of tobacco products are not allowed in any indoor or outdoor area, including parking garages, grounds, sidewalks or recreational areas. This policy also includes the use of e-cigarettes.
Academic Term and Student Information

Semester System
USF operates on a semester system. Semesters begin in August and January with Summer Sessions beginning in May and June. See Academic Calendar for appropriate dates. For information on converting quarter hours to semester hours, for purposes such as transfer of credit and the required GPA for admissions, refer to: http://www.grad.usf.edu/inc/linked-files/gpa.pdf

Academic Load
See Enrollment Requirements in the Academic Policies Section

Academic Standing

Class Standing - A student’s class standing is determined by the number of credits he/she has earned without relation to his/her GPA.

6M - Graduate student admitted to a major in a Master’s Degree Program
6A - Graduate student admitted to a major in a Specialist Degree Program
6D - Graduate student admitted to a major in a Doctoral Degree Program (not eligible to register for dissertation hours)
6C - Graduate student admitted to Doctoral Candidacy (eligible to register for dissertation hours)
7A-7D 1st-4th year professional Degree Program (M.D.) or post-doctoral status

Also see “In good standing” in the Academic Policies Section

Student Definitions

Degree Seeking Students:
Students who have been accepted into a major within a degree program

Graduate Certificate Seeking Students:
Students who have been accepted into a Graduate Certificate. Students who are non-degree seeking, but who are admitted to a Graduate Certificate may register during the same registration period as Degree-Seeking Students. For more information about Graduate Certificates and specific requirements, refer to Section 11 Graduate Certificates or go to the Graduate Certificate website at http://www.usf.edu/innovative-education/programs/graduate-certificates/

Non-Degree-Seeking Students:
Students who have not been accepted into a major within a degree program or Graduate Certificate. Non-Degree-Seeking students may enroll and enter classes on a space available basis by obtaining appropriate approval from the degree-granting college or academic unit in which the courses are offered. Non-Degree-Seeking students must meet all prerequisites for courses in which they wish to enroll. Certain classes are available only to degree-seeking students and may not be available for Non-Degree-Seeking students.

All coursework transferred into the graduate major must have a grade of B or better. Any application of such credit must be approved by the degree-granting college and must be appropriate to the major. For more information, refer to the Transfer of Credit policy in the Academic Policies Section. Prior to completing twelve (12) hours in a specific major it is strongly recommended that a Non-Degree-Seeking...
Student apply for admission and be accepted to the major to continue taking courses in the major. Majors may have additional requirements, so check with the major of interest for more information.

**Transient Students:**
USF 10.001 Transient Student Policy:
http://regulationspolicies.usf.edu/policies-and-procedures/pdfs/policy-10-001.pdf

The SUS Transient Student program enables a graduate student to take advantage of resources available on other SUS campuses. A Transient Student, by mutual agreement of the appropriate academic authorities in both the sponsoring and hosting institutions, receives a waiver of admission requirements and application fee at the host institution and a guarantee of acceptance of earned credits by the sponsoring institution. A graduate advisor, who will initiate a visiting arrangement with the appropriate faculty of the host institution, must recommend a Transient Student. USF degree-seeking students who wish to enroll at another regionally accredited institution MUST HAVE PRIOR WRITTEN APPROVAL from their college academic advisor to receive credit for courses taken. For more information, contact the Registrar’s Office at (813) 974-2000. **Transient Student Form:** http://www.registrar.usf.edu/forms/TSF2008-04-07_16_17_06.pdf

**Graduate Assistantships (GA), Research Assistantships (RA), and Teaching Assistantships (TA):**
Graduate Assistantships are intended to recruit quality students to graduate study at USF and to enhance the graduate learning experience. Graduate assistantships exist within academic departments or other university offices on campus. Graduate assistants may teach, conduct research, or perform other tasks that contribute to the student’s professional development. Graduate students may be classified as Graduate Assistants (GAs), Graduate Teaching Assistants/Associates (GTAs), Graduate Instructional Assistants (GIAs), and/or Graduate Research Assistants/Associates (GRAs). All graduate assistants at USF work under a contract negotiated by the Graduate Assistants United (GAU) and the USF Board of Trustees. The GAU is the labor union certified as the exclusive bargaining agent for graduate assistants at USF. To receive an assistantship, the graduate student must meet the following eligibility requirements:

- Accepted in a graduate major;
- Maintain an overall minimum grade point average (GPA) and major GPA of 3.00;
- Enrolled full-time during the semester(s) appointed as a graduate assistant;
- For teaching assistantships, demonstrate proficiency in spoken English (if student is not from an English speaking country).

Full-time enrollment is considered nine (9) graduate credit hours in the fall semester, nine (9) graduate credit hours in the spring semester, and six (6) graduate credit hours in the summer semester. If a graduate assistant is enrolled in the last semester of his/her program of study, the number of registered semester hours may be less than the full-time requirement. Graduate assistants must comply with all Office of Graduate Studies enrollment requirements to retain their assistantship as stated in the Graduate Catalog.

The TA Training offered by ATLE as a requirement of training for all new Teaching Assistants (9183/9184 job codes) is designed in two parts to deliver blended instruction on the essentials of teaching at USF. First, TAs complete a set of seven media-rich and interactive modules that comprises an 8-hour online course intended to equip USF Teaching Assistants with the skills needed to effectively plan and deliver compelling courses that will ensure student success. Second, this online knowledge base is complemented by either an 8 hour one-day face-to-face session (for information: http://www.usf.edu/atle/events/ta-training.aspx) or an 8 week course (for information: http://www.usf.edu/atle/events/pct-course.aspx) that is ideal for any graduate student teaching at the college level, either while here with us at USF or in their future career. The focus of this component is on teaching college classes, and doing it well, which examines best practices in a number of topics related to course design and course delivery, so that by the end of the major, Teaching Assistants feel like they are well-equipped to build and deliver a college-level class on their own and will receive a certificate. Those who elect the 8-week course will focus on
For specifics regarding Graduate Assistantship requirements, guidelines, and policies, refer to the Graduate Assistantships Resource Center online at [http://www.grad.usf.edu/assistantships.php](http://www.grad.usf.edu/assistantships.php), the Graduate Catalog Academic Policies Section, and also the Graduate Assistants Policies and Guidelines Handbook.

**Student Identification Card (USFCard and ID Badge) Policy**

University policy requires all students obtain and carry the **USFCard** while on campus. The USFCard is primarily used for identification, for verification of USF status, and for using University services, such as the Library, the purchase of parking decals, obtaining passes for University sporting and theatrical events, and other related events/services. USFCards may be obtained at the USFCard Center on each campus. Legal Identification (passport, driver’s license, or State/ Government Photo Identification card) must be presented to obtain a USFCard. For the issuance of a family card, the student (with their USFCard) must accompany the family member(s) who must also provide legal identification. All privileges extended to the family(s) are discontinued when the Sponsor is no longer a student. Use of the USFCard by anyone other than the person to whom it was issued is strictly prohibited. The cardholder is responsible for any and all losses associated with their card. Fees for issuance of the first and replacement cards are in accordance with USF 5.018. Refer to the fee schedule for costs of each additional family member card. Financial services, long distance telephone services, and other features are options available at the user’s discretion. USFCards are the property of the University of South Florida and must be returned on request.

**Student Records Policy**

Pursuant to the provisions of the Family Educational Rights and Privacy Act (“FERPA”; 20 USC Par. 1232g), 34 CFR Par. 99.1 et seq, Florida Statutes Sub. Par. 228.093 and 240.237 and USF Rule 6C4-2.0021, Florida Administrative Code, students have the right to:

1. Inspect and review their education records;
2. Privacy in their education records;
3. Challenge the accuracy of their education records; and
4. Report violations of FERPA to the FERPA Office, Department of Education, 400 Madison Avenue, SW, Washington, D.C. 20202 and/or bring actions in Florida Circuit Court for violations of USF 4-2.001, Florida Administrative Code.

Copies of the University’s student records policy, USF 2.0021, may be obtained from the Office of the Registrar or the General Counsel.

**Academic Record**
The student’s academic record shall not be changed after the student has graduated. Except in cases of administrative error, the student’s academic record shall not be changed once the semester has rolled.

**Release of Student Information**
Pursuant to requirements of the Family Educational Rights and Privacy Act (FERPA), the following types of information, designated by law as “directory information,” may be released via official media of USF (according to USF policy): **Student name, local and permanent addresses, telephone listing, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, full- and part-time status, and the most recent previous educational agency or institution attended, and other similar information.** The University Directory, published annually by the University,
contains only the following information, however: student name, local and permanent address, telephone listing, classification, and major field of study. The Directory and other listings of “directory information” are circulated in the course of University business and, therefore, are accessible to the public, as well as to students, faculty, and staff. Students must inform the USF Office of the Registrar in writing (forms available for that purpose), if they wish directory information to be withheld. Such requests must be received within the first two (2) weeks of the semester and will remain in effect until the student has not been enrolled at USF for three (3) consecutive terms. Notification to the University of refusal to permit release of “directory information” via the University Directory must be received no later than the end of the first week of classes in the Fall Semester.

Exclusions
Members or former members of the faculty who hold or have held the rank of Assistant, Associate, or Full Professor are not eligible to be granted degrees from USF, except upon prior authorization of the Office of Graduate Studies and the Provost. In cases where a member of the immediate family of a faculty member is enrolled in a graduate major, the faculty member may not serve on any advisory or examination committee or be involved in any determination of academic or financial status of that individual.

Course Information

Academic Credit hours

Academic credit provides the basis for quantifying the amount of engaged learning time expected of a typical student enrolled in traditional classroom settings, laboratories, studios, internships and other forms of experiential learning, and distance and correspondence education. Credit hours are a measure of learning, and support a wide range of activities, including the transfer of students from one institution to another, awarding financial aid, and credentialing for employment. Because of the significance of awarding credit hours, an institution is obligated to ensure that credit hours for courses and majors conform to the commonly accepted standards of higher education, as stated in the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) Federal Requirements 4.9 (Definition of Credit Hour) (http://sacscoc.org/pdf/081705/Credit%20Hours.pdf) and the SACSCOC Credit Hours Policy Statement. This Policy is intended to ensure that all credit-bearing courses and programs offered by the University of South Florida System (USF System) meet the requirements of the Federal definition of a credit hour and the Credit Hours Policy Statement issued by the SACSCOC.

In determining the maximum number of credits that may be assigned to a course, the following guidelines apply.

- For courses taught in a “traditional” classroom format in a 15-week semester, the maximum number of credits to be assigned is limited to the weekly number of 50-minute contact periods (or their equivalent) with the instructor. Underlying this statement is an assumption that each 50-minute contact period requires a minimum additional two hours of student work outside of the class involving reading, exercises, etc. Where this assumption does not hold true (as may be the case with some laboratories, for example), then the maximum number of credits may be significantly less than the weekly number of 50-minute contact periods.
  - For a lecture class, one unit is considered to be one hour of lecture class time and two hours per week of homework. For the typical three-unit class, a student spends three hours per week in class and should do six hours per week of homework. The total number of class contact hours per semester equals the credit hours multiplied by 15 weeks.
  - For a laboratory class, the hours per week are considered to be all in class with no outside assignments. Thus, one unit is three hours per week of laboratory time.
Where a course includes “by arrangement lab hours,” these generally take the place of the hours assigned to homework, since the student is required to use supervised college facilities to do assignments related to homework. An example might be a 3-unit lecture course which requires the student also to work two hours per week in the computer lab. There would be only four hours per week of additional homework required.

- In all cases, but particularly in cases such as online learning where seat time is non-verifiable, credit hours are awarded on the basis of documented student learning outcomes that reflect the amount of academically engaged time for a typical student in a traditional format, and on the basis of documentation of the amount and type of work a typical student is expected to complete within a specified period of academically engaged time. The number of credit hours awarded is based on the number and/or rigor of student learning outcomes, with the higher number of credit hours awarded yielding greater number and/or rigor of outcomes.

Availability of Courses
USF does not commit itself to offer all the courses, majors, and minors listed in this catalog unless there is sufficient demand to justify them. Some courses may be offered only in alternate semesters or years, or even less frequently if there is little demand.

Mandatory First-Day Attendance Policy
All students are required to attend class the first day a class meets, for both online and on-campus courses. Students unable to attend must contact the instructor prior to the first day to ensure they are not dropped from the course. This policy is not applicable to courses in the following categories: Educational Outreach, FEEDS Program, Community Experiential Learning (CEL), Cooperative Education Training, and courses that do not have regularly scheduled meeting days/times (such as, directed reading/research or study, individual research, thesis, dissertation, internship, practica, etc.). Students are responsible for dropping undesired courses in these categories by the 5th day of classes to avoid fee liability and academic penalty. (See USF Regulation – Registration - 4.0101, http://regulationspolicies.usf.edu/regulations/pdfs/regulation-usf4.0101.pdf)

Attendance Policy for the Observance of Religious Days by Students
In accordance with Sections 1006.53 and 1001.74(10) (g) Florida Statutes and Board of Governors Regulation 6C-6.0115, the University of South Florida (University/USF) has established the following policy regarding religious observances: http://regulationspolicies.usf.edu/policies-and-procedures/pdfs/policy-10-045.pdf

Cross-listing 4000/6000 Courses
It is expected that the 4000 and 6000 courses will have distinct syllabi demonstrating different depth and breadth of the subject matter as reflected in the course requirements. The courses presuppose different audiences, and the intention is to offer them at distinct levels.

Course Currency
All courses, with the exception of those approved for transfer of credit, should meet the time limit specified for the degree and be academically relevant as determined by the faculty in the graduate major. Courses used for the graduate degree requirements can be no more than ten years old at the time the degree is conferred.

Course Descriptions
For a listing of the most current, approved course descriptions refer to the USF Course Inventory Database available online at http://ugs.usf.edu/course-inventory or in the course description listing in the Graduate Catalog.

Adds
After a student has completed his/her registration on the date assigned, he/she may add a course(s) during the drop/add week (i.e. through the fifth day of classes) through the OASIS system. Courses may be added with instructor approval and verification up to the last day to withdraw without academic penalty. See Academic
Calendar for deadlines. Courses may not be added after the deadline to withdraw without academic penalty or retroactively except in cases of University Administrative error.

Drops/Withdrawals

Drop
A student may drop a course(s) during the drop/add periods (first five days of classes) in order for the course(s) not to appear on any permanent academic records. No tuition or fees will be assessed for course(s) dropped within that period. Courses may not be dropped after the last day of classes except in cases of University Administrative error.

Withdrawal - A student may withdraw from a course(s) between the second and tenth week of the semester (except for summer sessions - see the Summer Schedule of Classes for dates). However, tuition and fees will be assessed for any course(s) withdrawn by the student after the first week. The student’s academic record will reflect a “W” grade for any course(s) withdrawal between the second and tenth week of the semester. Under specific conditions, consideration for refund of tuition and fees may be requested if a Fee Adjustment Request form accompanied by verifiable supporting documentation is submitted to the Office of the Registrar within six (6) months from the end of the semester to which any refund would be applicable. Students who withdraw may not continue to attend classes.

Effective Fall 2016, all graduate students will be limited to a total of two course withdrawals while enrolled as a degree-seeking or a non-degree seeking taking graduate courses at USF. Only in extenuating circumstances will approval be granted for more than two course withdrawals. Appeals for additional course withdrawals due to extenuating circumstances must be submitted to the Office of Graduate Studies via the Graduate Petition process.

Fee Adjustment Options
Students who receive approval to drop a course during the second through tenth week of classes are liable for tuition and fees. However, the student may apply for a Fee Adjustment through the Registrar’s Office if the student has any of the exceptional circumstances noted above in item 3. The Fee Adjustment form may be submitted after the petition to drop is approved and processed. The Registrar will determine if a fee/tuition refund is applicable.

Deletes
A “delete” completely removes the course from the record with no history that it was ever part of the record. Courses will not be deleted from a student’s record except in cases of University Administrative error. Requests for course deletions must be submitted only during the semester in which the error has occurred and only with written explanation from college faculty verifying the error. Such requests must be submitted by the last day of classes and approved by the College Dean or designee and the Office of Graduate Studies Dean or designee. Retroactive requests for course deletions will not be approved. Faculty and students are encouraged to review course enrollment to verify accuracy of registration. In the event of extenuating circumstances such as documented medical emergencies, military leave or University error, students may request special consideration for deletions or retroactive deletions in writing to the Dean of the Office of Graduate Studies.

Retroactive Actions
Requests for retroactive actions will no longer be considered / approved. Also see Academic Record.

Auditing Privileges and Fees
A student who wishes to sit in on a class to review the course material may do so; however, the student is not allowed to take exams, earn grades, or receive credit. The student’s status for that class is an audit and his/her presence in the classroom is as a listener. Audit status must be obtained only during the first five days of the term by filing an Audit Form and a date-stamped permit from the college/department on the campus where the course
is being offered, with the Registrar’s Office. IN-STATE fees are assessed for all audit courses. Procedure and forms for requesting to audit are available on the Registrar’s website.

Cancellation of Registration before First Class Meeting
Students may cancel their registration by notifying the Office of the Registrar in writing prior to the first day of classes. If fees have already been paid, the student may request a full refund of fees and tuition from the Office of Purchasing and Financial Services.

Voluntary Withdrawal (from the major)
A student may voluntarily withdraw from their graduate major. A Voluntary Withdrawal cannot be retroactive. The effective date of the withdrawal will be entered into the student’s record by the Office of the Registrar as the first business day after the end of the semester. Students who wish to withdraw must submit a Voluntary Withdrawal Form, available from the Office of Graduate Studies (www.grad.usf.edu). Once processed, the student’s status will be changed from Graduate Degree Seeking to Non-Degree Seeking. A change to Non-Degree Seeking status could adversely impact financial aid. Questions regarding this should be directed to the Financial Aid Department at (813) 974-4700. The student will remain financially and academically responsible for any course(s) they have registered for. The student may request to drop or delete courses they are registered for by submitting a Office of Graduate Studies Petition.

Academic Dismissal
Students may be academically dismissed from their graduate major for a variety of reasons. Once processed, the student’s status will be changed from Graduate Degree Seeking to Non-Degree Seeking. A change to Non-Degree Seeking status could adversely impact financial aid. Dismissal cannot be retroactive. The effective date will be entered into the student’s record by the Office of the Registrar as the First Business Day after the end of the Semester, except in cases of academic dismissal due to academic dishonesty or disruption of academic process. Some of the reasons for academic dismissal include*:

- Failure to successfully satisfy requirements to meet Conditional Admission by the deadline established by the major.
- Receiving an “FF” grade
- Failure to maintain “good standing”
- Failure to make satisfactory progress

*students may be dismissed for other reasons, such as violations of student conduct. Refer to the USF Policy – 6.0021 (http://regulationspolicies.usf.edu/regulations/pdfs/regulation-usf6.0021.pdf) for more information.

To be readmitted, the student will need to reapply for admission, meeting the admission criteria in place at the time. Graduate students who are assigned an “FF” grade will be academically dismissed from the University and will not be eligible to apply to any graduate major at USF.
Section 6

Tuition, Fees, and Financial Information

Tuition Information

Tuition and Fees Regulation: http://regulationspolicies.usf.edu/regulations/pdfs/regulation-usf4.0102.pdf

For tuition information refer to: http://usfweb2.usf.edu/finaid/. Tuition and fees are subject to change, without prior notice. For information on Residency for tuition purposes, refer to the Florida Residency Policy.

All registration fees and all courses added during the drop/add period must be paid in full by the payment deadline date specified in the current Schedule of Classes. Registration fee payment may be made in person or mailed to the Cashier’s office. Students not on an authorized deferred payment plan and who have not paid their registration fees in full by the published deadline will have their registrations canceled. A student will not receive credit for any courses taken during that semester. Students who are allowed to register in error may have their registration canceled. Any fees paid will be refunded or credited against any charges due the University.

Student Financial Services
Houses the Cashier’s office, student accounting, accounts receivable, and the Student Account Information desk. It is located in SVC 1038, with the mailing address: Student Financial Services, 4202 E. Fowler Ave., ADM 0147, Tampa, FL 33620.

Veteran Deferment Benefits

Students receiving VA benefits who apply in writing no later than the specified date for the 60-day deferment of fees from the Office of Veteran’s Services must pay registration fees in full by the date posted online. For more information, contact USF Veteran’s Services: at (813) 974-2291 or http://usfweb2.usf.edu/vetserve/

Financial Aid

Financial assistance is available through the Office of Financial Aid. Students requiring such assistance should contact http://www.usf.edu/financial-aid/ for information. Students eligible for tuition waivers (through assistantships, or employee benefits, etc.) should contact the department and/or college providing the waiver for information. Also see USF Regulation USF 6-0121 and USF 6-012.

Office of Financial Aid Policy on Refunds and Repayments

Fees, Fines, and Penalties
USF Regulation USF4-017, at http://regulationspolicies.usf.edu/regulations/pdfs/regulation-usf4.0107.pdf
Section 7

Academic Policies and Regulations

Academic Policy and Regulation Information

For USF Regulations refer to http://regulationspolicies.usf.edu/regulations/
For USF Policies refer to http://regulationspolicies.usf.edu/policies-and-procedures/policy-procedures.asp

Student Responsibilities

The University, the Colleges, and the majors have established certain academic requirements that must be met before a degree is granted. While advisors, directors, department chairpersons, and deans are available to assist the student meet these requirements, it is ultimately the responsibility of the student to be acquainted with all policies and regulations, and be responsible for completing requirements. If requirements for graduation have not been satisfied, the degree will not be granted. The information presented here represents the University Academic Policies. Colleges and departments may have additional requirements. Check with your College Graduate Coordinator or your Department Director for more information. Courses, majors, and requirements described in the Catalog may be suspended, deleted, restricted, supplemented, or changed at any time at the sole discretion of the University and the Board of Trustees. For a list of current course descriptions, refer to the USF Course Inventory database online at https://www.systemacademics.usf.edu/course-inventory/

Student Conduct

Members of the University community support high standards of individual conduct and human relations. Responsibility for one’s own conduct and respect for the rights of others are essential conditions for academic and personal freedom within the University. USF reserves the right to deny admission or refuse enrollment to students whose actions are contrary to the purposes of the University or impair the welfare or freedom of other members of the University community. Disciplinary procedures are followed when a student fails to exercise responsibility in an acceptable manner or commits an offense as outlined in the Student Conduct Code. Refer to the USF 6.0021, Student Code of Conduct at http://regulationspolicies.usf.edu/regulations/pdfs/regulation-usf6.0021.pdf

Responsible Conduct of Research

Responsible Conduct of Research (RCR) is a critical element in training for scholarship. USF has information about RCR available online at: www.grad.usf.edu/rcr.php

Effective Spring 2013, the Office of Graduate Studies requires all new doctoral students to have basic RCR training by completing the Collaborative Institutional Training Initiative (CITI) module most relevant to the student’s program of study. The CITI modules have been designed to introduce researchers to various elements of research conduct ranging from research misconduct to data management to mentoring. As this is a minimum requirement, specific doctoral majors may require training that goes beyond the basic components introduced in this module. Graduate Majors that have received Office of Graduate Studies approval for rigorous RCR training consistent with
disciplinary standards and practices may exempt their students from the CITI requirement. Students must complete the module, or provide evidence of previous qualified RCR training to their Graduate Director and Office of Graduate Studies, in the first semester enrolled in a doctoral major. Previous RCR training should have been completed within the past year. Students will be unable to register for courses in a future semester until successful fulfillment of this RCR requirement. Once the training is completed, the Registration hold will be lifted.

**Intellectual and Scholarship Integrity**

**Shared Authorship and Research Education Policy**

USF contains a broad range of academic majors in diverse disciplines, and the USF faculty recognize that the conventions on shared authorship and credit for scholarship vary among disciplines. In general, sharing in authorship implies both substantive intellectual contributions to the work and also approval of the work as it appears in public. Right to authorship credit is not automatically conveyed by being the instructor of a course, being a student’s major professor, or being a research assistant working with faculty and professional researchers; neither is credit automatically prohibited because of such status.

Each college/major that includes research education shall include an explicit discussion of shared authorship issues and disciplinary conventions as part of the formal curriculum addressing research methods and ethics, including the conventions of the discipline’s publications. In addition, each college or major shall have a formal statement about shared authorship made available to students (such as on a college or major website) or given to students at the same time as they are given notice about other major and college expectations.

Each college/major shall also have a written procedure for resolving questions or conflicts about shared authorship where students are involved. The college and major may use the same procedure for resolving questions for non-student employees, but the procedure for resolving questions or conflicts involving students must address the educational needs of students (e.g., explicitly asking about the nature of the research methods and ethics education as experienced by a student involved in the case at hand).

This written procedure must be made available to students (such as on a college or major website) or given to students at the same time as they are given notice about other major and university expectations.

**Academic Integrity of Students**

Reference USF Regulation 3.027 - To read the entire Regulation, go to: [http://regulationspolicies.usf.edu/regulations/pdfs/regulation-usf3.027.pdf](http://regulationspolicies.usf.edu/regulations/pdfs/regulation-usf3.027.pdf) Please note the sections that specifically pertain to graduate students.

**Disruption of Academic Process**

Student Academic Grievance Procedure

For matters that are not academic in nature, reference USF 30-053 Student Grievance Processes and Non-Academic Grievance Policy - [http://regulationspolicies.usf.edu/policies-and-procedures/pdfs/policy-30-053.pdf](http://regulationspolicies.usf.edu/policies-and-procedures/pdfs/policy-30-053.pdf)

Graduate Catalog

The USF Graduate Catalog, including college and major requirements, and major and course descriptions, is available on the web at [http://www.grad.usf.edu](http://www.grad.usf.edu). Each Catalog is published and in effect for the academic term(s) noted on the title page.

Student’s Major Degree Requirements
In order to graduate, students must meet all requirements specified in the USF Catalog of their choice, except as noted below. As the University is dynamic, changes and updates to the catalog are anticipated. In contrast to major requirements, which are tied to a specific catalog, all students must comply with University policies and procedures that come into effect each catalog year.

- Students cannot choose a USF Catalog published prior to admission (or readmission) or during an academic year in which they did not complete at least two terms. If a student is dropped from the system and must be reinstated, the student’s choice of Catalog is limited to the USF Catalog in effect at the time of readmission or any one Catalog published during their continuous re-enrollment.

- If state law or certification requirements change, the student must comply with the most current standard or criteria.

- If the College or Department makes fundamental changes to the major that necessitates changes in the degree requirements of enrolled students, the needs of those students will be explicitly addressed in the proposal for change and scrutinized by the Office of Graduate Studies.

- USF policies and procedures not related to degree requirements such as academic grievance procedures, student conduct code and other procedural processes and definitions may be updated each year and the student will be held to the most current catalog and procedures available.

- USF does not commit itself to offer all the courses, majors, and majors listed in this Catalog. If the student cannot meet all of the graduation requirements specified in the Catalog of choice as a result of decisions and changes made by the University, appropriate substitutions will be determined by the major to ensure that the student is not penalized.

Student/Advisor Relationship
Although it is ultimately the responsibility of the student to be acquainted with all policies and regulations, and be responsible for completing requirements, the Advisor’s role is to guide students in all aspects of their academic major and to monitor and evaluate students’ progress toward their degrees. He/she should be aware of any difficulties that students may be facing in their coursework or research experiences and should work with students in resolving these issues. It is recommended that the advisor and student understand each other’s expectations and that effective means of communication are established. The advisor and student are encouraged to meet at appropriate intervals to critically evaluate the student’s progress. These meetings may be requested by the student or the advisor. The advisor also has the obligation to express to the student any concerns he/she may have regarding the student’s performance, to stipulate the level and quality of work expected, and to offer suggestions leading to student success. As such, the advisor neither gives the student excessive guidance nor allows the
student to struggle needlessly. The goal of this relationship is to foster student independence, which results in successful completion of the program of study.

**Student’s Program of Study**
In addition to the graduate major requirements as specified in the Graduate Catalog, each student should have a written, flexible program of study that includes the student’s choice of Catalog year, choice of concentration, cognate, or other options available in the major, and a tentative identification of other appropriate choices available to the student in the program, which may (but does not need to) include specific courses. A program of study is not a guarantee that specific courses will be available in a specific semester or that statutory and regulatory requirements will not change during the student’s enrollment in the major. As required or appropriate, the program of study should be revisited and modified by the student and the student's advisor/major professor(s).

**Electronic Signatures**
Where procedures described in this catalog require signatures, requirements for original signatures may be satisfied by University-approved electronic signatures or other secure methods of verifying approval by advisors, major professors, committee members, or other University administrators, faculty, and staff.

**Assistantships**

Graduate Assistantships (GA), Research Assistantships (RA), and Teaching Assistantships (TA) Graduate Assistantships are intended to recruit quality students to graduate study at USF and to enhance the graduate learning experience. Graduate assistantships exist within academic departments or other university offices on campus. Graduate assistants may teach, conduct research, or perform other tasks that contribute to the student’s professional development. Graduate students may be classified as Graduate Assistants (GAs), Graduate Teaching Assistants/Associates (GTAs), Graduate Instructional Assistants (GIAs), and/or Graduate Research Assistants/Associates (GRAs). All graduate assistants at USF work under a contract negotiated by the Graduate Assistants United (GAU) and the USF Board of Trustees. The GAU is the labor union certified as the exclusive bargaining agent for graduate assistants at USF.

**Eligibility**
To receive an assistantship, the graduate student must meet the following eligibility requirements:

- Accepted in a graduate major;
- Maintain an overall minimum grade point average (GPA) and major GPA of 3.00;
- Enrolled full-time during the semester(s) appointed as a graduate assistant.
- For Teaching Assistants, demonstrate proficiency in spoken English (if student is not from an English speaking country)

**Appointments**
Graduate Assistants may be appointed up to a maximum of 0.50 FTE for a single assistantship. Majors who desire to appoint a Graduate Student, in any classification, more than 0.50 FTE up to 0.75 FTE, for single or multiple appointments, must submit justification to the Office of Graduate Studies for approval. Students hired in non-GA positions on campus must also not exceed 0.75 FTE for the combined position and assistantship appointments. It is preferred that students refrain from employment outside of the assistantship appointment. Departments may determine the maximum number of semesters for teaching assistantship appointments.

**Enrollment (Assistantships)**
Full-time enrollment is considered nine (9) graduate credit hours in the fall semester, nine (9) graduate credit hours in the spring semester, and six (6) graduate credit hours in the summer semester. If a graduate assistant is enrolled in the last semester of his/her program of study, the number of registered semester hours may be less
than the full-time requirement. Graduate assistants must comply with all Office of Graduate Studies enrollment requirements to retain their assistantship as stated in the Graduate Catalog. For specifics regarding Graduate Assistantship requirements, guidelines, and policies, refer to the Graduate Assistants Policies and Guidelines Handbook.

Note - Criminal History Background Checks may be required depending on the appointment - reference USF Policy 0-615 - http://regulationspolicies.usf.edu/policies-and-procedures/pdfs/policy-0-615.pdf

Enrollment Requirements

Students receiving Veterans' Administration benefits should confirm their enrollment requirements with the Office of Veterans' Services or Veterans’ Coordinator.

Minimum University Regulations

USF Full-Time Student Definition
Students taking a minimum of nine (9) hours toward their degree in the fall or spring semester, or taking a minimum of six (6) hours in the summer semester, will be classified as Full-Time students for academic purposes. Students may take a maximum of eighteen (18) hours in any given semester; exceeding eighteen (18) hours requires a signed program of study or written approval from the College. For financial aid enrollment requirements, refer to the Office of Financial Aid - http://usfweb2.usf.edu/finaid/other/enrollment.aspx.

Continuous Enrollment for All Graduate Students
All graduate degree-seeking students must be continuously enrolled. Continuous enrollment is defined as completing, with grades assigned, a minimum of 6 hours of graduate credit every three continuous semesters. Courses that receive a “W” grade do not fulfill continuous enrollment requirements. Colleges and majors may have additional requirements. Students on an approved leave of absence are not subject to the enrollment requirement for the time approved for the leave. Students who have been Admitted to Doctoral Candidacy must follow the Dissertation Hour Enrollment in place of the Continuous Enrollment requirement as specified here for all graduate students (not in candidacy). See also the Time Limitations Policy.

Readmission Following Non-enrollment
A graduate student who is not registered and enrolled for a minimum of six (6) credits in a 12-month period is automatically placed in non-degree seeking (i.e. inactive) status. Students must be readmitted to the major to continue their studies. Readmission is at the discretion of the major and is not guaranteed. Refer to the Readmission Policy in the Graduate Admissions Section for more information.

Enrollment during Comprehensive Exams and Admission to Candidacy
During the term in which students take the comprehensive exams, students must be enrolled for a minimum of two (2) hours of graduate credit. If the exam is taken between semesters, the student must enroll for a minimum of two (2) hours of graduate credit in the semester before or following the exam. Students must also be enrolled for a minimum of two (2) hours of graduate work in the semester of admission to doctoral candidacy.

Dissertation Hours
Students working on a dissertation must enroll for a minimum of two (2) hours of dissertation every semester, starting with the semester following Admission to Doctoral Candidacy, up to and including the semester the dissertation is submitted to and approved by the Office of Graduate Studies. Dissertation hours may apply to the Continuous Enrollment Requirement. Colleges and majors may have additional requirements. Students who are dropped from degree-seeking status and formally readmitted to the major must enroll in a minimum of 5 dissertation hours in the semester that the readmission is effective. Refer to the Readmission Policy in the

http://www.grad.usf.edu/
Graduate Admissions Section for more information. Note: students cannot be enrolled in thesis and dissertation at the same time.

Enrollment during Semester of Thesis Submission
Students must be enrolled for a minimum of two (2) thesis hours during the semester that the thesis is submitted and approved by the Office of Graduate Studies, usually the semester of graduation. Students not enrolled for the minimum requirement will not have the thesis/dissertation approved and therefore may not be certified for graduation. Note: students cannot be enrolled in thesis and dissertation at the same time.

Enrollment during Semester of Graduation
Students must be enrolled for a minimum of two (2) graduate hours during the semester of graduation.

Enrollment for Graduate Teaching and Research Assistants
Graduate Teaching and Research Assistants should be full-time students. Exceptions must be approved by the College Dean and the Dean of the Office of Graduate Studies.

Leaves of Absence (LOA)
Leaves of absence may be granted to students under exceptional and unavoidable circumstances. Students requesting a LOA must specify the reasons for the leave, as well as the duration. Requested LOA may be approved for up to two years. Students requiring less than three (3) consecutive terms of absence do not need an approved LOA if they meet the continuous enrollment requirement.

Students with an approved LOA must be enrolled in the first semester after the leave expires. To request an LOA, the student must complete the form available from the Office of Graduate Studies website. The LOA must be approved by the Major Professor, the Major, the College, and the Office of Graduate Studies, and is noted in the student’s record. If the LOA is granted, the time absent does not count against the student’s time limit to obtain the degree.

Students returning from an approved LOA must reactivate their status by contacting the Office of Graduate Studies for procedures. Doctoral candidates returning from a LOA must also have their candidacy status reactivated.

Satisfactory Academic Progress (SAP)

For Academic Purposes
Satisfactory Academic Progress for academic purposes is determined by the progress the student has made in the Major towards degree completion, taking into account the curriculum requirements, as well as the time to degree allocations. This is a separate assessment from the Satisfactory Academic Progress requirement for financial aid.

For Financial Aid Recipients

Federal regulations require all schools participating in Title IV federal financial aid programs to have a Satisfactory Academic Progress (SAP) policy that conforms to specific grade-based and time-based requirements. These requirements apply to all students as one determinant of eligibility for financial aid and include three components:
• GPA
• Pace
• Maximum Time

Refer to the Financial Aid websites for information and requirements.

**Academic Standards and Grades**

**Minimum University Requirements**

**In Good Standing**
To be considered a “student in good standing,” graduate students must
- Maintain an overall minimum grade point average (GPA) of 3.00 (on a 4.00 scale) in all courses taken as a graduate student, and
- Maintain an overall minimum grade point average (GPA) of 3.00 (on a 4.00 scale) in all courses taken in each of the student’s degree-seeking majors.

Only courses with grades of “C” (2.00) or better will be accepted toward a graduate degree; no grade of C- or below will be accepted. Students must meet the requirements to be in good standing to graduate. All “I” and “M” grades must be cleared for graduation to be certified. Students who fail to maintain good standing may be placed on probation or academically dismissed.

**Grade Point Average (GPA)**
The GPA is computed by dividing the total number of quality points by the total number of graded (A-F) hours completed. The total quality points are figured by multiplying the number of credits assigned to each course by the quality point value of the grade given. The GPA is truncated to two decimals (3.48) and is not rounded up.

Credit hours for courses with grades of I, IU, M, MU, N, S, U, W, Z and grades which are preceded by T (Transfer) are subtracted from the total hours attempted before the GPA is calculated. Graduate students are not eligible for grade forgiveness. All grades earned, regardless of course level, will be posted on the transcript. If a student retakes a course, both grades will be used in the determination of the GPA. Courses taken at USF as non-degree-seeking are not computed in the GPA unless the courses are transferred in and applied to the degree requirements. The program and the college must approve such actions.

Grades for transfer credits accepted toward the major will not be counted in the GPA unless the coursework in question was taken as a non-degree-seeking student at USF and meets the requirements stated above (see Institution Based Credit/Transfer of Credit section).

http://www.grad.usf.edu/
Graduate Grading System

**Plus/Minus Grading:**
Effective fall semester 2000, graduate and undergraduate grades will be assigned quality points in the Grade Point Average (GPA) grading system. The +/- designation must be included in the syllabus provided at the beginning of the course. The use of the +/- grading system is at the discretion of the instructor. The syllabus policy is available in the office of the Provost.

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*Incomplete grade policy change effective fall 08. IF grades earned and posted prior to fall 2008 do calculate in the GPA; IF grades earned as of fall 2008 forward do not calculate in the GPA refer to Incomplete Grade Policy for more information.

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2 Graduate Students who receive an FF will be academically dismissed from the University and will not be eligible to apply to any graduate program at USF. See section on Academic Dishonesty and Graduate Studies Policy on Academic Integrity for more information.
Satisfactory (S)/ Unsatisfactory (U)
Graduate students may not take courses in the major on an S/U (satisfactory / unsatisfactory) basis unless courses are specifically designated S/U in the Catalog. Students may take courses outside of the major on an S/U basis with prior approval of the course professor, major professor or advisor, and the Dean of the College in which the student is seeking a degree. The student may apply a maximum of six (6) hours of such credit (excluding those courses for which S/U is designated in the Catalog) toward a master’s degree. Directed Research, Thesis, and Dissertation courses are designated as variable credit and are graded on an S/U basis only. Before a student begins work under Directed Research, a written agreement must be completed between the student and the professor concerned, setting forth in detail the requirements of the course.

Incomplete (I)
Definition: An Incomplete grade (“I”) is exceptional and granted at the instructor’s discretion only when students are unable to complete course requirements due to illness or other circumstances beyond their control. This applies to all gradable courses, including pass/fail (S/U).

Students may only be eligible for an “I” when:

- the majority of the student’s work for a course has been completed before the end of the semester
- the work that has been completed must be qualitatively satisfactory
- the student has requested consideration for an “I” grade as soon as possible but no later than the last day of finals week.

The student must request consideration for an Incomplete grade and obtain an “I” Grade Contract from the instructor of record. Even though the student may meet the eligibility requirements for this grade, the course instructor retains the right to make the final decision on granting a student’s request for an Incomplete. The course instructor and student must complete and sign the “I” Grade Contract Form that describes the work to be completed, the date it is due, and the grade the student would earn factoring in a zero for all incomplete assignments. The due date can be negotiated and extended by student/instructor as long as it does not exceed one semester from the original date grades were due for that course. The instructor must file a copy of the “I” Grade Contract in the department that offered the course and the Office of Graduate Studies by the date grades are due. The instructor must not require students to either re-register for the course or audit the course in order to complete the “I” grade. Students may register to audit the course, with the instructor’s approval, but cannot re-take the course for credit until the “I” grade is cleared. The instructor will be required to complete the I-Grade Contract online when posting the semester grade at the end of the term, identifying the remaining coursework to be completed, the student’s last day of attendance, and the percent of work accomplished to this point. This online contract will be automatically copied to the student’s email and to the Registrar.

An “I” grade not cleared within the next academic semester (including summer semester) will revert to the grade noted on the contract. “I” grades are not computed in the GPA, but the grade noted on the contract will be computed in the GPA, retroactive to the semester the course was taken, if the contract is not fulfilled by the specified date. When the final grade is assigned, if applicable, the student will be placed on academic probation or academically dismissed (refer to Automated Academic Probation Procedures for information). Students cannot be admitted to doctoral candidacy or certified for graduation with an “I” grade.

Example:
- student has a “B” in the course, not including the grade for the missing assignment, therefore is eligible for an “I”
- student’s grade, including a zero for the missed work, would be an “D”
- student and instructor complete the “I” Grade Contract, assigning an “ID” (Incomplete +D grade)
Deadline Agreed Upon in Contract (e.g. two weeks):*
If the student completes the work as agreed upon in the Contract by the noted deadline
• the instructor of record will submit a change of grade in egrades
• student earns final grade comprised of all completed course work

If the student does not complete the work as agreed upon in the Contract by the noted deadline
• “I” automatically drops off and the grade of “D” remains.
• GPA is recalculated for the current semester and retroactively recalculated for the semester in which the “I” was granted.

*Although the instructor establishes the deadline for completion of the work, the deadline may only extend through the end of the subsequent semester.

Missing (M)
The University policy is to issue an M grade automatically when the instructor does not submit any grade for a graduate student. Until it is removed, the M is not computed in the GPA. To resolve the missing grade, students receiving an M grade must contact their instructor. If the instructor is not available, the student must contact the instructor’s department chair. Courses with an M grade may not be applied to the major requirements. Students with an M grade will not be admitted to doctoral candidacy until the M grade is resolved.

Continuing Registration Grades (Z)
The Z grade shall be used to indicate continuing registration in multi-semester internship or thesis/dissertation courses where the final grade to be assigned will indicate the complete sequence of courses or satisfactory completion of the thesis/dissertation. Upon satisfactory completion of a multi-semester internship or thesis/dissertation, the final grade assigned will be an S. The Office of Graduate Studies submits the change of grade for the last registration of thesis/dissertation courses once the thesis/dissertation has been accepted for publication.

Note: Graduation will not be certified until all courses have been satisfactorily completed. No grade changes will be processed after the student has graduated except in the case of university error. Procedures requiring petitions are processed through the Office of Graduate Studies.

Probation
Any student who is not in good standing at the end of a semester shall be considered on probation as of the following semester. The college or major may also place students on probation for other reasons as designated by the college or major. Notification of probation shall be made to the student in writing by the department, with a copy to the College Dean. At the end of each probationary semester, the department shall recommend, in writing, to the College Dean one of the following:

1. Removal of probation
2. Continued probation; OR
3. Dismissal from the major.

Students on probation may only enroll in graduate courses (5000-7000 level) that are part of the approved degree major requirements as specified in the Graduate Catalog. Students with a GPA below 3.00 for two consecutive semesters will be prevented from registering for courses without the permission of the College Dean. The College Dean will notify the Dean of the Office of Graduate Studies in cases of academic dismissal. To be readmitted, the student will need to reapply for admission, meeting the admission criteria in place at the time. For information on the Automated Probation Process go to http://www.grad.usf.edu/inc/linked-files/probation-procedure.pdf
Voluntary Withdrawal
A student may withdraw from the university without grade penalty by the University deadline. Information on the different types of withdrawal (i.e., withdrawing from a single class – see the Drop section, an entire semester, or from the major itself) can be obtained from the Registrar’s Office. Appropriate alternative calendar dates may apply. Students who withdraw may not continue to attend classes.

Transfer of Credit (From Institutions External to USF Tampa)
Students may transfer graduate-level structured coursework into their graduate major taken at regionally accredited institutions, including USF System Institutions (USF St. Petersburg, USF Sarasota-Manatee), with the approval of the graduate major, college, and Office of Graduate Studies.

- May transfer only graduate-level (5000-7999) structured coursework with a grade of B (3.00) or better. Courses with Pass/Fail grades are not eligible for transfer. Grades from courses taken at other Institutions are not calculated in the USF GPA, although the courses are listed on the transcript.

- May transfer in up to 50% of a given graduate major’s total minimum hours as reflected in the individual major listings in the USF Graduate Catalog in effect at the time of initial enrollment for that major. For doctoral majors, this percentage is based on the post-baccalaureate minimums. Note – the 50% maximum includes the total of both external Transfer of Credit and Internal Application of credit. Individual Graduate Majors may have more restrictive requirements.

- Must not have been used for a completed degree. For students with coursework from a completed degree, the specific course requirements in common across both majors may be waived with the substitution of other approved coursework at the discretion of the major.

- Must not be older than ten years at the time of graduation or course currency is required.

Approval Process and Deadlines for Transfer of Credit:
Acceptance of transfer of credit requires submission of the Transfer of Credit Form and approval of the:

- Graduate Director
- College Dean or designee
- Dean of the Office of Graduate Studies or designee

The Graduate Major / Department will be responsible for evaluating, approving, and initiating the transfer using established criteria to ensure academic integrity of the coursework. This must be completed and submitted to the Office of Graduate Studies no later than the end of the first semester the student is enrolled in the graduate major.

Application of Internal Credit (Internal Transfer within USF)
Students may request application of internal credit of graduate-level (5000-7999) structured coursework toward their graduate major taken at USF, with the approval of the graduate major, college, and Office of Graduate Studies, for courses taken as:

- an undergraduate student that were not used as part of the undergraduate degree requirements, except in cases of an Accelerated Degree Program approved through Undergraduate Council, Graduate Council and SACSCOC.
- a non-degree seeking status (including Graduate Certificate Students, INTO students, etc.)
- a degree-seeking student, where the student is approved for a Change of Major to another graduate major

For Application of Internal Credit:

- May transfer only graduate-level (5000-7999) structured coursework with a grade of B (3.00) or better. Courses with Pass/Fail grades are not eligible for transfer. Grades from courses taken at USF are calculated in the USF GPA and are noted on the transcript.
May transfer in up to 50% of a given graduate major’s total minimum hours as reflected in the individual major listings in the USF Graduate Catalog in effect at the time of initial enrollment for that major. For doctoral majors, this percentage is based on the post-baccalaureate minimums. Note – the 50% maximum includes the total of both external Transfer of Credit and Internal Application of credit. Individual Graduate Majors may have more restrictive requirements.

May transfer in the total hours taken as part of a completed Graduate Certificate to the graduate major with Major approval.

Must not have been used for a completed degree. For students with coursework from a completed degree, the specific course requirements in common across both majors may be waived with the substitution of other approved coursework at the discretion of the major.

Must not be older than ten years at the time of graduation or course currency is required.

Approval Process and Deadlines for Application of Internal Credit:
Acceptance requires completion of the Application of Credit Form and approval of the
- Graduate Director
- College Dean or designee
- Dean of the Office of Graduate Studies or designee

The Graduate Major / Department will be responsible for evaluating, approving, and initiating the application of credit using established criteria to ensure academic integrity of the coursework. This must be completed and submitted to the Office of Graduate Studies no later than the end of the first semester the student is enrolled in the graduate major.

Change of Graduate Major

See Change of Graduate Major in the Admissions Section.

Accelerated Majors

Accelerated Majors allow highly qualified undergraduate students to complete a Bachelor’s degree and a master’s degree in a select few majors on an accelerated timeline. Accelerated Majors commonly offer a shorter duration to completion of both degrees. Students complete a portion of the required graduate coursework while classified as an undergraduate student and have it count towards both degrees. As soon as the student completes the undergraduate degree requirements, the student is converted to graduate student status, where the remaining graduate requirements are fulfilled. Students interested in pursuing an Accelerated Program must complete an Accelerated Major Application

Note: Although students may be in an Accelerated Major, pursuing a Bachelor’s and Master’s Degree at the same time, they cannot be in two levels at once.

Accelerated Majors:
- Require that degrees are conferred sequentially
- Have an approved Program of Study, including a plan for academic advising and notation for financial aid impact
May share up to twelve (12) hours of structured graduate credit between the graduate and undergraduate degree or between the graduate degree and the Honors College Curriculum Requirements tied to the undergraduate major. Refer to the specific major for total hours approved to be shared.

Require approval from the Undergraduate Council, Graduate Council, and SACSCOC. It is preferred that the total combined credits be at least 150 credits (120 bachelor’s and 30 master’s) after the shared coursework is counted. Accelerated Majors with less than 150 total combined credits may be considered for approval but require submission to SACSCOC as a Substantive Change to the Major.

Require a 3.33 GPA overall and a 3.50 GPA in the undergraduate major

Require that the admission requirements for the graduate major be noted in the Accelerated Major requirements.

Require a minimum of 15 hours in the undergraduate major to be completed before a student may apply for consideration for the Accelerated Major

Require a “B” (3.00) in each graduate course taken as part of the shared credits applied to both undergraduate and graduate majors. Consequences for not obtaining a “B” will be noted in the specific Accelerated Major requirements.

APPLICATION AND PROGRESSION

Application - Students may be considered for an Accelerated Major following completion of a minimum of 15 hours in the undergraduate major and submission of an Accelerated Major Application. The student may be considered for acceptance into the Accelerated Major through faculty nomination or student self-nomination via submission of the Accelerated Major Application Form. Majors will review and approve the application.

Progression - Majors will verify graduate admission eligibility and submit the required paperwork (Accelerated Graduate Major Progression Form) to officially convert the student to graduate standing, no later than when the student has reached 90 hours or Bachelor’s degree has been conferred. The application requires approval from the Graduate Major, College, and Office of Graduate Studies.

Concurrent Degree Options

Students interested in Concurrent Degrees:

- Must apply for admission to the first major and validate admission through enrollment. In the semester following that enrollment, the student must apply for admission to the second major and concurrent degree approval.
- May share between 0% and 15% of the total combined minimum credit hours. Only structured graduate coursework may be shared.
- Will meet all other separate degree requirements (e.g. two dissertations, one thesis/one dissertation, projects, exams, etc.), unless the Concurrent Degree was approved with a combined requirement by Graduate Council through the formal Concurrent Degree Curriculum Approval.
- Must have a minimum of 60 total combined graduate hours after the shared hours are applied for concurrent master’s majors, or a minimum of 102 total combined graduate hours for a concurrent master’s/doctorate
- Degrees may be conferred sequentially or concurrently, as specified in the approved Major requirements
- Both Degrees must be conferred within the time-limit for the first degree to which the student is admitted.

Example: A student is enrolled in two master’s majors, one requires 30 hours and the other requires 42 hours minimum. With approval, the student may share 9 hours (equal to or less than 15%) across the combined 72 total minimum credit hours required. The total minimum hours completed would then be 63. The student would also complete two separate theses. In concurrent degrees where the student is completing a thesis for one major and the other does not require a thesis, the thesis submitted to the Office of Graduate Studies reflects the Major for which it is required.

http://www.grad.usf.edu/
Concurrent Degree Curriculum Approval
Concurrent Degrees are developed by the faculty in the Department and submitted for approval via the Concurrent Degree Curriculum Approval Form. Concurrent Degree Curriculum Proposals must be approved by the Department, School/College Committees (as appropriate), the College, Office of Graduate Studies, and Graduate Council.

Concurrent Degree Graduation Certification
Majors participating in an approved Concurrent Degree are encouraged to work collaboratively with a shared Program of Study to ensure timely progression and coordination of requirements for the student. Each degree is certified individually per standard procedures.

Interdisciplinary Majors
A student may pursue a single graduate degree that spans several academic areas.

An Interdisciplinary Major –
Defined as a student pursuing a single stand-alone graduate degree, which is offered across two or more graduate majors. (Note: where two separate degrees are preferred, refer to the Concurrent Degree information above).

Application to an Interdisciplinary Major
Students interested in applying for admission to an Interdisciplinary Major follow the established University, College, and Major admission requirements – refer to the Office of Graduate Studies website for specific information for that particular major.

Development of an Interdisciplinary Major
Interdisciplinary Majors are formalized through the College, Office of Graduate Studies, and Graduate Council and must follow the University requirements for development of a new degree program and/or major, including notation on the Workplan, if applicable. Procedures for developing an Interdisciplinary Major are available on the Office of Graduate Studies website. For information contact the Office of Graduate Studies.

Off-Campus Courses and Majors
Graduate courses and majors are offered at locations other than the Tampa, Sarasota, St. Petersburg, and Lakeland campuses. Information on course enrollment procedures for off-campus courses and majors may be obtained from the College in which the courses or majors are offered.
Section 8

University Degree Requirements

Degree Requirements

The following sections describe the University requirements established by the Office of Graduate Studies for the Master’s, Education Specialist, and Doctoral degrees. However, individual majors and colleges may establish additional or more stringent requirements.

Student Responsibilities

The University of South Florida and all colleges, departments and majors therein establish certain academic requirements that must be met before a degree is granted. These requirements concern such things as curricula and courses, majors and minors, and academic residence. Faculty and graduate directors are available to help the student understand and arrange to meet these requirements, but the student is responsible for fulfilling them. At the end of a student's course of study, if all requirements for graduation have not been satisfied, the degree will not be granted. For this reason, it is important for students to acquaint themselves with all regulations and to remain currently informed throughout their college careers. Courses, majors, and requirements described in the catalog may be suspended, deleted, restricted, supplemented, or changed in any other manner at any time at the sole discretion of the University and the USF Board of Trustees.

Graduate Faculty Definition

The University of South Florida recognizes Graduate Faculty and Affiliate Graduate Faculty. Only Graduate Faculty, and Affiliate Graduate Faculty approved for such purposes, may serve as the Instructor of Record for graduate level courses.

Graduate Faculty is defined to consist of all tenure-track or tenured faculty appointed at the Assistant, Associate, or Professor rank, who holds a terminal degree or equivalent in their discipline. Graduate Faculty members are eligible to teach graduate courses and may direct and serve on masters, specialist, and doctoral level committees. To chair a doctoral level committee, a Graduate Faculty member must engage in current and sustained scholarly, creative, or research activities, such as publications, performances, exhibitions, patents, inventions and research grants.

Affiliate Graduate Faculty membership may be granted by the Office of Graduate Studies Dean to individuals whose skills or expertise meet criteria established by the College. Affiliate Graduate Faculty membership is in effect for a specified period of time and specific purposes. Affiliate members may be eligible to serve on masters, specialist, and doctoral level committees, to direct master's and specialist's level committees, and to co-direct doctoral level committees, at the discretion of the College. Affiliate Graduate Faculty can only serve as the Instructor of Record when they have a terminal degree in the discipline and are approved to teach graduate courses in that field. Emeritus Professors and retired or recently resigned professors may also be appointed as Affiliate Graduate Faculty with the approval of the College and Office of Graduate Studies Dean.

Graduate Faculty Approval – Graduate faculty is defined as noted above; Colleges and Departments may have additional requirements. The Office of Graduate Studies will maintain a list of Graduate Faculty along with approval guidelines from the Colleges and Departments. Also reference USF Policy 10-115 – Faculty Credentials for
Teaching Undergraduate and Graduate Courses - http://regulationspolicies.usf.edu/policies-and-procedures/pdfs/policy-10-115.pdf. For a current list of Graduate Faculty and Affiliate Graduate Faculty in any major contact the graduate director or coordinator.

Master’s Degree Requirements

Minimum Hours
A minimum of thirty (30) hours is required for a master’s degree, at least sixteen (16) hours of which must be at the 6000 level or above; the remaining hours must be at the 5000 level or above.

At least twenty (20) hours must be in formal, regularly scheduled structured course work. Lower level undergraduate courses may not be used to satisfy master’s course requirements but may be taken to meet specific prerequisites. All graduate and undergraduate courses taken as a graduate student count in the overall GPA, whether or not they count toward the minimum hours for the degree. Graduate students may not enroll for more than 18 hours in any semester without written permission from the College Dean. The minimum number of credit hours required for each individual master’s major is noted in the degree requirements section of the Graduate Catalog for that major listing. Majors with formally approved concentrations must have core major requirements that all students must successfully complete.

Institutional Enrollment Requirement
At least 50% of credits toward a graduate degree must be earned through instruction offered by the home institution (e.g., USF Tampa, USF St. Petersburg, USF Sarasota-Manatee) granting the degree. For information about the minimum number of credit hours required for the major refer to the curriculum requirements in the catalog listing for that major. Students are responsible for consulting with their Graduate Director for information on courses that may be taken outside their graduate major, as well as the Transfer of Credit Policy for course transfer eligibility requirements. Although equivalent courses may be offered at other institutions including within the USF System, they may not satisfy degree requirements.

Students must matriculate for at least one semester following admission to the University before graduation may be approved. Students who want to change majors following admission into the University, must wait one semester before submitting the Change of Major request.

Students who change to a lower degree level (e.g. change from doctorate to master’s), in the same major, may graduate the same semester that the change is approved, provided that it is not the first semester following admission to the University.

Time Limitations
Master’s and Ed.S. degrees must be completed within five (5) years from the student’s date of admission for graduate study. Courses taken prior to admission to the USF graduate major, for example as non-degree seeking or from other institutions, must be transferred in prior to graduation (preferably before the end of the student’s second semester; see Course Currency Link). Master and Ed.S. degrees (including concurrent degrees) that require course work in excess of 50 credit hours may be granted a longer time limit by the University Graduate Council.

Time Limit Extensions
In the event that a student nears the end of the time limitation as specified above, but the student needs more time to complete the degree, the student may submit a request for an extension using the Time Limit Extension Request Form, available on the Office of Graduate Studies website http://www.grad.usf.edu/student-forms.php. Requests must include:
- the reasons for the delay in completion,
- the anticipated time needed for completion,
- endorsements from the graduate faculty advisor, graduate major, and College Dean or designee,
- a detailed plan of study denoting the pathway to completion and timeline for the remaining requirements for the degree

Note — for the time limit extension procedures, if the time limit extension will cause courses taken within the major to be older than 10 years, then a request for course concurrency may be required or the courses may be invalidated toward the degree requirements, per the time-limit policy.

If approved, the time-limit extension applies to courses applied toward the degree, with the exception of those transferred in or from completed majors. However, majors may require additional or repeat coursework as part of the condition of the time-limit extension. For requests exceeding a year of additional time, the Office of Graduate Studies will audit the student’s progress each semester to ensure that the plan of study is adhered to and that progress towards degree completion is occurring.

Students who exceed the time limitations may have their registration placed on hold until a request for extension has been approved. Only one time-limit extension request is permitted. Students who are temporarily unable to continue the major should submit a Leave of Absence Request, which extends the time limit for the duration of the approved Leave for up to two years (see the section on Leave of Absence in the Enrollment Requirements section.)

Note - Time Limit Extensions are valid for a maximum period of two (2) years from the date of request. For more information and guidance, contact the Office of Graduate Studies.

Enrollment Requirements
Refer to the Academic Policies Section

Major Professor
The Major Professor serves as the student’s advisor and mentor. Students should confer with the Department (or equivalent) to confirm the internal process and timeline for the selection and appointment of the Major Professor. The student must identify a major professor from the student’s academic area and receive that person’s agreement to serve as major professor. The selection of the Major Professor must be approved and appointed by the Department as soon as possible, but no later than the time the student has completed 50% of the major. Students must have a major professor in order to maintain Satisfactory Academic Progress.

If a major professor cannot be identified or in the event a major professor is unable or unwilling to continue serving on the student’s committee, the student is responsible for finding another major professor from the Department (or equivalent). Students who are unable to find a replacement major professor should confer with the Graduate Director for available options (including converting to a non-thesis option if available.) If no other options exist, the student may be requested to voluntarily withdraw from the major or may be honorably withdrawn in good academic standing. The student and major professor should plan a program of study which, when completed, will satisfy the degree requirements specified. A copy of this program of study, signed by the student and professor, must be maintained in the student's department file.

Major Professors must meet the following requirements:
• Be from the student’s academic area -- Be graduate faculty*, as defined by the University, from the student's academic area.
• Be engaged in current and sustained scholarly, creative, or research activities and have met departmental (or equivalent) requirements
• Have been approved by the student’s Department Chair (or equivalent) to serve as a Major Professor or Co-Major Professor

*Affiliate Graduate Faculty may serve as a Co-Major Professor with a graduate faculty from the student’s department. Co-Major Professors may be two graduate faculty or one graduate faculty and one approved Graduate Affiliate Faculty

The membership of graduate faculty will be based upon criteria developed within the appropriate major or department and approved at the college level. These criteria must be forwarded to the Dean of the Office of Graduate Studies.

In the event a Major Professor leaves the University (i.e., for an appointment at another university, due to retirement, etc.) and the Major Professor is willing and able to continue serving on the student’s committee, the Major Professor then becomes a Co-Major Professor on the Committee and another graduate faculty from the student’s Department is appointed as the other Co-Major Professor. In the event that the other Co-Major is Affiliate Graduate Faculty, the faculty leaving the University may remain as a member, with another graduate faculty from within the student’s Department appointed as the other Co-Major Professor. To ensure that the student can make satisfactory progress, one of the Co-Major Professors must be accessible on the University campus for the student to make satisfactory progress on the thesis/dissertation. In the event a Major Professor is on temporary leave (e.g. sabbatical, research, etc.); the Major Professor shall coordinate with the Graduate Director to facilitate the needs of the student. In some instances, a student may choose to have two professors serve as Major Professor. In this situation the faculty are approved as “Co-Major Professors” and jointly serve in that role. Consequently, both faculty must sign approval on paperwork pertaining to the student's processing (i.e., committee form, change of committee form, etc.)

(Co-) Major Professor(s) of the Graduate Student Supervisory Committee Responsibilities
Available on the Office of Graduate Studies Website: http://www.grad.usf.edu/policies.php

Thesis Committee
Students working toward a thesis degree will have the benefit of a committee of members of the graduate faculty. The committee will approve the course of study for the student and plan for research, supervise the research and any comprehensive qualifying exams, and read and approve the thesis for content and format.

Composition
The committee will consist of either:
• the major professor and at least two other members or
• two co-major professors and at least one other member

Committee members should be from the general research area in which the degree is sought. (Colleges and Majors may require additional committee members and specify characteristics.)

Member Definition
All graduate faculty, as defined by the University and the College/Department, and approved by their department and college, are assumed by the Office of Graduate Studies as qualified to be a member of and/or supervise a committee. Persons desiring to serve on a Graduate committee who are not defined as Graduate Faculty (i.e. visiting faculty, professionals, etc.) by the University and the College/Department must submit a curriculum vitae (CV) and be approved by the Department, College, and, as needed, the Office of Graduate Studies, for each committee.

Committee members must meet the following requirements:
• Be graduate or affiliate graduate faculty, as defined by the University
• Have the background and expertise that contributes to the success of the student.
In addition to the requirements specified in the Graduate Faculty definition, committee membership will be based upon criteria developed within the appropriate major or department and approved at the college level. These criteria must be forwarded to the Dean of the Office of Graduate Studies.

**Approval**

Once a committee has been determined, a Supervisory Committee Form needs to be completed by the student and submitted to the Committee Members for original signatures. Check with the College for instructions and forms. The original appointment form and two (2) copies should be submitted to the College Associate Dean’s office for approval. A copy of the approved form should be kept in the student’s file. An approved and current Committee Form must be on file in the major/college before graduation may be certified. Committee forms need to be processed as early in the major as possible, but no later than the semester prior to graduation. (Colleges and departments may institute additional requirements for membership on Supervisory Committees.)

**Changes to Committee**

Changes to a Supervisory Committee must be submitted on a Change of Committee Form. Check with the College for instructions and forms. Original signatures of faculty being added to the Committee, along with the approval signature of the (Co-) Major Professor(s), must be on the form. Faxed signatures are acceptable. Faculty who are removed from the Committee are not required to sign the form, provided that the (Co-) Major Professor(s) has signed. In such instances the signature of the (Co-) Major Professor(s) indicate(s) approval of the change, as well as acknowledgement and approval of the change by the removed member. Any non-faculty being added to a committee must submit a Curriculum Vitae (CV) for college approval. Change of Committee Forms should be submitted for approval as soon as the change takes place. Changes to a Committee are official only once approved and filed by the major and college.

**Masters Comprehensive Examination**

Prior to clearance for the degree, candidates must perform satisfactorily on a comprehensive examination or an alternative method designated by the academic unit to measure student competency in the major area. Students must be enrolled for a minimum of two (2) hours of graduate credit during the semester when the comprehensive examination is taken. If the exam is taken between semesters, the student must be enrolled for a minimum of two (2) hours of graduate credit in the semester before or following the exam.

**Thesis**

If a thesis is required, it must conform to the guidelines of the University. Refer to the Thesis and Dissertation Guidelines, available on the web at [http://www.grad.usf.edu/ETD-main.php](http://www.grad.usf.edu/ETD-main.php) for complete information about requirements, procedures, and deadlines. For enrollment requirements, refer to the Academic Policies section in the Catalog.

**Thesis Format**

The Thesis must conform to one of two formats:

**Option 1 – a traditional format** inclusive of:

- Part I: Preliminary Pages
  - Title Page
  - Dedication (optional page)
  - Acknowledgments (optional page)
  - Table of Contents

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3 Deviations from the available format are acceptable if approved in advance by the Supervisory Committee and Office of Graduate Studies.
List of Tables (if applicable)
List of Figures (if applicable)
Abstract

Part II:  Text (divided by chapter or section headings)

Part III: References / Bibliography

Appendix Sections and copyright permission (if applicable)

About the Author (optional page)

Option 2 — collection of articles/papers instead of chapters. References may be at the end of each section or at the end of the entire document. Copyright permissions (if applicable) must be noted in the Appendix.

Part I:  Preliminary Pages
  Title Page
  Dedication (optional page)
  Acknowledgments (optional page)
  Table of Contents
  Abstract

Part II:  Introduction
  Collection of Articles/Papers *
  Conclusion

Part III:  References / Bibliography

Appendix Sections and copyright permission (if applicable)
About the Author (optional page)

*Students must be first author for articles and papers used for the thesis/dissertation, or another designation or affirmation that the student had primary intellectual responsibility for the publication.

NOTE – students cannot be enrolled in thesis and dissertation hours at the same time. The master’s must be awarded prior to doctoral candidacy.

Directed Research
Directed Research hours may satisfy up to 50% of the thesis hour requirement.

Manuscript Processing Fee
Students participating in the thesis/dissertation process are required to pay a processing fee. More information is available on the Thesis and Dissertation website.

Exchange of Thesis for Non-Thesis Credit
If a student changes from thesis to non-thesis during a semester and is currently enrolled in thesis credit, the current thesis credits may be exchanged without academic penalty if an Office of Graduate Studies Petition is filed with the Office of Graduate Studies no later than the last day to withdraw without Academic Penalty. If a
student enrolled in a thesis required major has taken thesis credits but elects to change to non-thesis track, the accumulated thesis credits may not be exchanged or converted to another non-structured credit. The thesis hours will remain on the transcript and will retain the “Z” grade.

**Thesis Defense**

Policies and procedures for the thesis defense are handled within the College and Major. Contact the College and Major for requirements.

**Thesis Final Submission Guidelines**

Information on requirements for submission of the finished and approved manuscript copies is available online at the Thesis and Dissertation website [http://www.grad.usf.edu/ETD-res-main.php](http://www.grad.usf.edu/ETD-res-main.php). Students who fail to submit the final copy of a thesis by the posted submission deadline will be considered for graduation in the following semester and must therefore apply for graduation by the posted deadline, enroll in a minimum of two (2) thesis hours for that subsequent semester, and meet the submission requirements as posted on the Thesis/Dissertation website. Only after the Office of Graduate Studies has approved the manuscript can the student be certified for the degree.

**Mandatory Electronic Submission**

Students are required to submit the thesis in an electronic format (ETD). Requirements and procedures are available at the Office of Graduate Studies website [http://www.grad.usf.edu/ETD-res-main.php](http://www.grad.usf.edu/ETD-res-main.php).

**Submission for Official Publication and Archiving**

All theses/dissertations will be submitted to the Office of Graduate Studies designated System for official publication and archiving.

**Changes after Publication**

Once a thesis is approved and accepted by the Office of Graduate Studies for publication, it cannot be changed.

**Release of Thesis Publications**

The University recognizes the benefits from collaboration with sponsors on research projects but also recognizes the possibility of conflicts of interest in the disclosure of the results of the collaborations. While the sponsor’s economic interests in the restriction of disclosure should be considered, the University has a primary mission to extend knowledge and disseminate it to the public and the broader academic community. The University’s “Statement of Policy Regarding Inventions and Works” acknowledges the possible need for delays in publication of sponsored research to protect the sponsor’s interests, but it provides no definite guidelines for the restrictions of publication beyond the statement: “Disclosure delays mutually acceptable to the Inventor, the Vice President for Research, and the sponsor, if any, are authorized in order to allow patent applications to be filed prior to publication, thereby preserving patent rights...”

To protect the University’s primary goal from un-due compromise, the University has adopted the following guidelines:

1. The recommendations of sponsors, regarding publication of research results should be considered advisory rather than mandatory.

2. In support of academic discourse and the mission to promote and share academic works, Theses will be released for worldwide access once submitted to and approved by the USF Office of Graduate Studies. In the event that a patent or copyright application provides reason to delay the

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release of the Thesis, a petition to request a one-year delay may be submitted to the Office of Graduate Studies for consideration. Such requests must be received by the format check of the thesis.

3. Students should not be delayed in the final defense of their theses by agreements involving publication delays.

Duty to Disclose New Inventions and Works
For information about the requirements of this policy contact the Division of Patents and Licensing at (813) 974-0994.

Thesis Change of Grade
In the semester in which the final manuscript has been received, reviewed, and certified for permanent filing in the University Library, the Office of Graduate Studies submits the change of grade from “Z” to “S” for the last registration of thesis courses to the office of the registrar when all grades are due at the end of the semester.

Education Specialist Degree (Ed.S.) Requirements

Ed.S. Thesis
Students who are required to submit an Ed.S. Thesis must meet all of the requirements for the thesis, as specified in the Master’s Degree section of this publication. For specific major information, refer to the College of Education.

Ed.S. Project
Students who are required to submit an Ed.S. Non-Thesis project must meet all of the requirements as specified by the College of Education. A project does not need to meet the requirements of a thesis and is not submitted to the Office of Graduate Studies for approval and archiving.

Doctoral Degree Requirements

The doctoral degree is granted in recognition of high attainment in a specific field of knowledge. It is a research degree and is not conferred solely upon the earning of credit, the completion of courses, or the acquiring of a number of terms of residency, but also the successful completion of scholarly work. The length of residency and the requirements below are minimums; majors/colleges may elect to establish more rigorous requirements. The degree will be granted after the student has shown proficiency and distinctive achievement in a specified field, has demonstrated the ability to do original, independent investigation, and has presented these findings with a high degree of literary skill in a dissertation. A major professor will be appointed as soon as possible but no later than the time the student has completed 50% of the major. The advisor will advise on any specific subject matter deficiencies and assist in the choice of a major professor and area of research.

Responsible Conduct of Research
Responsible Conduct of Research (RCR) is a critical element in training for scholarship. USF has information about RCR available online at: [www.grad.usf.edu/rcr.php](http://www.grad.usf.edu/rcr.php)

Effective Spring 2013, Office of Graduate Studies requires all new doctoral students to have basic RCR training by completing the Collaborative Institutional Training Initiative (CITI) module most relevant to the student’s program.
of study. The CITI modules have been designed to introduce researchers to various elements of research conduct ranging from research misconduct to data management to mentoring. As this is a minimum requirement, specific doctoral majors may require training that goes beyond the basic components introduced in this module. Graduate Majors that have received Office of Graduate Studies approval for rigorous RCR training consistent with disciplinary standards and practices may exempt their students from the CITI requirement. Students must complete the module, or provide evidence of previous qualified RCR training to their Major Director and Office of Graduate Studies, in the first semester enrolled in a doctoral major. Previous RCR training should have been completed within the past year. Students will be unable to register for courses in a future semester until successful fulfillment of this RCR requirement. Once the training is completed, the Registration hold will be lifted.

**Doctoral Minimum Hours**

The doctoral degree is earned on the basis of advancement to doctoral candidacy status and satisfactory completion of the dissertation. *Note-* for professional doctorates (e.g. Au.D., DNP, DrPH, DPT, MD), a dissertation may not be required. Refer to the major listing for more information. The minimum number of credit hours to earn the doctorate is 72, post-bachelors, including dissertation (or project). The minimum number of credit hours required for each individual doctorate major is noted in the degree requirements section of the Graduate Catalog for that major listing. Some graduate majors may require more than 72 hours. Majors with formally approved concentrations must have core major requirements that all students must successfully complete.

Students must comply with general enrollment requirements and also institutional residency requirements. All doctoral students must have at least one gradable (A-F) graduate course taken at USF to satisfy the GPA minimum requirements. No undergraduate course may be used to satisfy the gradable minimal course requirement for the doctoral degree. Lower level undergraduate courses may not be used to satisfy doctoral major requirements, but may be taken to meet specific prerequisites. All graduate and undergraduate courses taken as a graduate student count in the overall GPA, whether or not they count toward the minimum hours for the degree.

**Time Limitations**

Doctoral degrees must be completed within seven (7) years from the student’s original date of admission for doctoral study. All courses applied to the doctoral degree must be completed within ten (10) years, including courses taken

1) prior to admission to the USF doctoral major,
2) taken as non-degree seeking, or
3) transferred in from other institutions.

There is no time limitation for courses from a completed master’s degree used toward a doctoral degree. For students who are readmitted, see Readmission Policy. Typically, a student will reach candidacy within four years, but this may vary per discipline.

**Time Limit Extensions**

In the event that a student nears the end of the time limitation as specified above, but the student needs more time to complete the degree, the student may submit a request for an extension using the *Time Limit Extension Request Form*, available on the Office of Graduate Studies website [http://www.grad.usf.edu/student-forms.php](http://www.grad.usf.edu/student-forms.php).

Requests must include

- the reasons for the delay in completion,
- the anticipated time needed for completion,
- and endorsements from the graduate faculty advisor, graduate major, and College Dean or designee,
- a detailed plan of study denoting the pathway to completion and timeline for the remaining requirements for the degree.
Note — for the time limit extension procedures, if the time limit extension will cause courses taken within the major to be older than 10 years, then a request for course concurrency may be required or the courses may be invalidated toward the degree requirements, per the time-limit policy.

If approved, the time-limit extension applies to courses applied toward the degree, with the exception of those transferred in or from completed majors. However, majors may require additional or repeat coursework as part of the condition of the time-limit extension. For requests exceeding a year of additional time, the Office of Graduate Studies will audit the student’s progress each semester to ensure that the plan of study is adhered to and that progress towards degree completion is occurring.

Students who exceed the time limitations may have their registration placed on hold until a request for extension has been approved. Only one time-limit extension request is permitted. Students who are temporarily unable to continue the major should submit a Leave of Absence Request, which extends the time limit for the duration of the approved Leave for up to two years (see the section on Leave of Absence in the Enrollment Requirements section.)

Note - Time Limit Extensions are valid for a maximum period of two (2) years from the date of request. For more information and guidance, contact the Office of Graduate Studies.

Enrollment Requirements
See Academic Policies Section

Institutional Enrollment Requirement
The majority of credits toward a graduate degree must be earned through instruction offered by the home institution (e.g., USF Tampa, USF St. Petersburg, USF Sarasota-Manatee) granting the degree. For information about the minimum number of credit hours required for the degree refer to the degree requirements in the major listing. Students are responsible for consulting with their graduate coordinator for information on courses that may be taken outside their graduate major, as well as the Transfer of Credit Policy for course transfer eligibility requirements. Although equivalent courses may be offered at other institutions (including within the USF System), they may not satisfy degree requirements.

Major Professor
The Major Professor serves as the student's advisor and mentor. Students should confer with the Department (equivalent) to confirm the internal process and timeline for the selection and appointment of the Major Professor. The student must identify a major professor and receive that person's agreement to serve as major professor. The selection of the Major Professor must be approved and appointed by the department as soon as possible, but no later than the time the student has completed 50% of the major. Students must have a major professor in order to maintain Satisfactory Academic Progress.

If a Major Professor cannot be identified or in the event a Major Professor is unable or unwilling to continue serving on the student’s committee, the student is responsible for finding another Major Professor. Students who are unable to find a replacement Major Professor should confer with the Graduate Director for available options. If no other options exist the student may be requested to voluntarily withdraw from the major or may be honorably withdrawn in good academic standing. The student and Major Professor should plan a program of study which, when completed, will satisfy the degree requirements specified. A copy of this program of study, signed by the student and professor, should be maintained in the student's department file.

Major Professors must meet the following requirements:
• Be from the student’s academic area -- Be graduate faculty*, as defined by the University, from the student’s academic area
• Be engaged in current and sustained scholarly, creative, or research activities and have met departmental (or equivalent) requirements
• Be active in scholarly pursuits as evidenced by at least one refereed publication in the last three years.
• Have been approved by the student’s Department Chair (or equivalent) to serve as a Major Professor or Co-
Major Professor.

*Affiliate Graduate Faculty may serve as a Co-Major Professor with a graduate faculty from the student’s
department. Co-Major Professors may be two graduate faculty or one graduate faculty and one approved
Graduate Affiliate Faculty

The membership of graduate faculty will be based upon criteria developed within the appropriate major or
department and approved at the college level. These criteria must be forwarded to the Dean of the Office of
Graduate Studies.

In the event a Major Professor leaves the University (i.e., for an appointment at another university, due to
retirement, etc.) and the Major Professor is willing and able to continue serving on the student's committee, the
Major Professor then becomes a Co-Major Professor on the Committee and another graduate faculty from the
student’s Department is appointed as the other Co-Major Professor. In the event that the other Co-Major is
Affiliate Graduate Faculty, the faculty leaving the University may remain as a member, with another graduate
faculty from within the student’s Department appointed as the other Co-Major Professor. It is important that one
of the Co-Major Professors be accessible on the university campus for the student to make satisfactory progress on
the thesis/dissertation. In the event a Major Professor is on temporary leave (e.g. sabbatical, research, etc.); the
Major Professor shall coordinate with the Graduate Director to facilitate the needs of the student. In some
instances, a student may choose to have two professors serve as Major Professor. In this situation the faculty are
approved as “Co-Major Professors” and jointly serve in that role. Consequently, both faculty must sign approval on
paperwork pertaining to the student's processing (i.e. committee form, change of committee form, admission to
 candidacy, etc.)

(Co-) Major Professor(s) of the Graduate Student Supervisory Committee Responsibilities
Available on the Office of Graduate Studies Website: [http://www.grad.usf.edu/policies.php](http://www.grad.usf.edu/policies.php)

Doctoral Committees
Some Colleges have a Graduate Committee comprised of graduate faculty, who advise the student from admission
up to doctoral candidacy, when the formal Doctoral Dissertation Committee is formed. As soon as an area of
research is determined and a major professor is selected, a Doctoral Dissertation Committee will be appointed and
approved for the student. The Department will request approval of the Doctoral Committee from the Dean of the
College and, as needed, the Dean of the Office of Graduate Studies.

Role of Doctoral Committees
Depending on the College, either the Graduate Committee or the Doctoral Dissertation Committee is
responsible for

• approving the student’s course of study
• grading the written comprehensive qualifying examination

Doctoral Dissertation Committee
Doctoral Dissertation Committees will,

• approve the plan for research
• supervise the research
• read and approve the dissertation, and
• conduct the dissertation defense.
**Member Definition**

All graduate faculty, as defined by the University and the College/Department, and approved by their department and college, are assumed by the Office of Graduate Studies as qualified to be a member of and/or supervise a doctoral committee. Persons desiring to serve on a committee who are not defined as Graduate Faculty (i.e. visiting faculty, professionals, etc.) by the University and the College/Department must submit a curriculum vitae and be approved by the Department, College, and Office of Graduate Studies, for each committee.

Committee members must meet the following requirements:

- Be graduate or affiliate graduate faculty, as defined by the University
- Have the background and expertise that contributes to the success of the student.

In addition to the requirements specified in the Graduate Faculty definition, committee membership will be based upon criteria developed within the appropriate major or department and approved at the college level. These criteria must be forwarded to the Dean of the Office of Graduate Studies.

**Composition**

The Doctoral Dissertation Committee will consist of at least four members:

- the Major Professor must be from the student’s academic area—two additional members must come from the academic area (i.e. discipline) of the student
- at least one external member (from outside the Department, School, or equivalent, hosting the doctoral major, but may be within the academic discipline)
- Faculty holding joint or adjunct appointments in the degree-granting academic unit (i.e. Department or equivalent) cannot be external members on a student’s committee.

**Approval**

Once a committee has been determined, a *Doctoral Dissertation Committee Form* needs to be completed by the student and submitted to the Committee Members for original signature. Check with the College for instructions and forms. To insure uniformity of excellence across the colleges, the (Co-)Major Professor(s) of Doctoral Dissertation Committees will need to submit a current curriculum vita (equivalent to an NIH Bio, approximately two pages long with the last three (3) years of scholarly activity included) with the committee appointment form to the College Dean or designee. This approval is in addition to the approval from their department chairperson. (Colleges and departments may institute additional requirements for membership on Doctoral Dissertation Committees.) Once approved, the original form and the approved Curriculum Vitae (CV) are placed in the student’s file. An approved and current Form must be on file in the major/college before graduation may be certified. *Doctoral Dissertation Committee Forms* need to be processed as early in the major as possible, but no later than the semester prior to graduation.

**Changes to Committee**

Changes to a Doctoral Dissertation Committee must be submitted on a *Change of Committee Form*. Check with the College for instructions and forms. Original signatures of faculty being added to the Committee, along with the approval signature of the (Co-) Major Professor(s), must be on the form. Faxed signatures are acceptable. Faculty who are removed from the Committee are not required to sign the form, provided that the (Co-) Major Professor(s) has signed. In such instances the signature of the (Co-) Major Professor(s) indicate(s) approval of the change, as well as acknowledgement and approval of the change by the removed member. Any non-faculty being added to a committee must submit a CV for approval. If a faculty member is being added as a Co-Major Professor, or if there is an appointment change to the Major Professor position, a CV must be included for the faculty member who is being added to that position. Change of Committee Forms should be submitted for approval as soon as the change takes place. Changes
to a Committee are official only once approved and filed by the major and college. An approved and current **Doctoral Dissertation Committee Form** must be on file before graduation may be certified.

**Doctoral Qualifying Examination**
As soon as the substantial majority of the course work is completed, the student must pass a written qualifying examination covering the subject matter in the major and related fields. This examination may be supplemented by an oral examination. Students must be enrolled for a minimum of two (2) hours of graduate credit in their discipline at the time they take the qualifying examination. If the exam is taken between semesters, students must be enrolled for a minimum of two (2) hours of graduate credit in the semester before or following the exam.

**Admission to Candidacy**
In order to be admitted to doctoral candidacy, students must meet the following requirements at USF:

1. admission to a doctoral major
2. appointment of a Doctoral Committee,
3. attainment of an overall and major Grade Point Average (GPA) of 3.00 at USF at the time of candidacy. All "I" and "M" grades, including "IF" and "MF", must be cleared before candidacy may be finalized.
4. successful completion of a qualifying examination
5. certification by the Doctoral Committee that the above qualifications have been successfully completed.

The Admission to Candidacy form should be submitted for approval during the semester that the qualifying exams were completed, but no later than the semester following the successful completion of the exam. The form will be approved by the Dean of the College and forwarded to the Dean of the Office of Graduate Studies for final approval. Doctoral Candidacy is effective as of the day that the Office of Graduate Studies approves of the request and changes the student’s status to 6C. For procedures and processing deadlines refer to the Office of Graduate Studies website at [www.grad.usf.edu](http://www.grad.usf.edu).

Once candidacy status is approved, students with approved candidacy are eligible to enroll in dissertation hours (7980) in the semester that immediately follows the last business day of the approval window. For example, students approved during the Fall approval window may enroll in the Spring. Students approved during the Spring approval window may enroll in the summer and students approved during the Summer approval window may enroll in the Fall. **Students may NOT enroll in dissertation hours prior to being admitted to doctoral candidacy.** Each major has a required number of dissertation hours for completion of the degree. Departments may, with College approval, apply Directed Research hours toward the total number of dissertation hours required. Directed Research hours shall not exceed 50% of the dissertation hour requirement. No directed research hours will be converted to dissertation hours (i.e. a directed research course dropped and a dissertation course added) prior to or during the approval window. **For more information, refer to Enrollment Requirements in the Academic Policies section.**

**Dissertation**
Dissertation requirements are for the academic degrees of Ph.D. and Ed.D. For the professional degrees of Au.D. and D.P.T., contact the professional school for doctoral project requirements. The Dissertation must conform to the guidelines of the University. Refer to the Thesis and Dissertation Guidelines, available on the web at [http://www.grad.usf.edu/ETD-res-main.php](http://www.grad.usf.edu/ETD-res-main.php) for information about requirements, procedures, and deadlines. For enrollment requirements, refer to the Academic Policies section in the Catalog.
Dissertation Format

The Dissertation must conform one of two available formats

Option 1 - traditional format\(^5\) inclusive of:

Part I: Preliminary Pages
   Title Page
   Dedication (optional page)
   Acknowledgments (optional page)
   Table of Contents
   List of Tables (if applicable)
   List of Figures (if applicable)
   Abstract

Part II: Text (divided by chapter or section headings)

Part III: References / Bibliography\(^6\)
   Appendices Title Page
   Appendix Sections (if applicable)

Part IV: About the Author (required for dissertations)

Option 2 — collection of articles/papers instead of chapters. References may be at the end of each section or at the end of the entire document. Copyright permissions (if applicable) must be noted on the Acknowledgements page.

Part I: Preliminary Pages
   Title Page
   Dedication (optional page)
   Acknowledgments and copyright permission (if applicable)
   Table of Contents
   Abstract

Part II: Collection of Articles/Papers

Part III: References / Bibliography\(^7\)
   Appendices Title Page
   Appendix Sections (if applicable)

NOTE — students cannot be enrolled in thesis and dissertation hours at the same time. The master’s must be awarded prior to doctoral candidacy.

\(^5\) Deviations from the two available formats are acceptable if approved in advance by the Supervisory Committee and Office of Graduate Studies.

\(^6\) Include either References or a Bibliography, as specified by your style guide.

\(^7\) Include either References or a Bibliography, as specified by your style guide.
Directed Research
Directed Research hours taken with the (Co) Major Professor(s) prior to approval to doctoral candidacy by the Office of Graduate Studies may satisfy up to 50% of the dissertation hour requirement, with program approval.

Manuscript Processing Fee
Students participating in the thesis/dissertation process are required to pay a processing fee. More information is available on the website at http://www.grad.usf.edu/ETD-res-main.php

Doctoral Dissertation Defense
After the Doctoral Dissertation Committee has determined that the final draft of the dissertation is suitable for presentation; the Committee will request the scheduling and announcement of the Dissertation Defense (also called Final Oral Examination or Oral Defense.) Check with the College and Major for college and major specific procedures for this process. A copy of the announcement should be sent to the Office of Graduate Studies, preferably two weeks in advance of the defense date. The announcement must also be posted in a public forum for a minimum of twenty-four hours to comply with statute requirements for a public meeting. The student and the Major Professor (or, if Co-Major Professors, at least one) must be physically present at the defense. The student must successfully defend the dissertation to be able to proceed and complete the final submission process.

Doctoral Dissertation Defense Chair
The Doctoral Dissertation Defense (Final Oral Examination) shall be presided by

- an external committee member from outside the Department, School, or equivalent, hosting the doctoral major, but may be within the academic discipline.

OR,

- a non-committee member (a.k.a. Outside Chair), (Refer to the individual Program's Degree Requirements in the Graduate Catalog for information). If the Chair is from another institution, this individual must be approved for Affiliate Graduate Faculty status.

The Doctoral Dissertation Defense Chair’s role includes overseeing the proceedings as well as serving as the student’s advocate, by ensuring fairness of the process. Faculty holding joint, courtesy, or adjunct appointments in the degree-granting academic unit (i.e. Department or equivalent) cannot serve as the Defense Chair.

Procedures for Conducting the Doctoral Dissertation Defense (Final Oral Examination)

1. The Doctoral Dissertation defense (final oral examination) should be conducted within a timeline to allow for the student to make any necessary corrections following the defense and still meet the final copy deadline for turning in the Dissertation to the Office of Graduate Studies.

2. The presentation should be considered an important function in the Department and all graduate students and faculty be encouraged to attend.

3. The presentation and defense are open to the public and as such, must meet the requirements of the Sunshine Laws for the State of Florida. The Doctoral Dissertation Committee deliberation is not public.
4. The room selected for the examination should have adequate seating with an alternate room selected in case of problems.

5. It is required that all members of the Doctoral Dissertation Committee be present for the examination unless an absence is approved prior to the defense taking place by the Office of Graduate Studies Dean. In the event that a member cannot attend in person, participation is permissible via speakerphone or video conference. A minimum of three members, including the Major Professor is required to proceed with the defense. If a non-committee member (Outside Chair) chairs the Defense, this individual does not count as one of the three required members in attendance. If an unforeseeable situation arises that would prevent compliance with this requirement the Major Professor or Doctoral Dissertation Defense Chair should contact the Office of Graduate Studies for guidance and approval to proceed with the defense.

6. The length of the examination period will generally not exceed three hours. Throughout this time the Doctoral Dissertation Defense Chair is to be in charge of all proceedings and, ideally, is expected to play a balancing role between advocacy and contention.

7. The Doctoral Dissertation Defense Chair, at any time during the course of the examination, may request all visitors to leave.

8. **Presentation**
   - The Doctoral Dissertation Defense Chair should open the proceedings by introducing the candidate and the Doctoral Dissertation Committee.
   - The examination should begin with a presentation by the candidate designed to summarize the dissertation.

9. **Questions**
   Following the presentation, the Defense may be moved to a different setting for the main examination. The College determines the order of the proceedings described below:
   - The examination will consist of questions about the research by the Doctoral Dissertation Defense Chair and the Doctoral Dissertation Committee.
   - It is suggested that questioning should be limited to about 15 minutes for each Doctoral Dissertation Committee member with subsequent rounds of questioning as necessary.
   - Questions from the faculty-at-large and/or the public may be allowed following the presentation. It is suggested that questioning from the general audience be limited up to 5 minutes per person.

10. **Deliberations and Voting**
    Following the completion of these proceedings, the Doctoral Dissertation Defense Chair
    - will ask all visitors and the candidate to leave and will reconvene the Doctoral Dissertation Committee only.
• will preside over the deliberations and voting of the Committee (Note: if a non-committee member (Outside chair) is used he/she will not participate in the voting)

• is responsible for tallying the votes and informing the candidate of the final decision. The voting is to be limited to "pass" and "fail" votes. The vote of the Doctoral Dissertation Committee must be unanimous. If unanimous agreement cannot be reached, the Doctoral Dissertation Defense Chair notifies the student’s Department Chair (or appropriate equivalent) who will endeavor to resolve the dispute in an expedient fashion.

• records the vote on the Successful Defense Form and conveys the decision of the Doctoral Dissertation Committee (Successful Defense Form) to the Department/College Graduate Office to be kept in the student’s file.

11. Approval of the Final Dissertation

All committee members must approve the final version of the dissertation via the Certificate of Approval Form. If the Committee is unable to unanimously approve a final draft of the dissertation, the student’s Department Chair and College Dean will work with the Doctoral Dissertation Committee to seek an equitable resolution.

Dissertation Final Submission Guidelines

Information on requirements for submission of the finished and approved manuscript copies is available online at the Thesis and Dissertation website at http://www.grad.usf.edu/ETD-res-main.php. Students who fail to submit the final copy of a dissertation by the posted submission deadline will not be considered for graduation. The student may be considered for graduation in the following semester and must therefore apply for the degree (graduation) by the posted deadline, enroll in a minimum of two (2) dissertation hours for that subsequent semester, and meet the submission requirements as posted on the Thesis/Dissertation website. Only after the Office of Graduate Studies has approved the manuscript can the student be certified for the degree.

Mandatory Electronic Submission

Students are required to submit the dissertation in an electronic format (ETD). Requirements and procedures are available at the Office of Graduate Studies website at http://www.grad.usf.edu/ETD-res-main.php

Submission for Official Publication and Archiving

All theses/dissertations will be submitted to the Office of Graduate Studies designated System for official publication and archiving.

Changes after Publication

Once a dissertation is approved and accepted by the Office of Graduate Studies for publication, it cannot be changed.

Release of Dissertation Publications

The University recognizes the benefits from collaboration with sponsors on research projects but also recognizes the possibility of conflicts of interest in the disclosure of the results of the collaborations. While the sponsor’s economic interests in the restriction of disclosure should be considered, the University has a primary mission to extend knowledge and disseminate it to the public and the broader academic community. The University’s “Statement of Policy Regarding Inventions and Works” acknowledges the possible need for delays in publication of sponsored research to protect the sponsor's
interests, but it provides no definite guidelines for the restrictions of publication beyond the statement: “Disclosure delays mutually acceptable to the Inventor, the Vice President for Research, and the sponsor, if any, are authorized in order to allow patent applications to be filed prior to publication, thereby preserving patent rights...”

To protect the University’s primary goal from un-due compromise, the University has adopted the following guidelines:

1. The recommendations of sponsors, regarding publication of research results should be considered advisory rather than mandatory.
2. In support of academic discourse and the mission to promote and share academic works, Dissertations will be released for worldwide access once submitted to and approved by the USF Office of Graduate Studies. In the event that a patent or copyright application provides reason to delay the release of the Dissertation, a petition to request a one year delay may be submitted to the Office of Graduate Studies for consideration. Such requests must be received by the format check of the dissertation.
3. Students should not be delayed in the final defense of their dissertations by agreements involving publication delays.

Duty to Disclose New Inventions and Works
For information about the requirements of this policy contact the Division of Patents and Licensing at (813) 974-0994.

Dissertation Change of Grade
In the semester in which the final manuscript has been received, reviewed, and certified for permanent filing in the University Library, the Office of Graduate Studies submits the change of grade from “Z” to “S” for the last registration of dissertation courses to the office of the registrar when all grades are due at the end of the semester.

The Use of “Ph.D.” in Credentials and Publication
Students may only use the credential of “Ph.D.” after degree conferral is granted. It is inappropriate to use the credential until it is officially and formally granted. The use of the abbreviation “Ph.D.” in university publications, correspondence, etc., including websites and other electronic media, shall be upper case “P”, lower case “h” followed by a period, an upper case “D” and another period. It shall not be used in the format of all upper case letters without periods, as in “PHD”.

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Application for Degree (Graduation)

To graduate, a student must submit the Application for Degree through their College. This application must be submitted in the term of expected graduation by the deadline noted in the academic calendar. If a student applies for graduation and is not approved, a new Application for Degree must be submitted by the deadline in a new term. In order for the degree statement to appear on a student’s academic record, the student must file the aforementioned application whether or not participation in the commencement ceremony is desired.

The application for a graduate degree is online at http://www.usf.edu/registrar/resources/graduation.aspx

The application must be submitted to the College advising office prior to the graduation application deadline. Inquiries concerning approval or denial of graduation should be made to the appropriate college. It is the student’s responsibility to clear all “I” (Incomplete) and “M” (Missing) grades in all courses and to provide official transcripts of all transferred course work needed for graduation at least three weeks prior to the end of the term in which he/she expects to graduate.

Graduation Requirements

It is the student’s responsibility to make sure that he/she has met all degree requirements (e.g. be in good standing) as specified in the Policies and Degree Requirements sections of this publication, as well as any College and Major requirements for the degree.

Commencement

Graduate students may not participate in commencement exercises until all requirements for the degree sought have been fulfilled. Students graduating from majors based from the Tampa campus (despite location, i.e. may be located in St. Petersburg, Sarasota, etc., such as students in Marine Science) participate in commencement exercises on the Tampa campus. All doctoral graduates receive degree conferral from the Tampa campus and therefore participate in commencement exercises in Tampa.

Diplomas

Diplomas are mailed to the student’s permanent address approximately six (6) weeks after commencement. Students with a change of address need to fill out a change of address form at the Registrar’s office. Questions regarding diplomas and degree certification should be directed to the Registrar’s office at 974-2000.
Letters of Certification

Letters of Certification Students in need of verification of the degree prior to receiving their diploma may request a Letter of Certification. This letter specifies that the student has finished all of the requirements for the degree and the date the degree will be conferred on. The letter must include the student’s U-ID Number, name of major and official name of the degree. The Major Professor, the College Dean (or designee), the Department Chair or Graduate Director (or designee), the Dean (or Designee) in the Office of Graduate Studies, and the Registrar must sign the Letter of Certification. A template for the Certification Letter is available on the Office of Graduate Studies website at http://www.grad.usf.edu/student-forms.php

Posthumous Degrees or Degrees in Memoriam


Award of Posthumous Degrees
The University of South Florida System (USF System) institutions may award a posthumous baccalaureate, master’s or doctoral and medical degree to a student who was in good academic standing at the time of his or her death and who had completed all substantive requirements for the degree. To award a non-thesis degree, the student would need to have completed all courses required for the degree. Courses required for the degree, in which students are enrolled at the time of his or her death, must have been completed to the satisfaction of the faculty so that passing grades might be posted. All other degree requirements must have been satisfied as well. To award a thesis or dissertation degree, all courses must be completed as described above and the thesis/dissertation must be sufficiently complete to the satisfaction of the faculty so that certification of completion may be posted to the student’s record.

Award of Degrees in Memoriam
USF System institutions may award baccalaureate, master’s, doctoral and medical degrees in memoriam to students who were in good academic standing at the time of his or her death.

Procedures for Award of Posthumous Degrees or Degrees in Memoriam
Departmental Chairs, or appropriate faculty members, on their own initiative or upon request of a student’s family, may recommend a posthumous, or an in memoriam degree, by forwarding the recommendation to the respective Dean of the appropriate college. If approved by the Dean, the request, accompanied by supporting documentation, will be forwarded to the Dean of Undergraduate or Graduate Studies (respective to the degree type at USF or to the Chief Academic Officer at USF St. Petersburg or USF Sarasota/Manatee for approval. If the Dean or Chief Academic Officer approves the recommendation, the institution’s Office of the Registrar will be notified. Posthumous degrees and in memoriam Degrees may also be presented to the student's family in an appropriate setting, which may include the ceremony held in fall and spring terms. A posthumous degree may be awarded at a commencement ceremony.

Note:
Diplomas for posthumous degrees will be identical to other degrees awarded in the same colleges and majors. Diplomas for Degrees in Memoriam will be prepared to read “Master of Arts in Memoriam, Master of Science in Memoriam,” “Doctor of Philosophy in Memoriam,” etc., depending upon the degree the student was pursuing at the time of his or her death.
Transcripts

Transcripts of a student's USF academic record may be requested by the student through the Office of the Registrar. A student's academic record can only be released upon authorization of the student. Students requesting transcripts may do so in person or by writing to the Office of the Registrar. By law, the request must include the student's signature and date. For transcripts to be issued, the student must have no financial obligations to the University. Procedures for requesting a transcript are available on the Office of the Registrar’s website at http://www.registrar.usf.edu/. Degree statements are posted approximately five weeks after the graduation ceremony. Current term grades are posted approximately one week after the final exams end. If grades for the current term are needed, clearly indicate that the transcript request is to be held for grades.

Office of Postdoctoral Affairs

The Office of Postdoctoral Affairs (OPA) serves as an administrative and academic center of excellence for postdoctoral scholars, and ensures they have an exemplary professional and personal development experience while at USF. It fosters a robust postdoctoral community, provides opportunities to enhance the postdoctoral experience and future success of its constituents, and serves as a dedicated resource for postdoctoral scholars, faculty, and administrators.

Objectives of the OPA:

• Provide guidance to colleges and postdoctoral scholars throughout the hiring process.
• Establish, maintain, and evaluate postdoctoral policies.
• Build collaboration among postdoctoral scholars, colleges, and graduate students.
• Offer professional development workshops for postdoctoral scholars and their mentors.
• Maintain a detailed database of current and alumni postdoctoral scholars.
• Submit postdoctoral data for university, state, national, and international reports.
• Facilitate the development of a USF Postdoctoral Association.

For more information, please see www.grad.usf.edu/postdoc
New graduate degree programs, majors and concentrations are continually under development. Check the website for recently approved curriculum and for information on which majors are currently accepting applications and which are currently closed for admission. For the most current list of authorized degrees programs, majors and concentrations, Accelerated Degree Programs, and Concurrent Degrees, go to http://www.grad.usf.edu/majors. As of the date of this publication, the University is authorized to offer over 50 different degrees with graduate majors offered as follows:

118 Master’s
2 Education Specialist
3 Professional doctoral (including M.D., D.P.T., PharmD)

196 Concentrations at the Master’s level
15 Concentrations at the Specialist level
88 Concentrations at the Doctoral level
1 Concentration at the Professional level

USF Curriculum Definitions – also reference USF 3.038 Academic Curricular Offerings
https://www.systemacademics.usf.edu/curriculum/definitions.php

Degree Program
- An organized curriculum leading to a degree in an area of study recognized as an academic discipline by the higher education community, as demonstrated by assignment of a unique Classification of Instructional Programs (CIP) code and name by the National Center for Educational Statistics.
- Each degree program shall have designated faculty effort and instructional resources, and shall include at least one program major, but may have multiple majors.
- Five degree levels are used in the SUS: Bachelor (B), Master (M), Specialist (S), Research Doctoral (R), and Professional Doctoral (P).
- Source(s): SUS BOG Regulation 8.0111; USF System Policy 10-36

EXAMPLE:
- CIP 13.0301 Curriculum and Instruction - Masters (M)

Major
- An organized curriculum offered within a degree program.
- A major shall be reasonably associated with the academic discipline within the degree program under which it is offered and shall share common core courses with any other majors within the same degree program. The major is the student’s primary field of study.
- Although in some cases the major and the degree program names are synonymous, only the degree program shall be assigned a CIP Code and shall be included in the State University System Academic Degree Program Inventory.
- The number of credit hours for a major for each degree level shall be established by the University in accordance with State regulations and SACSCOC minimum requirements.
- The degree program majors are coded within BANNER.
- Source(s): SUS BOG Regulation 8.0111; USF System Policy 10-36; SACSCOC Core Requirement 2.2

EXAMPLE:
- CIP 13.0301 – M
  - Curriculum and Instruction (CUR)
Degree (Degree Designator)

- Specific credential associated with a degree program and associated major(s). These include but are not limited to:
  - **Bachelor Level**: Bachelor of Arts (BA); Bachelor of Science (BS); Bachelor of Business Administration (BBA), Bachelor of Information Technology (BSIT); Bachelor of Social Work (BSW), etc.
  - **Master Level**: Master of Arts (MA); Master of Science (MS); Master of Arts in Teaching (MAT), Master of Public Health (MPH), Master of Public Administration (MPA), etc.
  - **Research Doctoral Level**: Doctor of Philosophy (PhD), Doctor of Education (EdD), Doctor of Public Health (DPH), etc.
  - **Professional Doctoral Level**: Doctor of Medicine (MD), Doctor of Physical Therapy (DPT), Doctor of Pharmacy (PharmD), Doctor of Nursing Practice (DNP), etc.

- **Source(s)**: USF Registrar; Faculty Senate Undergraduate & Graduate Councils

**EXAMPLE:**
- CIP 13.0301 – Master’s level degree designator(s):
  - M.Ed. (CUR)

Concentration

- Any organized set of courses that is offered as part of a major and enhances or complements the degree program to be awarded in a manner which leads to specific educational or occupational goals, and/or from different disciplines that provide an interdisciplinary focus.
- Concentrations are defined by the University with the credit-hour length set in accordance with University policy, except that the number of credit hours shall not equal or exceed the number of credit hours established for a major at the same degree level.
- Each concentration is coded within BANNER.
- At the Undergraduate level concentrations appear on the transcript but not diploma; and, at the Graduate level concentrations appear on both the transcript and diploma

- **Source(s)**: SUS BOG Regulation 8.011; Faculty Senate Undergraduate & Graduate Councils; USF Undergraduate & Graduate Catalogs

**EXAMPLE:**
- CIP 13.0301 – M.Ed. in Curriculum and Instruction (CUR) with a concentration in:
  - College Student Affairs (CSA)
  - Early Childhood (CNK)
  - English Education (CEN)
  - Science Education: Physics (CPY)

Track, Specialization, Cluster, etc.

- Areas of study within a major or concentration that are less formal and not tracked in the student’s BANNER record.

- **Source(s)**: Faculty Senate Undergraduate & Graduate Councils; Undergraduate, Graduate Catalogs

**EXAMPLE:**
The MS in Business Analytics / Information Systems program offers a track in business intelligence.
Minor
- Undergraduate Only. An academic minor is an optional complement to a bachelor’s degree in a particular field, leading to specific educational goals. It requires approximately one-half the upper-level credits required for a major in that field. The department may require the same admission or retention standards as required for the major.
- **Source(s):** Faculty Senate Undergraduate & Graduate Councils; Undergraduate, Graduate Catalogs

**EXAMPLE:**
Public Health (GPH) Minor: 15 credits
The goal of the general Public Health minor is to develop in a broad range of students an understanding and appreciation of the field of Public Health.

Certificate
- An organized set of courses offered as a distinct area of study that leads to specific educational or occupational goals.
- Certificates may consist of courses that are part of a major or courses that are created outside of a major. The number of credit hours for a certificate shall be set by the University
- **Source(s):** Faculty Senate Undergraduate & Graduate Councils; Undergraduate, Graduate Catalogs

**EXAMPLE:**
Graduate Certificate in Entrepreneurship: 12 Credit Hours
The Graduate Certificate in Strategic Intelligence will provide a state-of-the-art, academic foundation in the discipline of intelligence studies. That foundation can prepare the individual to pursue further graduate study or to develop and apply this critical set of professional skills. The curriculum follows the guidelines for the International Association for Intelligence Education (IAFIE), covering strategic thinking, core concepts, analytic methods, and analytic communication (writing and briefing).
List of Authorized Degrees – Graduate and Professional Degree Programs – By Degree, Level, and Majors

<table>
<thead>
<tr>
<th>Degree Code</th>
<th>Degree Description</th>
<th>Graduate and Professional Majors Offered Under That Degree (Medical / Professional Majors noted with *)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree Code</td>
<td>Degree Description</td>
<td>Graduate and Professional Majors Offered Under That Degree (Medical / Professional Majors noted with *)</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| M.A.T.      | Master of Arts in Teaching          | ❖ Elementary Education  
❖ English Education  
❖ Exceptional Student Education  
❖ Foreign Language Education  
❖ Mathematics Education (6-12)  
❖ Middle Grades Mathematics  
❖ Science Education  
❖ Social Science Education |
| M.Acc.      | Master of Accountancy               | ❖ Accountancy                                                                                   |
| M.Arc.      | Master of Architecture              | ❖ Architecture                                                                                   |
| M.B.A.      | Master of Business Administration   | ❖ Business Administration  
❖ Executive MBA                                                                                   |
| M.C.E.      | Master of Civil Engineering         | ❖ Civil Engineering                                                                               |
| M.E.V.E.    | Master of Environmental Engineering | ❖ Environmental Engineering                                                                     |
| M.Ed.       | Master of Education                 | ❖ Curriculum and Instruction  
❖ Educational Leadership                                                                         |
| M.F.A.      | Master of Fine Arts                 | ❖ Art  
❖ Creative Writing                                                                               |
| M.H.A.      | Master of Health Administration     | ❖ Health Administration                                                                         |
| M.M.        | Master of Music                     | ❖ Music                                                                                         |
| M.M.E.      | Master of Mechanical Engineering    | ❖ Mechanical Engineering                                                                         |
| M.P.A.      | Master of Public Administration     | ❖ Public Administration                                                                         |
| M.P.A.S.    | Master of Physician Assistant       | ❖ Physician Assistant Studies                                                                     |
| M.P.H.      | Master of Public Health             | ❖ Public Health                                                                                  |
| M.S.        | Master of Science                   | ❖ Advanced Athletic Training  
❖ Applied Behavior Analysis  
❖ Athletic Training  
❖ Audiology (Post Baccalaureate)  
❖ Aural (Re)Habilitation (Post Baccalaureate)  
❖ Biology  
❖ Chemistry  
❖ Childhood and Adolescent Behavioral Health  
❖ Cybercrime NEW  
❖ Cybersecurity  
❖ Entrepreneurship in Applied Technologies  
❖ Environmental Science and Policy  
❖ Exercise Science  
❖ Finance  
❖ Geology  
❖ Intelligence Studies  
❖ Management |
<table>
<thead>
<tr>
<th>Degree Code</th>
<th>Degree Description</th>
<th>Graduate and Professional Majors Offered Under That Degree *(Medical / Professional Majors noted with *)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.S.B.</td>
<td>Master of Science in Biotechnology</td>
<td>Business Analytics and Information Systems, Marine Science, Microbiology, Nurse Anesthesia, Nursing, Physics, Speech-Language Pathology (post Bacc), Sport and Entertainment Management</td>
</tr>
<tr>
<td>M.S.B.C.B.</td>
<td>Master of Science in Bioinformatics &amp; Computational Biology</td>
<td>Bioinformatics and Computational Biology</td>
</tr>
<tr>
<td>M.S.B.E.</td>
<td>Master of Science in Biomedical Engineering</td>
<td>Biomedical Engineering</td>
</tr>
<tr>
<td>M.S.C.E.</td>
<td>Master of Science in Civil Engineering</td>
<td>Civil Engineering</td>
</tr>
<tr>
<td>M.S.C.H.</td>
<td>Master of Science in Chemical Engineering</td>
<td>Chemical Engineering</td>
</tr>
<tr>
<td>M.S.C.P.</td>
<td>Master of Science in Computer Engineering</td>
<td>Computer Engineering</td>
</tr>
<tr>
<td>M.S.C.S.</td>
<td>Master of Science in Computer Science</td>
<td>Computer Science</td>
</tr>
<tr>
<td>M.S.E.E.</td>
<td>Master of Science in Electrical Engineering</td>
<td>Electrical Engineering</td>
</tr>
<tr>
<td>M.S.E.M.</td>
<td>Master of Science in Engineering Management</td>
<td>Engineering Management</td>
</tr>
<tr>
<td>M.S.E.V.</td>
<td>Master of Science in Environmental Engineering</td>
<td>Environmental Engineering</td>
</tr>
<tr>
<td>M.S.H.I.</td>
<td>Master of Science in Health Informatics</td>
<td>Health Informatics</td>
</tr>
<tr>
<td>M.S.I.E.</td>
<td>Master of Science in Industrial Engineering</td>
<td>Industrial Engineering</td>
</tr>
<tr>
<td>M.S.I.T.</td>
<td>Master of Science in Information Technology</td>
<td>Information Technology</td>
</tr>
<tr>
<td>M.S.M.</td>
<td>Master of Science in Marketing</td>
<td>Marketing</td>
</tr>
<tr>
<td>M.S.M.E.</td>
<td>Master of Science in Mechanical Engineering</td>
<td>Mechanical Engineering</td>
</tr>
<tr>
<td>M.S.M.S.</td>
<td>Master of Science in Medical Sciences</td>
<td>Medical Sciences</td>
</tr>
<tr>
<td>M.S.M.S.E.</td>
<td>Master of Science in Materials Science and Engineering</td>
<td>Materials Science and Engineering</td>
</tr>
<tr>
<td>M.S.P.H.</td>
<td>Master of Science in Public Health</td>
<td>Public Health</td>
</tr>
<tr>
<td>M.S.P.N.</td>
<td>Master of Science in Pharmaceutical Nanotechnology</td>
<td>Pharmaceutical Nanotechnology NEW</td>
</tr>
<tr>
<td>M.S.R.E.</td>
<td>Master of Science in Real Estate</td>
<td>Real Estate – Suspended for Admissions</td>
</tr>
<tr>
<td>M.S.W.</td>
<td>Master of Social Work</td>
<td>Social Work</td>
</tr>
<tr>
<td>Degree Code</td>
<td>Degree Description</td>
<td>Graduate and Professional Majors Offered Under That Degree (Medical / Professional Majors noted with *)</td>
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<tr>
<td>-------------</td>
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</tr>
<tr>
<td>M.U.C.D.</td>
<td>Master of Urban and Community Design</td>
<td>Urban and Community Design</td>
</tr>
<tr>
<td>M.U.R.P.</td>
<td>Master of Urban &amp; Regional Planning</td>
<td>Urban and Regional Planning</td>
</tr>
<tr>
<td></td>
<td><strong>EDUCATION SPECIALIST DEGREES</strong></td>
<td></td>
</tr>
<tr>
<td>Ed.S.</td>
<td>Education Specialist</td>
<td>Curriculum and Instruction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Educational Leadership</td>
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<tr>
<td></td>
<td><strong>DOCTORATE DEGREES</strong></td>
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</tr>
<tr>
<td>Au.D.</td>
<td>Doctor of Audiology</td>
<td>Audiology</td>
</tr>
<tr>
<td>D.B.A.</td>
<td>Doctor of Business Administration</td>
<td>Business Administration</td>
</tr>
<tr>
<td>D.N.P.</td>
<td>Doctor of Nursing Practice</td>
<td>Nursing</td>
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<tr>
<td>D.P.T.</td>
<td>Doctor of Physical Therapy*</td>
<td>Physical Therapy*</td>
</tr>
<tr>
<td>Dr.P.H.</td>
<td>Doctor of Public Health</td>
<td>Public Health</td>
</tr>
<tr>
<td>Ed.D.</td>
<td>Doctor of Education</td>
<td>Educational Program Development</td>
</tr>
<tr>
<td>M.D.</td>
<td>Doctor of Medicine</td>
<td>Medicine*</td>
</tr>
<tr>
<td>Pharm.D.</td>
<td>Doctor of Pharmacy</td>
<td>Pharmacy**</td>
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<td>Degree Code</td>
<td>Degree Description</td>
<td>Graduate and Professional Majors Offered Under That Degree (Medical / Professional Majors noted with *)</td>
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<td></td>
<td></td>
<td>✤ Integrative Biology</td>
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<td>✤ Linguistics and Applied Language Studies</td>
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<td></td>
<td>✤ Marine Science</td>
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<td>✤ Mathematics</td>
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<td></td>
<td>✤ Mechanical Engineering</td>
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<td>✤ Medical Sciences</td>
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<td>✤ Music</td>
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<td>✤ Nursing Science</td>
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<td>✤ Philosophy</td>
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<td>✤ Physics, Applied</td>
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<td>✤ Public Health</td>
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<td>✤ Rehabilitation Sciences</td>
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<td>✤ School Psychology</td>
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<td></td>
<td></td>
<td>✤ Second Language Acquisition and Instructional Technology</td>
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<tr>
<td></td>
<td></td>
<td>✤ Social Work – Suspended for Admissions</td>
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<tr>
<td></td>
<td></td>
<td>✤ Sociology</td>
</tr>
</tbody>
</table>

List is accurate as of 8/10/2017. To view the most current list and available concentration areas within the graduate majors go to: [http://www.grad.usf.edu/majors](http://www.grad.usf.edu/majors)
### List of Authorized Graduate and Professional Degree Programs –
By Major with Degree Designator and Concentrations

118 Master’s
2 Ed Specialist
49 Doctoral (including PhD, EdD, AuD, DNP, DrPH, DBA)
3 Professional Doctoral (including M.D., DPT, PharmD)*

<table>
<thead>
<tr>
<th>MASTERS</th>
<th>DEGREE</th>
<th>DEGREE DESCRIPTION</th>
<th>CONCENTRATIONS</th>
</tr>
</thead>
</table>
| 1.      | Accountancy | M.Acc. Master of Accountancy | • Audit/Systems  
|         |         |                     | • Tax |
| 2.      | Adult Education | M.A. Master of Arts | • Human Resource Development |
| 3.      | Advanced Athletic Training | M.S. Master of Science | |
| 4.      | Applied Anthropology | M.A. Master of Arts | • Archaeological and Forensic Science  
|         |         |                     | • Bio-Cultural Medical Anthropology  
|         |         |                     | • Cultural Resource Management  
|         |         |                     | • Heritage Studies |
| 5.      | Applied Behavior Analysis | M.A. Master of Arts | |
| 6.      | Applied Behavior Analysis | M.S. Master of Science | |
| 8.      | Art | M.F.A. Master of Fine Arts | |
| 9.      | Art History | M.A. Master of Arts | |
| 10.     | Athletic Training | M.S. Master of Science | |
| 11.     | Audiology (Post Bacc) - Being Terminated | M.S. Master of Science | |
| 12.     | Aural (Re) Habilitation (Post Bacc) - Being Terminated | M.S. Master of Science | |
| 13.     | Autism Spectrum Disorders and Severe Intellectual Disabilities | M.A. Master of Arts | |
| 14.     | Bioinformatics and Computational Biology | M.S.B.C.B. Master of Science in Bioinformatics & Computational Biology | • Cell Biology, Microbiology & Molecular Biology  
|         |         |                     | • Ecology and Evolution  
|         |         |                     | • Environmental and Ecological Microbiology  
|         |         |                     | • Physiology and Morphology |
| 15.     | Biology | M.S. Master of Science | • Pharmacy |
| 16.     | Biomedical Engineering | M.S.B.E. Master of Science in Biomedical Engineering | • Compliance, Risk Management & Anti-Money Laundering  
|         |         |                     | • Cyber Security  
|         |         |                     | • Data Analytics  
|         |         |                     | • Sport Business  
|         |         |                     | • Supply Chain Management  
|         |         |                     | • Analytics and Business Intelligence  
|         |         |                     | • Information Assurance |
| 17.     | Biotechnology | M.S.B. Master of Science in Biotechnology | |
| 18.     | Business Administration | M.B.A. Master of Business Administration | • Developmental Disabilities  
|         |         |                     | • Leadership in Child and Adolescent Behavioral Health  
|         |         |                     | • Translational Research and Evaluation  
|         |         |                     | • Youth & Behavioral Health |
| 19.     | Business Analytics and Information Systems | M.S. Master of Science | |
| 20.     | Career and Technical Education | M.A. Master of Arts | |
| 21.     | Chemical Engineering | M.S.C.H. Master of Science in Chemical Engineering | |
| 22.     | Chemistry | M.S. Master of Science | |
| 23.     | Chemistry (non-thesis option) | M.A. Master of Arts | |
| 24.     | Child and Adolescent Behavioral Health | M.S. Master of Science | • Leadership in Child and Adolescent Behavioral Health  
|         |         |                     | • Translational Research and Evaluation  
|         |         |                     | • Youth & Behavioral Health |
| 25.     | Civil Engineering | M.C.E. Master of Civil Engineering | |
| 26.     | Civil Engineering | M.S.C.E. Master of Science in Civil Engineering | |

http://www.grad.usf.edu/
<table>
<thead>
<tr>
<th>No.</th>
<th>Program</th>
<th>Degree Type</th>
<th>Concentrations</th>
</tr>
</thead>
<tbody>
<tr>
<td>27.</td>
<td>Communication</td>
<td>M.A.</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>28.</td>
<td>Computer Engineering</td>
<td>M.S.C.P.</td>
<td>Master of Science in Computer Engineering</td>
</tr>
<tr>
<td>29.</td>
<td>Computer Science</td>
<td>M.S.C.S.</td>
<td>Master of Science in Computer Science</td>
</tr>
<tr>
<td>30.</td>
<td>Counselor Education</td>
<td>M.A.</td>
<td>Master of Arts&lt;br&gt;- Career Counseling&lt;br&gt;- Clinical Mental Health Counseling&lt;br&gt;- School Counseling</td>
</tr>
<tr>
<td>31.</td>
<td>Creative Writing</td>
<td>M.F.A.</td>
<td>Master of Fine Arts&lt;br&gt;- Fiction&lt;br&gt;- Poetry</td>
</tr>
<tr>
<td>32.</td>
<td>Criminal Justice Administration</td>
<td>M.A.</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>33.</td>
<td>Criminology</td>
<td>M.A.</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>35.</td>
<td>Cybercrime NEW</td>
<td>M.A.</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>36.</td>
<td>Cybersecurity</td>
<td>M.S.</td>
<td>Master of Science&lt;br&gt;- Digital Forensics&lt;br&gt;- Computer Security Fundamentals&lt;br&gt;- Cyber Intelligence&lt;br&gt;- Information Assurance</td>
</tr>
<tr>
<td>37.</td>
<td>Economics</td>
<td>M.A.</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>38.</td>
<td>Educational Leadership</td>
<td>M.Ed.</td>
<td>Master of Education</td>
</tr>
<tr>
<td>39.</td>
<td>Electrical Engineering</td>
<td>M.S.E.E.</td>
<td>Master of Science in Electrical Engineering</td>
</tr>
<tr>
<td>40.</td>
<td>Elementary Education</td>
<td>M.A.</td>
<td>Master of Arts&lt;br&gt;- Early Childhood&lt;br&gt;- Elementary Curriculum&lt;br&gt;- Language Arts&lt;br&gt;- Science and Mathematics</td>
</tr>
<tr>
<td>41.</td>
<td>Elementary Education</td>
<td>M.A.T.</td>
<td>Master of Arts in Teaching</td>
</tr>
<tr>
<td>42.</td>
<td>Engineering Management</td>
<td>M.S.E.M.</td>
<td>Master of Science in Engineering Management</td>
</tr>
<tr>
<td>43.</td>
<td>English</td>
<td>M.A.</td>
<td>Master of Arts&lt;br&gt;- Literature&lt;br&gt;- Rhetoric and Composition</td>
</tr>
<tr>
<td>44.</td>
<td>English Education</td>
<td>M.A.T.</td>
<td>Master of Arts in Teaching</td>
</tr>
<tr>
<td>45.</td>
<td>Entrepreneurship in Applied Technologies</td>
<td>M.S.</td>
<td>Master of Science</td>
</tr>
<tr>
<td>46.</td>
<td>Environmental Engineering</td>
<td>M.E.V.E.</td>
<td>Master of Environmental Engineering</td>
</tr>
<tr>
<td>47.</td>
<td>Environmental Engineering</td>
<td>M.S.E.V.</td>
<td>Master of Science in Environmental Engineering&lt;br&gt;- Engineering for International Development</td>
</tr>
<tr>
<td>48.</td>
<td>Environmental Science and Policy</td>
<td>M.S.</td>
<td>Master of Science</td>
</tr>
<tr>
<td>49.</td>
<td>Exceptional Student Education</td>
<td>M.A.</td>
<td>Master of Arts</td>
</tr>
<tr>
<td>50.</td>
<td>Exceptional Student Education</td>
<td>M.A.T.</td>
<td>Master of Arts in Teaching</td>
</tr>
<tr>
<td>51.</td>
<td>Executive MBA Program</td>
<td>M.B.A.</td>
<td>Master of Business Administration</td>
</tr>
<tr>
<td>52.</td>
<td>Exercise Science</td>
<td>M.S.</td>
<td>Master of Science&lt;br&gt;- Health and Wellness&lt;br&gt;- Strength and Conditioning</td>
</tr>
<tr>
<td>53.</td>
<td>Finance</td>
<td>M.S.</td>
<td>Master of Science</td>
</tr>
<tr>
<td>54.</td>
<td>Foreign Language Education – Being Terminated</td>
<td>M.A.</td>
<td>Master of Arts&lt;br&gt;- French&lt;br&gt;- German&lt;br&gt;- Spanish</td>
</tr>
</tbody>
</table>
### Section 10 Degrees, Majors, and Concentrations

#### 56. Foreign Language Education
- **M.A.T.** Master of Arts in Teaching
  - Chinese
  - French
  - German
  - Italian
  - Japanese
  - Latin
  - Russian
  - Spanish

#### 57. French
- **M.A.** Master of Arts

#### 58. Geography
- **M.A.** Master of Arts
  - Environmental Geography
  - Geographic Information Science and Spatial Analysis
  - Human Geography

#### 59. Geology
- **M.S.** Master of Science

#### 60. Gerontology
- **M.A.** Master of Arts

#### 61. Global Sustainability
- **M.A.** Master of Arts
  - Coastal Sustainability
  - Climate Change and Sustainability
  - Food Sustainability and Security
  - Entrepreneurship
  - Sustainable Business
  - Sustainable Energy
  - Sustainable Tourism
  - Sustainable Transportation
  - Water

#### 62. Health Administration
- **M.H.A.** Master of Health Administration

#### 63. Health Informatics
- **M.S.H.I.** Master of Science in Health Informatics
  - Health Analytics

#### 64. History
- **M.A.** Master of Arts
  - American History
  - Ancient History
  - European History
  - Latin American History
  - Medieval History

#### 65. Industrial Engineering
- **M.S.I.E.** Master of Science in Industrial Engineering

#### 66. Intelligence Studies
- **M.S.** Master of Science
  - Cyber Intelligence
  - Strategic Intelligence

#### 67. Information Technology
- **M.S.I.T.** Master of Science in Information Technology

#### 68. Latin American, Caribbean and Latino Studies
- **M.A.** Master of Arts

#### 69. Liberal Arts
- **M.A.** Master of Arts
  - Africana Studies
  - American Studies
  - Film Studies
  - Humanities
  - Social and Political Thought

#### 70. Library and Information Science
- **M.A.** Master of Arts

#### 71. Linguistics
- **M.A.** Master of Arts

#### 72. Linguistics: English as a Second Language
- **M.A.** Master of Arts

#### 73. Management
- **M.S.** Master of Science
  - Human Resources
  - Project Management
  - Biological Oceanography
  - Chemical Oceanography
  - Geological Oceanography
  - Interdisciplinary
  - Marine Resource Assessment
  - Physical Oceanography

#### 74. Marine Science
- **M.S.** Master of Science

#### 75. Marketing
- **M.S.M.** Master of Science in Marketing

#### 76. Mass Communications
- **M.A.** Master of Arts
  - Media Studies
  - Multimedia Journalism
  - Strategic Communication Management

#### 77. Materials Science and Engineering
- **M.S.M.S.E.** Master of Science in Materials Science and Engineering

#### 78. Mathematics
- **M.A.** Master of Arts
  - Pure and Applied

#### 79. Mathematics Education
- **M.A.** Master of Arts

#### 80. Mathematics Education (6-12)
- **M.A.T.** Master of Arts in Teaching

#### 81. Mechanical Engineering
- **M.M.E.** Master of Mechanical Engineering

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113. Speech-Language Pathology (Post Bacc) M.S. Master of Science
114. Sport and Entertainment Management M.S. Master of Science
115. Statistics M.A. Master of Arts
116. Urban and Community Design M.U.C.D. Master of Urban and Community Design
117. Urban and Regional Planning M.U.R.P. Master of Urban & Regional Planning
118. Women’s and Gender Studies M.A. Master of Arts

*The MPAS is offered through the Morsani College of Medicine*

**EDUCATION SPECIALIST**

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**DOCTORATE**

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<tr>
<td>Music Education</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Section 10 Degrees, Majors, and Concentrations

<table>
<thead>
<tr>
<th>Degree</th>
<th>Major/Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>39. Nursing</strong></td>
<td>D.N.P. Doctor of Nursing Practice</td>
</tr>
<tr>
<td></td>
<td>• Adult-Gerontology Acute Care Nursing (NAG)</td>
</tr>
<tr>
<td></td>
<td>• Adult-Gerontology Primary Care / Occupational Health Nursing (NOC)</td>
</tr>
<tr>
<td></td>
<td>• Adult-Gerontology Primary Care Nursing/Oncology Nursing (NOA)</td>
</tr>
<tr>
<td></td>
<td>• Adult-Gerontology Primary Care Nursing(NPG)</td>
</tr>
<tr>
<td></td>
<td>• Concurrent MPH/Adult-Gerontology Primary Care Nursing (NOP)</td>
</tr>
<tr>
<td></td>
<td>• Family Health Nursing (NFH)</td>
</tr>
<tr>
<td></td>
<td>• Pediatric Health Nursing (NPH)</td>
</tr>
<tr>
<td><strong>40. Nursing Science</strong></td>
<td>Ph.D. Doctor of Philosophy</td>
</tr>
<tr>
<td><strong>41. Pharmacy</strong>*</td>
<td>PharmD. Doctor of Pharmacy</td>
</tr>
<tr>
<td></td>
<td>• Pharmacy and Health Education</td>
</tr>
<tr>
<td><strong>42. Philosophy</strong></td>
<td>Ph.D. Doctor of Philosophy</td>
</tr>
<tr>
<td></td>
<td>• Philosophy and Religion</td>
</tr>
<tr>
<td><strong>43. Physical Therapy</strong>*</td>
<td>D.P.T. Doctor of Physical Therapy</td>
</tr>
<tr>
<td><strong>44. Physics, Applied</strong></td>
<td>Ph.D. Doctor of Philosophy</td>
</tr>
<tr>
<td><strong>45. Psychology</strong></td>
<td>Ph.D. Doctor of Philosophy</td>
</tr>
<tr>
<td></td>
<td>• Clinical Psychology</td>
</tr>
<tr>
<td></td>
<td>• Cognition, Neuroscience &amp; Social Psychology</td>
</tr>
<tr>
<td></td>
<td>• Industrial Organizational Psychology</td>
</tr>
<tr>
<td><strong>46. Public Health</strong></td>
<td>Dr.P.H. Doctor of Public Health</td>
</tr>
<tr>
<td></td>
<td>• Advanced Practice Leadership in Public Health</td>
</tr>
<tr>
<td><strong>47. Public Health</strong></td>
<td>Ph.D. Doctor of Philosophy</td>
</tr>
<tr>
<td></td>
<td>• Biostatistics</td>
</tr>
<tr>
<td></td>
<td>• Community and Family Health</td>
</tr>
<tr>
<td></td>
<td>• Environmental and Occupational Health</td>
</tr>
<tr>
<td></td>
<td>• Epidemiology</td>
</tr>
<tr>
<td></td>
<td>• Global Communicable Disease</td>
</tr>
<tr>
<td></td>
<td>• Health Services Research</td>
</tr>
<tr>
<td><strong>48. Rehabilitation Sciences</strong></td>
<td>Ph.D. Doctor of Philosophy</td>
</tr>
<tr>
<td></td>
<td>• Chronic Disease</td>
</tr>
<tr>
<td></td>
<td>• Neuromusculoskeletal Disability</td>
</tr>
<tr>
<td></td>
<td>• Veteran’s Health/Reintegration</td>
</tr>
<tr>
<td><strong>49. School Psychology</strong></td>
<td>Ph.D. Doctor of Philosophy</td>
</tr>
<tr>
<td><strong>50. Teacher Education and Second Language Acquisition</strong></td>
<td>Ph.D. Doctor of Philosophy</td>
</tr>
<tr>
<td><strong>51. Social Work Suspended for Admissions</strong></td>
<td>Ph.D. Doctor of Philosophy</td>
</tr>
<tr>
<td><strong>52. Sociology</strong></td>
<td>Ph.D. Doctor of Philosophy</td>
</tr>
</tbody>
</table>

*List accurate as of 8/10/17

The M.D. is offered through the Morsani College of Medicine; the D.P.T. is offered through the School of Physical Therapy; the PharmD. is offered through the College of Pharmacy.
Accelerated Majors

Accelerated Majors allow academically qualified students to complete an undergraduate Bachelor’s degree and a graduate degree (typically master’s degree) on an accelerated timeline, graduating sooner than in traditional majors. Typically, students will complete a portion of the required graduate coursework while classified as an undergraduate student and have it count towards both degrees. As soon as the student completes the undergraduate degree requirements, the student is converted to graduate status, where the remaining graduate requirements are fulfilled.

Students must submit an Accelerated Major Application for acceptance into an Accelerated Major track. Once a student is ready to move into graduate student status, the Progression Form must be completed and submitted. More information and the Application and Progression Forms are available online at: http://www.grad.usf.edu/accelerated.php

For specific curriculum requirements and to see how many hours are shared, refer to the corresponding major section of the Graduate Catalog. Note: Accelerated Majors must have a combined total of 150 hours after counting the shared coursework or have SACSCOC approval for the total combined hours if less.

<table>
<thead>
<tr>
<th>UNDERGRADUATE College / Major</th>
<th>GRADUATE College / Major / Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS Biomedical Sciences (BS)</td>
<td>ED Science Education (MAT) -</td>
</tr>
<tr>
<td>AS Chemistry (BS)</td>
<td>EN Biomedical Engineering (MSBE)</td>
</tr>
<tr>
<td>AS Chemistry (BS)</td>
<td>ED Science Education (MAT) -</td>
</tr>
<tr>
<td>AS Economics (BA)</td>
<td>AS Economics (MA) – non-thesis option only</td>
</tr>
<tr>
<td>AS English (BA)</td>
<td>AS English (MA)</td>
</tr>
<tr>
<td>AS Environmental Biology (BS)</td>
<td>ED Science Education (MAT)</td>
</tr>
<tr>
<td>AS Environmental Microbiology (BS)</td>
<td>ED Science Education (MAT)</td>
</tr>
<tr>
<td>AS Humanities and Cultural Studies BA</td>
<td>AS Liberal Arts with a Concentration in Film and New Media Studies (MA)</td>
</tr>
<tr>
<td>AS Integrative Animal Biology (BS)</td>
<td>ED Science Education (MAT)</td>
</tr>
<tr>
<td>AS Interdisciplinary Natural Science (BS)</td>
<td>ED Science Education (MAT) -</td>
</tr>
<tr>
<td>AS Marine Biology (BS)</td>
<td>ED Science Education (MAT)</td>
</tr>
<tr>
<td>AS Mathematics (BA)</td>
<td>AS Mathematics (MA)</td>
</tr>
<tr>
<td>AS Microbiology (BS)</td>
<td>AS Microbiology (MS)</td>
</tr>
<tr>
<td>AS Physics (BA)</td>
<td>ED Science Education (MAT)</td>
</tr>
<tr>
<td>BA Advertising (BS)</td>
<td>AS Mass Communications: Strategic Communication Management Conc. (MA)</td>
</tr>
<tr>
<td>BA Business Analytics and Information Systems (BS)</td>
<td>BA Business Analytics and Information Systems (MS)</td>
</tr>
<tr>
<td>EN Chemical Engineering (BSCH)</td>
<td>EN Biomedical Engineering (MSBE)</td>
</tr>
<tr>
<td>EN Chemical Engineering (BSCH)</td>
<td>EN Chemical Engineering (MSCH)</td>
</tr>
</tbody>
</table>

http://www.grad.usf.edu/
<table>
<thead>
<tr>
<th>UNDERGRADUATE College / Major</th>
<th>GRADUATE College / Major / Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN Chemical Engineering (BSCH)</td>
<td>EN Engineering Management (MSEM)</td>
</tr>
<tr>
<td>EN Chemical Engineering (BSCH)</td>
<td>EN Materials Science and Engineering (MSMSE)</td>
</tr>
<tr>
<td>EN Computer Engineering (BSCP)</td>
<td>EN Computer Engineering (MSCP)</td>
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<tr>
<td>EN Computer Engineering (BSCP)</td>
<td>EN Computer Science (MSCS)</td>
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<tr>
<td>EN Computer Engineering (BSCP)</td>
<td>EN Information Technology (MSIT)</td>
</tr>
<tr>
<td>EN Industrial Engineering (BSIE)</td>
<td>EN Biomedical Engineering (MSBE)</td>
</tr>
<tr>
<td>EN Industrial Engineering (BSIE)</td>
<td>EN Engineering Management (MSEM)</td>
</tr>
<tr>
<td>EN Mechanical Engineering (BSME)</td>
<td>EN Biomedical Eng (MSBE)</td>
</tr>
<tr>
<td>EN Mechanical Engineering (BSME)</td>
<td>EN Engineering Management (MSEM)</td>
</tr>
<tr>
<td>EN Mechanical Engineering (BSME)</td>
<td>EN Mechanical Eng (MME)</td>
</tr>
<tr>
<td>EN Mechanical Engineering (BSME)</td>
<td>EN Mechanical Engineering (MSME)</td>
</tr>
<tr>
<td>Honors College Honors College (BS)</td>
<td>MD Medicine (MD)</td>
</tr>
<tr>
<td>NR Nursing (BS) Nursing (BS) RN to BS 120 2nd BS seq 120 Upper div seq 120 Also Associates to Master’s available</td>
<td>NR Nursing (MS)</td>
</tr>
</tbody>
</table>
Concurrent Degree Options

Reference: Section 7 Academic Policies section on Concurrent Degree Designation for the official policy.

The following lists some of the formalized Concurrent Degree offered through the University of South Florida. New Concurrent Degree options may have been approved since the publication of this list; others may now be closed to new admissions. If the majors of interest in are not listed below, contact the Department to see if the major qualifies for a Concurrent Degree option. Information about the Degree Requirements for these concurrent degrees may be found in the corresponding listing for the major in the college sections of the Catalog. To apply for a Concurrent Degree students must complete the Concurrent Degree Application, available online at: http://www.grad.usf.edu/student-forms.php.

Each is listed twice, once under each major.

<table>
<thead>
<tr>
<th>Concurrent Degree Programs</th>
<th>Effective</th>
<th>College(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Anthropology (M.A.)</td>
<td></td>
<td>Arts and Sciences Public Health</td>
</tr>
<tr>
<td>Applied Anthropology (Ph.D.)</td>
<td></td>
<td>Arts and Sciences Public Health</td>
</tr>
<tr>
<td>Audiology (Au.D.)</td>
<td>4/17/06</td>
<td>Behavioral and Community Sciences</td>
</tr>
<tr>
<td>Biomedical Engineering (MSBE)</td>
<td>3/26/07</td>
<td>Engineering Business</td>
</tr>
<tr>
<td>Biomedical Engineering (PhD)</td>
<td>3/19/07</td>
<td>Engineering Medicine</td>
</tr>
<tr>
<td>Biotechnology (M.S.B.)</td>
<td>9/15/08</td>
<td>Medicine Business</td>
</tr>
<tr>
<td>Business Administration (MBA)</td>
<td>5/6/13</td>
<td>Business</td>
</tr>
<tr>
<td>Communication Sciences and Disorders (Ph.D.)</td>
<td>4/17/06</td>
<td>Behavioral and Community Sciences</td>
</tr>
<tr>
<td>Education (M.Ed.)</td>
<td></td>
<td>Education Arts and Sciences</td>
</tr>
<tr>
<td>Entrepreneurship in Applied Technologies (M.S.)</td>
<td>3/26/07</td>
<td>Engineering Business</td>
</tr>
<tr>
<td>Entrepreneurship in Applied Technologies (M.S.)</td>
<td></td>
<td>Medical Business</td>
</tr>
<tr>
<td>Entrepreneurship in Applied Technologies (M.S.)</td>
<td>9/15/08</td>
<td>Medicine Business</td>
</tr>
<tr>
<td>French (MA)</td>
<td></td>
<td>Arts and Sciences</td>
</tr>
<tr>
<td>Global Sustainability (M.A.)</td>
<td></td>
<td>Business Global Sustainability</td>
</tr>
<tr>
<td>Health Administration (MHA)</td>
<td>n/a</td>
<td>Public Health</td>
</tr>
<tr>
<td>Law (J.D.)</td>
<td>2007</td>
<td>Medicine Stetson Law School</td>
</tr>
<tr>
<td>Linguistics: English as a Second Language (MA)</td>
<td></td>
<td>Arts and Sciences</td>
</tr>
<tr>
<td>Medical Sciences (Ph.D.)</td>
<td>11/20/06</td>
<td>Medicine</td>
</tr>
<tr>
<td>Medicine (M.D.)</td>
<td></td>
<td>Engineering Medicine</td>
</tr>
<tr>
<td>Medicine (M.D.)</td>
<td>2007</td>
<td>Medicine Stetson Law School</td>
</tr>
<tr>
<td>Medicine (M.D.)</td>
<td></td>
<td>Medical</td>
</tr>
<tr>
<td>Medicine (MD)</td>
<td>3/19/07</td>
<td>Engineering Medicine</td>
</tr>
<tr>
<td>Medicine (MD)</td>
<td>5/1/17</td>
<td>Medicine Public Health</td>
</tr>
<tr>
<td>Degree</td>
<td>Concentration</td>
<td>Date</td>
</tr>
<tr>
<td>------------------------------</td>
<td>----------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Nursing (M.S.)</td>
<td>Public Health: Environmental and Occupational Health (MPH)</td>
<td>9/14/09</td>
</tr>
<tr>
<td>Nursing (M.S.)</td>
<td>Public Health: Occupational Health (M.P.H.)</td>
<td>10/27/99</td>
</tr>
<tr>
<td>Physical Therapy (D.P.T.)</td>
<td>Public Health (M.P.H.)</td>
<td>10/17/05</td>
</tr>
<tr>
<td>Public Health (M.P.H.)</td>
<td>Applied Anthropology (M.A.)</td>
<td></td>
</tr>
<tr>
<td>Public Health (M.P.H.)</td>
<td>Applied Anthropology (Ph.D.)</td>
<td></td>
</tr>
<tr>
<td>Public Health (M.P.H.)</td>
<td>Physical Therapy (D.P.T.)</td>
<td>10/17/05</td>
</tr>
<tr>
<td>Public Health (M.P.H.)</td>
<td>Medicine (M.D.)</td>
<td>5/1/17</td>
</tr>
<tr>
<td>Public Health: Occupational Health (M.P.H.)</td>
<td>Nursing (M.S.)</td>
<td>10/27/99</td>
</tr>
<tr>
<td>Public Health: Epidemiology and Biostatistics Dual Concentration (M.P.H.)</td>
<td>Public Health: Epidemiology and Biostatistics (M.P.H.)</td>
<td>Public Health</td>
</tr>
<tr>
<td>Public Health: Health Policies and Programs (M.P.H.)</td>
<td>Health Administration (M.H.A.)</td>
<td>Public Health</td>
</tr>
<tr>
<td>Public Health: Maternal and Child Health and (MPH)</td>
<td>Social Work (M.S.W.)</td>
<td>Behavioral and Community Sciences</td>
</tr>
<tr>
<td>Public Health: Environmental and Occupational Health (MPH)</td>
<td>Nursing (M.S.)</td>
<td>9/14/09</td>
</tr>
<tr>
<td>Religious Studies (M.A.)</td>
<td>Education (MEd)</td>
<td></td>
</tr>
<tr>
<td>Social Work (M.S.W.)</td>
<td>Public Health: Maternal and Child Health and (M.P.H.)</td>
<td>Behavioral and Community Sciences</td>
</tr>
<tr>
<td>Spanish (MA)</td>
<td>Linguistics: English as a Second Language (MA)</td>
<td>2017</td>
</tr>
</tbody>
</table>
Section 11

Graduate Certificates

Office of Graduate Certificates

University of South Florida
4202 E. Fowler Ave., LIB 608
Tampa, FL 33620-8470

Web address:  http://www.usf.edu/innovative-education/programs/graduate-certificates/
Phone:  813-974-8031
Fax:  813-974-7061

Graduate Certificates

Following is an alphabetical list of Graduate Certificates offered at USF at the time of publication. Some certificates may be inactive and new certificates may now be available. For information about Graduate Certificates currently offered and certificate requirements, go to the Graduate Certificate website noted above.

1. Academic Advising
2. Addictions and Substance Abuse Counseling
3. Advanced Pain Management
4. Africana Studies
5. Aging and Neuroscience*
6. Aging Studies
7. American Culture and Society
8. Joint SAS/USF Certificate in Analytics and Business Intelligence**
9. Anatomy
10. Applied Behavior Analysis**
11. Applied Biostatistics**
13. Behavioral Research to Immersion to Develop Graduate Excellence (BRIDGE) - INACTIVE
14. Biochemistry and Molecular Biology - INACTIVE
15. Bioinformatics
16. Biomedical Ethics*- INACTIVE
17. Biostatistics*
18. Biotechnology
19. Brain Fitness and Memory Management
20. Building Sustainable Enterprise
21. Business Analytics
22. Business Foundations
23. Cardiovascular Engineering
24. Career Counseling*
25. Children’s Mental Health**
26. Climate Change and Sustainability
27. Clinical Aging Studies
28. Clinical Investigation**
29. Coastal Sustainability
30. Coastal Sustainability Management
31. College Student Affairs
32. College Teaching*
33. Community Development
34. Comparative Literary Studies
35. Compliance, Risk, and Anti-Money Laundering
36. Concepts and Tools of Epidemiology**
37. Creative Writing
38. Crime Scene Investigations for Violent Crimes Criminal Justice Administration*
39. Cuban Studies
40. Cyber Intelligence
41. Cybersecurity Education and Awareness
42. Diasporas and Health Disparities*
43. Digital Forensics **
44. Digital Music Education** Disabilities Education: Severe and/or Profound**
45. Disaster Management**
46. Diversity
47. Energy Sustainability
48. Entrepreneurship**
49. Environmental Health*
50. Environmental Policy and Management
51. Epidemiology of Infectious Disease*
52. ESOL**
53. Evaluation
54. Exceptional Student Education
55. Film and New Media Studies
56. Food Sustainability and Security
57. Foreign Language Education: Professional
58. Foreign Language Education: Culture and Content
59. Genocide and Human Rights
60. Geographical Information Systems
61. Geriatric Social Work/Clinical Gerontology
62. Gifted Education**INACTIVE
63. Global Health and Latin American and Caribbean Studies
64. Global Health and Latin American and Caribbean Studies
65. Global Health Practice
66. Global Strategy and Decision-Making
67. Globalization Studies - INACTIVE
68. Global Sustainability
69. Health Analytics
70. Health Care Risk Management & Patient Safety - INACTIVE
71. Health Informatics*
72. Health Information
73. Health Management and Leadership*
74. Health, Safety & Environment
75. Health Sciences**
76. Hearing Specialist: Early Intervention**
77. Hospice, Palliative Care and End of Life Studies
78. Human Resources
79. Humanitarian Assistance**
80. Hydrogeology
81. Infection Control**
82. Information Assurance **
83. Instructional Technology: Distance Education**
84. Instructional Technology: Florida Digital Educator**
85. Instructional Technology: Instructional Design*
86. Instructional Technology: Multimedia Design*
87. Instructional Technology: Web Design**
88. Integrated STEM Education Grades 6-9
89. Integrative Health Coaching INACTIVE
90. Integrative Mental Health Care
91. Integrative Oncology INACTIVE
92. Intellectual Property
93. Interdisciplinary Transportation

http://www.grad.usf.edu/
134. Public Management
135. Qualitative Research
136. Reading *
137. Regulatory Affairs – Medical Devices**
138. Rehabilitation Technology
139. Renewable Energy
140. Research Administration
141. Robotics **
142. Safety Management
143. Scholarly Excellence, Leadership Experiences, and Collaborative Training (SELECT) (XHS)
144. School Counseling Post-Masters*
145. School Library Media Specialist**
146. Smart Grid Power Systems
147. Social Marketing & Social Change**
148. Social Science Education - INACTIVE
149. Statistical Data Analysis
150. Strategic Intelligence
151. Sustainable
152. Sustainable Placemaking
153. Sustainable Tourism
154. Sustainable Tourism Leadership
155. Sustainable Transportation

156. Systems Engineering**
157. Teacher Leadership for Student Learning **
158. Teaching and Communicating Ocean Sciences Broader Impacts *
159. Teaching Composition
160. Teaching English as a Second Language (TESL)
161. Teaching in Pharmacy
162. Technology Management**
163. Total Quality Management**
164. Toxicology and Risk Assessment**
165. Transatlantic Studies
166. Translational Research in Adolescent Behavioral Health*
167. Transportation Systems Analysis**
168. Water, Health and Sustainability
169. Water Sustainability
170. Wireless Engineering**
171. Women’s Health
172. Women’s and Gender Studies

* Partially online
** Fully online

Graduate Certificate Policies

The areas of study for the Graduate Certificates are created within the mission of graduate education. Students will be awarded certificates upon completion of specific course work, which has been approved by the Graduate Council. The Graduate Certificate is not defined as a degree by the Office of Graduate Studies; rather, it is a focused collection of courses that, when completed, affords the student some record of distinct academic accomplishment in a given discipline or set of related disciplines. Moreover, the Graduate Certificate is not viewed as a guaranteed means of entry into a graduate major. While the courses comprising a graduate certificate may be used as evidence in support of a student’s application for admission to a graduate major, the certificate itself is not considered to be a prerequisite.

Process of Approval for New Graduate Certificates

Proposals for new areas of study for graduate certificates are created and submitted by the academic unit that wishes to offer such a certificate. Proposals must be accompanied by endorsement from the department heads and deans of the colleges/schools in which the contributing course work is offered as well as from the academic unit or units whose students or majors could be impacted by the creation of the graduate certificate. The Graduate Council will consider all the proposals for new graduate certificates to assure proposal guidelines have been followed and that repetition and redundancy across areas of study for certificates are not evident. Those meeting the criteria set forth by the Graduate Council will then be recommended to the Provost for approval.

Criteria for Approval
The general principles applied to the assessment of the academic quality of proposals for new graduate areas of study for certificates include:
1. The proposed sequence of course work must offer a clear and appropriate educational objective at the post-baccalaureate level.

2. The proposed curriculum will achieve its educational objective in an efficient and well-defined manner.

3. A perceived need for such a certificate should exist. This provision might be defined in terms of either external markets (i.e., external demand for the skills associated with such a certificate) or internal academic means (i.e., the need for a critical mass of students in a given discipline).

4. An appropriate number of credit hours must comprise the area of study for the certificate. The number of graduate credits cannot be less than nine (9) or more than one-half of the credits necessary for a related master’s degree from the Office of Graduate Studies.

5. If the area of study for a certificate requires new courses, those courses must be approved by the appropriate College bodies or offices and the Graduate Council.

**Student Eligibility and Admission Criteria**

Students must apply and be accepted into the Graduate Certificate to be eligible to receive a certificate. The prerequisites and general criteria of eligibility for admission to any graduate certificate area of study include:

1. An earned baccalaureate degree or its equivalent from a regionally accredited college or university or enrollment in a USF Accelerated Major is required. Students in Accelerated Majors may be admitted upon completion of 120 semester hours.

2. Each Graduate Certificate specifies the requirements for admission, including minimum grade point average, standardized test scores, and other similar criteria as part of the application. However, prospective non-degree seeking graduate certificate students must meet University graduate admissions grade point average requirements.

Students who wish to pursue a Graduate Certificate must apply to the Graduate Certificate Office (http://www.usf.edu/innovative-education/programs/graduate-certificates/) and be admitted to the Graduate Certificate. Students are encouraged to contact the coordinator prior to applying.

- **Non-Degree Seeking Students**
  All non-degree seeking students who wish to pursue approved graduate certificates should apply for admission to the Certificate through the Graduate Certificate Office as soon as possible for maximum benefit, but must apply to the Certificate and complete required coursework within five years of taking the first course applicable to the certificate. Students must submit a Completion Form for the Graduate Certificate to be awarded.

- **Degree Seeking Students**
  - All degree seeking students who wish to pursue approved graduate certificates must apply for admission to the Graduate Certificate through the Graduate Certificate Office. The application must be received prior to conferral of the degree that includes the same coursework. Students who have completed all coursework must apply for admission to the certificate and submit a Completion Form prior to the deadline to apply for graduation by the fourth week of the semester in which the student plans to graduate.
Degree seeking students who are pursuing a Graduate Certificate in a discipline outside of their graduate major must apply for admission to the Graduate Certificate through the Graduate Certificate Office. The application must be received prior to the deadline to apply for graduation (by the fourth week of the semester) in which the student plans to graduate. Required coursework for the certificate must be completed within five years of taking the first course applicable to the certificate. Students must submit a Completion Form for the certificate to be awarded.

3. Certificate-seeking students not currently enrolled in a degree-granting graduate major, will be admitted into a separate classification within the University, and will be classified as “Graduate Certificate Students.” This separate classification will permit the University to monitor statistical and enrollment data for certificate areas of study, and will allow inclusion of such efforts in the annual reports and academic planning. The Graduate Certificate Office will note successful completion of a certificate on the student’s transcript upon completion.

4. Students pursuing a graduate certificate are required to meet the same academic requirements as those defined for degree-seeking students to remain in “good standing”.

5. All graduate certificate students may apply one graduate course to two graduate certificates.

6. All graduate certificate students must meet all prerequisites for courses in which they wish to enroll.

7. Should a graduate certificate student subsequently apply and be accepted to a graduate major, the University’s Transfer of Credit Policy applies. It is up to the Major to determine the number of credits that may be transferred in from the Graduate Certificate into the Graduate Major, up to the 49% limits specified in the transfer of credit policy. Any application of such credit must be approved by the degree-granting college and must be appropriate to the major. See the Transfer of Credit Policy for more information.

Certificate Requirements

To receive a Graduate Certificate:

1. Students must successfully complete certificate requirements as established by the University. Graduate Certificate students will be held to the academic standards for all graduate students as specified in the Graduate Catalog, except for any additional requirements as noted in the section in the Graduate Catalog regarding Graduate Certificates.

2. Students must submit a completion form. Degree-seeking students must submit this form before graduating from their graduate major. Non-degree-seeking students must submit this form no later than one semester after completing their certificate coursework.

3. Students must have been awarded a bachelor’s or higher degree to be eligible.
SECTION 12

COLLEGE OF

ARTS AND SCIENCES

http://www.cas.usf.edu/
Changes to Note

Graduate Council approved the changes on the date noted.

**Administrative Changes**

<table>
<thead>
<tr>
<th>Department</th>
<th>Action</th>
<th>Description</th>
<th>Date</th>
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</thead>
</table>

**Accelerated Majors**

<table>
<thead>
<tr>
<th>Department</th>
<th>Action</th>
<th>Description</th>
<th>Date</th>
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</table>

**Concurrent Degrees**

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<th>Department</th>
<th>Action</th>
<th>Description</th>
<th>Date</th>
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<tbody>
<tr>
<td>AS Applied Anthropology / Public Health</td>
<td>M.A./MPH</td>
<td>Add Coverdell Peace corps language to Anthro section</td>
<td>5/1/2017</td>
</tr>
<tr>
<td>AS Applied Anthropology / Public Health</td>
<td>Ph.D./MPH</td>
<td>Add Coverdell Peace corps language to Anthro section</td>
<td>5/1/2017</td>
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<tr>
<td>AS Linguistics: ESL / French</td>
<td>M.A. / M.A.</td>
<td>New Concurrent Degree Option</td>
<td>5/1/2017</td>
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<tr>
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<td>M.A. / M.A.</td>
<td>New Concurrent Degree Option</td>
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**Majors**

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<tr>
<td>AS Applied Anthropology</td>
<td>M.A.</td>
<td>Change Major - add three professional development options</td>
<td>4/3/2017</td>
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<tr>
<td>AS Applied Anthropology</td>
<td>M.A.</td>
<td>Change Major - add Coverdell Peace Corps information</td>
<td>5/1/2017</td>
</tr>
<tr>
<td>AS Applied Anthropology</td>
<td>Ph.D.</td>
<td>Change Major - add Coverdell Peace Corps information</td>
<td>5/1/2017</td>
</tr>
<tr>
<td>AS French</td>
<td>M.A.</td>
<td>Change Major, remove summer deadline</td>
<td>5/8/2017</td>
</tr>
<tr>
<td>AS Government</td>
<td>Ph.D.</td>
<td>Change Major</td>
<td>5/8/2017</td>
</tr>
<tr>
<td>AS Government</td>
<td>Ph.D.</td>
<td>Change Deadlines; Change fall from Jan 15 to Jan 5</td>
<td>4/3/2017</td>
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<tr>
<td>AS History</td>
<td>M.A.</td>
<td>Change Admissions to regular; fall deadline to Dec 1</td>
<td>5/1/2017</td>
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<tr>
<td>AS History</td>
<td>Ph.D.</td>
<td>Change Major, fall deadline to Dec 1</td>
<td>5/8/2017</td>
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<tr>
<td>AS Latin American, Caribbean &amp; Latino Studies</td>
<td>M.A.</td>
<td>Change Major</td>
<td>5/8/2017</td>
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<td>M.A.</td>
<td>Change Major - Additional Change - to language requirement</td>
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<td>AS Physics</td>
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<td>Change Deadlines- Remove Summer admissions</td>
<td>5/15/2017</td>
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<td>AS Physics, Applied</td>
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<td>Change Deadlines- Remove Summer admissions</td>
<td>5/15/2017</td>
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<tr>
<td>AS Political Science</td>
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<td>Change Major - new Concentration in AFRICANA STUDIES (AFA)</td>
<td>5/8/2017</td>
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<td>AS Public Administration</td>
<td>M.P.A.</td>
<td>Change Major - Terminate Exec MPA Concentration</td>
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<td>AS Religious Studies</td>
<td>M.A.</td>
<td>Change Major - reduce hours from 36 to 30</td>
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<td>AS Spanish</td>
<td>M.A.</td>
<td>Change Major</td>
<td>2/6/2017</td>
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</table>
University of South Florida  
College of Arts and Sciences  
4202 E. Fowler Ave BEH107  
Tampa, FL 33620

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Web address: [http://www.cas.usf.edu/](http://www.cas.usf.edu/)  
Email: see individual department listings  
Phone: 813-974-6957  
Fax: 813-974-4075

College Dean: Eric Eisenberg, Ph.D.  
Sr. Associate Dean: Robert Potter, Ph.D.  
Associate Dean: Allison Cleveland Roberts, Ph.D.

College Structure:  
The College of Arts and Sciences is USF's largest college. The College is comprised of three schools including the School of Social Sciences, the School of Natural Sciences & Mathematics, and the School of Humanities, all with strong interdisciplinary connections among them and throughout the University.

Mission Statement:  
The College of Arts and Sciences is a community of scholars dedicated to the idea that educated people are the basis of a just and free society. The essences of education are a capacity for the appreciation of social change within a context of prior human achievement. The faculty of the Arts and Sciences strive to instill in their students a history of human ideas, a love of learning, and an understanding of the means that scholars have used in their search for beauty and order in the natural world. The education provided by the disciplines of the Arts and Sciences is the foundation upon which the lives and professions of our students are built, and the basis from which personal growth occurs.

The College of Arts and Sciences takes as its goal a melding of the natural, humanistic and social philosophies into a comprehensive whole that encourages the development of new ideas and new approaches to the understanding of our universe. It is the responsibility of scholars to share their discoveries for the betterment of society. Thus, the Arts and Sciences embrace the disciplines that strive to make immediate use of knowledge in the service of social goals as well as the disciplines whose discoveries contribute to the fund of basic information that is the stepping stone of applied knowledge.

Degrees, Majors, and Concentrations Offered:

**Master of Arts (M.A.)**  
Applied Anthropology (ANT)  
- Archaeological and Forensic Science (AAF)  
- Bio-cultural Medical Anthropology (BCM)  
- Cultural Resource Management (CRM)  
- Heritage Studies (HGS)  
Chemistry (non-thesis) (CHA)  
Communication (SPE)  
Economics (ECO)  
English (ENG)  
- Literature (LIT)  
- Rhetoric & Composition (RAC)  
French (FRE)  
Geography (GPY)
- Human Geography (USG)
- Geographic Information Science and Spatial Analysis (TGP)
- Environmental Geography (EVG)

History (HTY)
- American History (AHY)
- Ancient History (AHS)
- European History (EHS)
- Latin American History (LAH)
- Medieval History (MHS)

Latin American, Caribbean, and Latino Studies (LAS)

Liberal Arts (MA)
- Africana Studies (AFT)
- American Studies (AME)
- Film Studies (FLM)
- Humanities (HTS)
- Social and Political Thought (SPT)

Library and Information Science (LIS)

Linguistics (LIN)
Linguistics: English as a Second Language (ESL)

Mass Communications (COM)
- Media Studies (MCM)
- Multimedia Journalism (MMJ) *inactive*
- Strategic Communication Management (PRS)

Mathematics (MTH)
- Pure & Applied (PAA)

Philosophy (PHI)
- Philosophy & Religion (PHR)

Political Science (POL)
- Africana Studies (AFA)

Psychology (PSY)
- Clinical Psychology (PSC)
- Cognition, Neuroscience & Social Psychology (PCN)
- Industrial-Organizational Psychology (PSI)

Religious Studies (REL)
Sociology (SOC)
Spanish (SPA)
Statistics (STC)

Women’s and Gender Studies (WGS)

**Master of Fine Arts (M.F.A.)**
Creative Writing (CWR)
- Fiction (CFI)
- Poetry (CPO)

**Master of Public Administration (M.P.A.)**
Public Administration (PAD)

http://www.cas.usf.edu/
Master of Science (M.S.)
Biology (BIO)
  - Cell Biology & Molecular Biology (MBG)
  - Ecology and Evolution (EEV)
  - Environmental & Ecological Microbiology (EVM)
  - Physiology and Morphology (PMY)
Chemistry (CHM)
Environmental Science and Policy (ESP)
Geology (GLY)
Intelligence Studies (ILS)
  - Cyber Intelligence (CYI)
  - Strategic Intelligence (SGI)
Microbiology (MIC)
Physics (PHY)
  - Applied Physics (APM)
    - Atomic & Molecular Physics (AMZ)
    - Laser Physics (APZ)
    - Materials Physics (MPZ)
    - Optical Physics (OPZ)
    - Semiconductor Physics (SCZ)
    - Solid State Physics (SSZ)

Master of Urban and Regional Planning (M.U.R.P.)
Urban and Regional Planning (URP)

Doctor of Philosophy (Ph.D.)
Applied Anthropology (APA)
  - Archaeological and Forensic Science (AAF)
  - Bio-cultural Medical Anthropology (BCM)
  - Cultural Resource Management (CRM)
  - Heritage Studies (HGS)
Cancer Biology (CNB)
Cell and Molecular Biology (CBO)
Chemistry (CHM)
Communication (SPE)
Economics (ECO)
English (ENG)
  - Literature (LIT)
  - Rhetoric & Composition (RAC)
Geography and Environmental Science and Policy (GEP)
Geology (GLY)
Government (GOV)
History (HTY)
Integrative Biology
  - Ecology and Evolution (EEV)
  - Environmental & Ecological Microbiology (EVM)
  - Physiology and Morphology (PMY)
Linguistics and Applied Language Studies (LAL)
Applied Anthropology (M.A.)

Mathematics (MTH)
- Pure & Applied (PAA)
- Statistics (STT)

Philosophy (PHI)
- Philosophy and Religion (PHR)

Physics (Applied) (APD)

Psychology (PSY)
- Clinical Psychology (PSC)
- Cognition, Neuroscience & Social Psychology (PCN)
- Industrial-Organizational Psychology (PSI)

Sociology (SOC)

Graduate Certificates Offered:
See Section 11: Graduate Certificates

COLLEGE REQUIREMENTS

Thesis Enrollment
Upon successful completion of all M.A./M.S. degree requirements except for thesis, Arts and Sciences graduate students must enroll in a minimum of two (2) credit hours of Thesis each semester (except Summers) until the completion of the master’s degree.

Dissertation Enrollment
Doctoral students who have been admitted to candidacy are required to accumulate a minimum of six (6) credit hours of Dissertation during each previous 12-month period (previous three (3) terms, e.g., Fall, Spring, Summer) until the degree is granted.
APPLIED ANTHROPOLOGY

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: December 15
Fall admission only

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 40
Level: Masters
CIP Code: 45.0201
Dept. Code: ANT
Major/College Code: APA AS
Implemented: 1985

Concentrations:
Archaeological and Forensic Science (AAF) (2014)
Cultural Resource Management (CRM) (2007)
Heritage Studies (HGS) (2008)

CONTACT INFORMATION

College: Arts and Sciences
Department: Anthropology

Contact Information: www.grad.usf.edu
Other Resources: http://anthropology.usf.edu/graduate/

MAJOR INFORMATION

The Applied Anthropology major, initiated in 1974, was the first in the country to focus on career training for the practice of Applied Anthropology. Faculty at USF specialize in various areas, including medical anthropology, biological anthropology, urban policy and community development, education, archaeology, cultural resource management (CRM), economic development, immigration, media, and issues pertaining to race, gender, and ethnicity. Geographic specializations emphasize the Caribbean, Latin America, Sub-Saharan Africa, Europe, and the United States. More than 240 graduates have received an education in anthropology and its practical uses, leading to employment in government and private sector agencies and organizations. For many, the MA is a terminal degree that qualifies them for professional careers in administration, program evaluation, planning, research, and cultural resource management. Others have gone on to earn doctoral degrees and have gained employment in academic or higher level nonacademic positions.

Students entering the Applied Anthropology major at USF choose from one of four tracks: Archaeology, Biological Anthropology, Cultural Anthropology, or Medical Anthropology. Although these four tracks share some common requirements, and are bound by general rules of the USF Office of Graduate Studies, they have different curricula and employment trajectories. Archaeology Track graduates typically enter careers in contract archaeology, or public and private agencies and museums responsible for managing archaeological resources. The Cultural Anthropology Track is designed to lead to employment in diverse areas that include education, urban planning, human services, private sector consulting and research, and non-governmental community organizations. Museum and heritage programming represent an area of overlap between the two emphases. Students who wish to pursue these kinds of specialties will develop curricula that draw from both applied and public archaeology requirements in consultation with their advisors. Biological Anthropology students are trained to work in law enforcement, private sector consulting and research, and non-governmental organizations. The Medical Anthropology track prepares students to conduct research, evaluation, and consulting in a variety of settings, including community-based organizations, county and state health departments, and non-governmental organizations. In addition to following the curriculum of a track, M.A. students can select elective courses to fulfill one of four concentrations in Archaeological and Forensic Sciences, Bio cultural Medical Anthropology, Cultural Resource Management, or Heritage Studies.
Our MA offers flexibility, depending on the student’s career plans. Students choose from one of three professional development options: research, internship, and internship-based research (a hybrid of the other two). All three options are expected to have an applied component, but differ in emphasis and setting.

**Major Research Areas:**
Human biology; bio cultural medical anthropology; nutrition/diet; growth and development; population genetics; forensic anthropology and human rights; neuroanthropology; stress; immune function; maternal and child health; reproductive health; HIV/AIDS; disasters; water and sanitation; migrant health; health policy; sociocultural and historical anthropology; transnational migration; labor; neoliberal globalization; citizenship; media and visual anthropology; environmental anthropology; urban anthropology; pedagogy and educational anthropology; heritage and memory studies; Florida archaeology; Eastern U.S. prehistory; Mesoamerican archaeology; Mediterranean prehistory; archaeological science; bioarchaeology; cultural resource management; public archeology.

**ADMISSION INFORMATION**
Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- GRE is required, however, there is no minimum score for admission into the major
- a statement of purpose
- a signed research ethics statement
- at least three letters of recommendation
- a resume or curriculum vitae
- graduate assistant application form (optional)
- writing sample (optional)

**CURRICULUM REQUIREMENTS**

**Total Minimum Hours - 40 credit hours**

**Core Requirements - 6 hours**

**Required Track - 24 hours**

**Optional Concentrations 9-12 hours**

**Internship – 0-7 hours, depending on the option**

**Thesis - 6 hours**

**CORE REQUIREMENTS - 6 hours**

<table>
<thead>
<tr>
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<th>Credits</th>
<th>Title</th>
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<tbody>
<tr>
<td>ANG 6705</td>
<td>3</td>
<td>Foundations of Applied Anthropology I</td>
</tr>
<tr>
<td>ANG 5486</td>
<td>3</td>
<td>Quantitative Methods in Anthropology (or equivalent in another department)</td>
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**Required Track - 24 hours**

Students select from one of the following Tracks:

**Archaeology Track**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Title</th>
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<tbody>
<tr>
<td>ANG 6198</td>
<td>3</td>
<td>Regional Problems in Methods of Public Archaeology</td>
</tr>
<tr>
<td>ANG 6110</td>
<td>3</td>
<td>Archaeological Theory and Current Issues</td>
</tr>
<tr>
<td>ANG 6197</td>
<td>3</td>
<td>Public Archaeology</td>
</tr>
<tr>
<td>Electives</td>
<td>6</td>
<td>Two electives in Archaeology</td>
</tr>
<tr>
<td>Electives</td>
<td>3</td>
<td>One elective in Biological Anthropology</td>
</tr>
<tr>
<td>Electives</td>
<td>3</td>
<td>One elective from any graduate seminar in Anthropology</td>
</tr>
<tr>
<td>Seminar</td>
<td>3</td>
<td>One graduate seminar outside the Department</td>
</tr>
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http://www.cas.usf.edu/
Biological Anthropology Track
ANG 6701 3 Contemporary Applied Anthropology
ANG 6766 3 Research Methods in Applied Anthropology
ANG 6511 3 Seminar in Physical Anthropology: Human Variation
ANG 6469 3 Selected Topics in Medical Anthropology OR
ANG 6585 3 Theory in Applied Bioanthropology
Seminars 9 Three additional graduate seminars in Anthropology
Seminar 3 One graduate seminar outside the Department

Cultural Anthropology Track
ANG 6701 3 Contemporary Applied Anthropology
ANG 6766 3 Research Methods in Applied Anthropology
Seminars 15 Five elective graduate seminars in Anthropology
Seminar 3 One graduate seminar outside the Anthropology Department

Medical Anthropology Track
ANG 6701 3 Contemporary Applied Anthropology
ANG 6766 3 Research Methods in Applied Anthropology
ANG 6469 3 Theory and Methods in Medical Anthropology
Seminars 12 Four elective graduate seminars in Anthropology
Seminar 3 One graduate seminar outside the Anthropology Department

Paul D. Coverdell Fellows Program in Applied Anthropology for Returning Peace Corps Volunteers
Students in the Coverdell Program are required to complete internships related to the program of study in underserved American Communities.

For more information on the Fellows Program:
https://www.peacecorps.gov/volunteer/university-programs/coverdell-fellows/

CONCENTRATION REQUIREMENTS (Optional)
Students may select one of the following concentrations:

Concentration in Archaeological and Forensic Sciences - 12 hours
Two required courses (3 credits each), consisting of
ANG 6701 3 Contemporary Applied Anthropology
ANG 6115 3 Seminar in Archaeology: Archaeological Science
ANG 6745 3 Forensic Anthropology OR
ANG 6511 3 Seminar in Physical Anthropology: Forensic Science
Electives 6 Two elective courses (3 credits each; one may be outside Anthropology):
ANG 6189 3 Ancient Diets
ANG 6195 3 Ancient Trade
ANG 6511 3 Seminar in Physical Anthropology: Anthrogenetics
ANB 6536 3 Bioarchaeology
ANG 6745 3 Forensic Anthropology
ANG 6741 3 Intro to Forensic Science
ANG 6511 3 Seminar in Physical Anthropology: Advanced Methods in Forensic Anthropology
ANG 6115 3 Seminar in Physical Anthropology: Soils
ANG 6115 3 Seminar in Physical Anthropology: Technologies for Heritage Preservation

External electives that also qualify (only one can count towards concentration):
Advanced Remote Sensing (GIS 6038C), Remote Sensing Seminar (GIS 6039), Tracer Geochemistry (GLY 6255), Analytical Techniques in Geology (GLY 6285C), Principles of Applied Geophysics (GLY 6475), Principles of Stable Isotope Geochemistry (GLY 6739)
Concentration in Bio-cultural Medical Anthropology - 12 hours
Four graduate medical anthropology courses with the ANG prefix:
ANG 6469 3 Selected Topics in Medical Anthropology: Theory and Methods in Medical Anthropology
ANG 6511 3 Seminar in Physical Anthropology: Theory and Methods of Applied Biological Anthropology
ANG 6511 3 Seminar in Physical Anthropology (e.g. Human Variation, Anthropology of Growth and Development, or Forensic Anthropology)

Or one of the following:
ANG 6469 3 Selected Topics in Medical Anthropology (e.g. Issues in Migrant Health, Anthropology and Development, Reproductive Health, Health & Medical System, Socio-Cultural Aspects of HIV/AIDS)
ANG 5937 2-4 Seminar in Anthropology

Please Note: the Foundations of Medical Anthropology on-line course offered through the School of Sustainability is a service course intended for non-anthropology students and cannot count towards the Applied Anthropology degree.

Concentration in Cultural Resource Management - 9 hours
ANG 6197 3 Public Archaeology
ANG 6115 3 Seminar in Archaeology: Current Issues and Techniques in Cultural Resources Management

One of the following electives (or other as approved by Graduate Director):
ANG 6448 3 Regional Problems in Urban Anthropology: Issues in Heritage Tourism
ANG 6115 3 Seminar in Public Archaeology (e.g. Historical Archaeology, Florida Archaeology, Southeastern Archaeology, Museum Methods)

Graduate class in Geographic Information Systems, whether offered in Anthropology or another department.
Graduate students pursuing a concentration in Cultural Resource Management must take the basic course requirements of their graduate program.

Concentration in Heritage Studies - 9 hours
ANG 6436 3 Issues in Heritage Tourism
Electives 6 Two electives from among the following options:
ANG 5395 3 Visual Anthropology
ANG 6081 4 Museum Methods
ANG 6197 3 Public Archaeology
ANG 6436 3 Issues in Heritage Tourism
ANG 6448 3 Regional Problems in Urban Anthropology (topics include Ethnohistory, Museums in Culture, Ethnicity and Public Policy, Heritage Research and Management, Culture and Environmental Resources)
ANG 7487 3 Advanced Quantitative Research Methods in Applied Anthropology

COMPREHENSIVE EXAM
The comprehensive exam requirement is satisfied upon successful completion of Foundation of Applied Anthropology (ANG 6705). Successful completion entails earning a final grade of “B” or better in this course.

The MA offers flexibility, depending on the student’s career plans. Students choose from one of three professional development options, which must be decided in consultation with their major professor before the proposal is delivered. All three options are expected to have an applied component, but differ in emphasis and setting.

- **Research Option** – This option is designed for students who are planning a career in applied research and are considering a Ph.D. degree. The final product is a thesis, which may be delivered as either a traditional thesis or as a peer-reviewed journal article. If an article is submitted, the student must be first author and the journal selected in consultation with the M.A. Committee. The publication must be formally accepted, but not necessarily published, to fulfill this requirement.

- **Internship-based Research Option**: This option is designed for students who are planning a career in applied research and practice. It is designed for students whose thesis research is situated in an Internship setting. A
formal Internship is required, and the final product is a thesis, which may be delivered as either a traditional thesis or a peer-reviewed journal article (same guidelines apply as in the Research option).

- **Internship Option**: This option is designed for students who are planning a career in applied research and practice. A formal Internship is required, and the final product consists of 1) a technical report or installation delivered to the host agency and 2) a substantial Internship report delivered to the M.A. committee. The student must be the first author on the technical report, and it must represent new and original work. The targeted length and substance of the Internship report should be discussed with the M.A. committee and agreement reached in advance.

**INTERNSHIP** – 0-7 hours minimum, depending on the option

- Research Option – no internship hour requirement
- Internship-Based Research Option:
  ANG 6915  4  Directed Research in Internship
- Internship Option
  ANG 6915  7  Directed Research in Internship

**THESIS** – 3-6 hours minimum, depending on the option

- Research Option
  ANG 6917  10  Thesis
- Internship-Based Research Option
  ANG 6971  6  Thesis
- Internship Option
  ANG 6971  3  Thesis
  At least 2 credit hours per semester until thesis is accepted.

**COURSES**

See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
APPLIED ANTHROPOLOGY AND PUBLIC HEALTH

Concurrent Degrees
Master of Arts (M.A.)/Master of Public Health (M.P.H.) Degrees

DEGREE INFORMATION

Refer to individual Majors for deadlines

Minimum Total Hours:
Applied Anthropology 37
Public Health 42

Level: Masters

CIP Code:
Anthropology: 45.0201
Public Health: 51.2201

Dept. Codes: ANT, DEA
Major/College: ANT AS / MPH PH

Concentrations:
Bio-cultural Medical Anthropology (BCM)

CONTACT INFORMATION

Colleges: Arts and Sciences
Public Health

Contact Information: www.grad.usf.edu
Other Resources: http://anthropology.usf.edu/graduate/

MAJOR INFORMATION

The two majors review applicants independently. Application forms for Anthropology and Public Health are completed with each listing both as major areas or study.

After admission to both majors, the Graduate Admissions office instructs the Registrar’s Office to classify the student as concurrently enrolled in anthropology and public health. In choosing which major to apply to first, students should take into consideration the following: requirements in Anthropology for admission are different from in Public Health; admission to one major does not guarantee admission to the other; and of course, the student’s interests and career plans. Upon completion of all requirements for the Concurrent Degrees, the student submits separate applications for graduation to Anthropology and Public Health, and is certified for graduation by both majors and receives two diplomas. Concurrent Degree students can also select elective courses to fulfill a concentration in Bio-cultural Medical Anthropology.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- 3.20 undergraduate GPA
- GRE required for consideration, but there is no minimum score
- a statement of purpose
- a signed research ethics statement
- at least three letters of recommendation
- a resume or curriculum vitae
- graduate assistant application form (optional)
- writing sample (optional)
- Also see admission requirements listed for the MPH in Public Health
CURRICULUM REQUIREMENTS

M.A. in Applied Anthropology (40 hours)
For specific information on the requirements for the MA in Applied Anthropology (including optional concentrations), please refer to the Catalog listing for that major.

- ANG 6705 Foundation of Applied Anthropology 3
- ANG 6701 Contemporary Applied Anthropology 3
- ANG 6766 Research Methods in Applied Anthropology 3
- PHC 6050 Biostatistics I (3) or ANG 5486 Quantitative Methods (3) 3
- Four graduate level seminars (variable topics) in Anthropology 12
  - At least two in the area of medical anthropology (often ANG 6469 Selected Topics in Medical Anthropology); one of these fulfilled by taking in public health PHC 6410 Social and Behavioral Sciences Applied to Health or PHC 6931 Advanced Seminar in SBS Applied to Health
  - Specific seminars should be taken to fulfill specific track requirements for the MA in Applied Anthropology degree (or an optional concentration)

External elective requirement (one graduate level course outside the Department of Anthropology) is fulfilled by a Public Health course 3

Comprehensive examination requirement met by successfully completing ANG 6705 (Foundation of Applied Anthropology). Successful completion entails earning a final grade of “B” or better in this course.

Internship: ANG 6915; one semester, full-time after completion of course requirements, 4 hours minimum, in the field of public health to dually fulfill MPH requirement for Supervised Field Experience, PHC 6945, 4 credit hours minimum

Thesis: ANG 6971: Dually fulfills MPH requirement for Special Project, PHC 6977, 6 credit hours minimum

Paul D. Coverdell Fellows Program in Applied Anthropology for Returning Peace Corps Volunteers

Students in the Coverdell Program are required to complete internships related to the program of study in underserved American Communities.

For more information on the Fellows Program: https://www.peacecorps.gov/volunteer/university-programs/coverdell-fellows/

M.P.H. in Public Health (42 hours)
Requirements include public health core courses, concentration area courses, electives, supervised field placement, comprehensive exam, and special project.

For specific information on the requirements, please refer to the Catalog listing for the MPH in Public Health

COURSES
See http://www.ugs.usf.edu/course-inventory/
APPLIED ANTHROPOLOGY

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: December 15
Fall admission only

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 46 beyond MA
Level: Doctoral
CIP Code: 45.0201
Dept. Code: ANT
Major/College Codes: APA AS
Effective: 1984

Concentrations:
Archaeological and Forensic Sciences (AAF)
Bio-cultural Medical Anthropology (BCM)
Cultural Resource Management (CRM)
Heritage Studies (HGS)

CONTACT INFORMATION

College: Arts and Sciences
Department: Anthropology

Contact Information:
http://anthropology.usf.edu/graduate/

MAJOR INFORMATION

The Ph.D. in Applied Anthropology, initiated in 1984, was the first doctoral major of its kind and has to date awarded more than 140 degrees. The major is designed to prepare students to conduct research, teach, and practice in both academic and nonacademic settings. Students participate in either a structured research internship or independent field research for two consecutive semesters. Students must choose one of four tracks, which guide curriculum and required courses: Archaeology, Biological Anthropology, Cultural Anthropology, or Medical Anthropology. In addition, students can select elective courses to fulfill an optional concentration in Archaeological and Forensic Sciences, Biocultural Medical Anthropology, Cultural Resource Management, or Heritage Studies.

For information regarding the Concurrent Degree Ph.D./MPH with the College of Public Health, see the separate listing under Applied Anthropology and Public Health.

Major Research Areas:
Human biology; biocultural medical anthropology; nutrition/diet; growth and development; population genetics; forensic anthropology and human rights; neuroanthropology; stress; immune function; maternal and child health; reproductive health; HIV/AIDS; disasters; water and sanitation; migrant health; health policy; sociocultural and historical anthropology; transnational migration; labor; neoliberal globalization; citizenship; media and visual anthropology; environmental anthropology; urban anthropology; pedagogy and educational anthropology; heritage and memory studies; Florida archaeology; Eastern U.S. prehistory; Mesoamerican archaeology; Mediterranean prehistory; archaeological science; bioarchaeology; cultural resource management; public archeology.
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- GRE required
- Concurrent Degree applicants (Anthropology/Public Health) must also meet GRE requirements for the MPH
- a statement of purpose
- a signed research ethics statement
- at least 3 letters of recommendation
- a resume or curriculum vitae
- graduate assistant application form (optional)
- writing sample (optional)

CURRICULUM REQUIREMENTS

Total minimum required hours - 46 hours beyond the M.A.

Core Requirements - 3 hours
Track - 24 hours
Electives - 6 hours minimum
External Curriculum Requirement - 6 hours minimum
Internship - 4 hours
Dissertation - 6 hours

Concentration – Optional – 9-12 hours

CORE REQUIREMENTS - 3 hours
ANG 6705 (3) Foundations of Applied Anthropology
Must receive a grade of “B” or better. Ph.D. students with a recent (within the past five years) M.A. in Anthropology are not required to take Foundations of Applied Anthropology, although they may do so if their advisor recommends it.

TRACKS - 24 hours
Students select one of the following tracks:

Archaeology Track:
ANG 6198 3 Archaeological Methods
ANG 6110 3 Archaeological Theory and Current Issues
ANG 6197 3 Public Archaeology and
ANG 7487 3 Advanced Quantitative Research Methods and
ANG 6115 3 Seminar in Archaeology: Advanced Archaeological Theory

Biological Anthropology Track
ANG 7487 3 Quantitative Research Methods
ANG 6701 3 Contemporary Applied Anthropology
ANG 6511 3 Human Variation
ANG 6585 3 Theory and Methods in Applied Bioanthropology
ANG 6766 3 Research Methods in Applied Anthropology

Cultural Anthropology Track
ANG 6494 3 Anthropological Theory Today
ANG 6701 3 Contemporary Applied Anthropology
ANG 6766 3 Research Methods in Applied Anthropology
ANG 7704 3 Legal and Ethical Aspects of Applied Anthropology
ANG 7487 3 Quantitative Research Methods
### Medical Anthropology Track

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANG 6494</td>
<td>3</td>
<td>Anthropological Theory Today</td>
</tr>
<tr>
<td>ANG 6701</td>
<td>3</td>
<td>Contemporary Applied Anthropology</td>
</tr>
<tr>
<td>ANG 6766</td>
<td>3</td>
<td>Research Methods in Applied Anthropology</td>
</tr>
<tr>
<td>ANG 7704</td>
<td>3</td>
<td>Legal and Ethical Aspects of Applied Anthropology</td>
</tr>
<tr>
<td>ANG 7487</td>
<td>3</td>
<td>Quantitative Research Methods</td>
</tr>
<tr>
<td>ANG 6469</td>
<td>3</td>
<td>Theory and Methods in Medical Anthropology</td>
</tr>
</tbody>
</table>

### CONCENTRATION REQUIREMENTS (Optional, not required) - Students may select one of the following concentrations:

**Concentration in Archaeological and Forensic Sciences - 12 hours**

Two required courses (3 credits each), consisting of

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANG 6115</td>
<td>3</td>
<td>Archaeological Science</td>
</tr>
<tr>
<td>ANG 6588</td>
<td>3</td>
<td>Forensic Anthropology or ANG 6511 Forensic Science</td>
</tr>
</tbody>
</table>

Two elective courses (3 credits each; one may be outside Anthropology) – 6 hours

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANG 6145</td>
<td>3</td>
<td>Ancient Diets</td>
</tr>
<tr>
<td>ANG 6193</td>
<td>3</td>
<td>Ancient Trade</td>
</tr>
<tr>
<td>ANG 6511</td>
<td>3</td>
<td>Anthropogenetics</td>
</tr>
<tr>
<td>ANB 6586</td>
<td>3</td>
<td>Bioarchaeology</td>
</tr>
<tr>
<td>ANG 6588</td>
<td>3</td>
<td>Forensic Anthropology</td>
</tr>
<tr>
<td>ANG 6515</td>
<td>3</td>
<td>Intro to Forensic Science</td>
</tr>
<tr>
<td>ANG 6115</td>
<td>3</td>
<td>Soils</td>
</tr>
<tr>
<td>ANG 6115</td>
<td>3</td>
<td>Technologies for Heritage Preservation</td>
</tr>
</tbody>
</table>

External electives that also qualify (only 1 can count towards concentration):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GIS 6038C</td>
<td>Advanced Remote Sensing</td>
</tr>
<tr>
<td>GIS 6039</td>
<td>Remote Sensing Seminar</td>
</tr>
<tr>
<td>GLY 6255</td>
<td>Tracer Geochemistry</td>
</tr>
<tr>
<td>GLY 6285C</td>
<td>Analytical Techniques in Geology</td>
</tr>
<tr>
<td>GLY 6475</td>
<td>Principles of Applied Geophysics</td>
</tr>
<tr>
<td>GLY 6739</td>
<td>Principles of Stable Isotope Geochemistry</td>
</tr>
</tbody>
</table>

**Concentration in Bio-Cultural Medical Anthropology -12 hours**

Four graduate medical anthropology courses with the ANG prefix:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANG 6469</td>
<td>Theory and Methods in Medical Anthropology</td>
</tr>
<tr>
<td>ANG 6511</td>
<td>Theory and Methods of Applied Biological Anthropology</td>
</tr>
<tr>
<td>ANG 6511</td>
<td>Seminar in Physical Anthropology (e.g. Human Variation, Anthropology of Growth and Development, Forensic Anthropology)</td>
</tr>
<tr>
<td>ANG 6566, 6569, 6469, or 5937</td>
<td>Nutritional Anthropology, Socio-Cultural Aspects of HIV/AIDS, Issues in Migrant Health, Anthropology and Development, Reproductive Health, ANG 6404 Health and Medical Systems</td>
</tr>
</tbody>
</table>

*Please Note: the Foundations of Medical Anthropology on-line course offered through the School of Sustainability is a service course intended for non-anthropology students and cannot count towards the Applied Anthropology degree.*

**Concentration in Cultural Resource Management -9 hours**

Required:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANG 6197</td>
<td>3</td>
<td>Public Archaeology</td>
</tr>
<tr>
<td>ANG 6115</td>
<td>3</td>
<td>Seminar in Archaeology; Current Issues &amp; Techniques in Cultural Resource Management</td>
</tr>
</tbody>
</table>

One of the following electives:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANG 6448</td>
<td>Regional Problems in Urban Anthropology: Issues in Heritage Tourism (or other as approved by Graduate Director)</td>
</tr>
</tbody>
</table>
ANG 6115  Topics in Public Archaeology  (Historical Archaeology, Florida Archaeology, Southeastern Archaeology, Museum Methods, or other as approved by Graduate Director)

Graduate class in Geographic Information Systems, whether offered in Anthropology or another department.

**Concentration in Heritage Studies - 9 hours**

**Required**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANG 6437</td>
<td>3</td>
<td>Selected Topics in Applied Anthropology: Issues in Heritage Studies</td>
</tr>
</tbody>
</table>

Two electives from among the following options:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANG 5395</td>
<td>3</td>
<td>Visual Anthropology</td>
</tr>
<tr>
<td>ANG 6081</td>
<td>4</td>
<td>Museum Methods</td>
</tr>
<tr>
<td>ANG 6197</td>
<td>3</td>
<td>Public Archaeology</td>
</tr>
<tr>
<td>ANG 6436</td>
<td>3</td>
<td>Issues in Heritage Tourism</td>
</tr>
<tr>
<td>ANG 6448</td>
<td>3</td>
<td>Regional Problems in Urban Anthropology (<em>Topics include ‘Ethnohistory,’ ‘Museums in Culture,’ ‘Ethnicity and Public Policy,’ ‘Heritage Research and Management,’ ‘Culture and Environmental Resources,’</em>)</td>
</tr>
<tr>
<td>ANG 6676</td>
<td>3</td>
<td>Seminar in Anthropological Linguistics</td>
</tr>
<tr>
<td>ANG 7487</td>
<td>3</td>
<td>Quantitative Research Methods</td>
</tr>
</tbody>
</table>

**Electives - 6 hours minimum**

Three elective graduate-level Anthropology courses. Two elective graduate-level Anthropology courses for students in the medical anthropology track.

**External Curriculum Requirement - 6 hours minimum**

The external curriculum requirement is designed to promote interdisciplinary perspectives. Students are expected to enroll in a minimum of two (2) or a maximum of three (3) graduate-level courses in departments other than Anthropology, selected on the basis of professional interests and in consultation with the major advisor (if the student takes only two external courses, he/she must take an additional anthropology elective). Students who enter the Ph.D. program with post-baccalaureate degrees in disciplines other than Anthropology may be able to use that expertise to satisfy the requirement, after consultation with the major advisor and approval of the Graduate Director. In these cases, the remaining credit hours will be fulfilled through additional coursework in Anthropology.

**Language Requirement**

All Ph.D. students are required to demonstrate proficiency in a foreign language, the specifics to be determined by the student and the supervisory committee, taking into account the nature of the student’s research. Minimal proficiency is demonstrated by the ability to satisfactorily translate a selection of the scholarly literature in the foreign language, with the occasional aid of a dictionary. The supervisory committee may require additional levels of proficiency depending on the nature of individual student research. The language requirement must be satisfied no later than the date of the dissertation defense.

**Internship and Qualifying examination - 4 hours minimum**

Qualifying examination covering area of specialization within applied anthropology and external specialization.

Two-semester internship or dissertation research ANG 7940 (Doctoral Internship in Applied Anthropology, minimum of 4 credit hours).

**Paul D. Coverdell Fellows Program in Applied Anthropology for Returning Peace Corps Volunteers**

Students in the Coverdell Program are required to complete internships related to the program of study in underserved American Communities.

For more information on the Fellows Program:

https://www.peacecorps.gov/volunteer/university-programs/coverdell-fellows/
Dissertation - 6 credits minimum
ANG 7980 Doctoral Dissertation. Dissertation, based on research or internship.

COURSES
See http://www.ugs.usf.edu/course-inventory/
APPLIED ANTHROPOLOGY AND PUBLIC HEALTH

Concurrent Degrees
Doctor of Philosophy (Ph.D.)/Master of Public Health (M.P.H.) Degrees

DEGREE INFORMATION
Refer to individual Majors for deadlines
International applicant deadlines:
http://www.grad.usf.edu/majors
Minimum Total Hours:
   46 – Applied Anthropology
   42 – Public Health
Level: Doctoral and Masters
CIP Code:
   Applied Anthro: 45.0201
   Public Health: 51.2201
Dept. Code:
   ANT, DEA
(Major/College Codes: APA AS, MPH PH
Concentrations:
   Bio-cultural Medical Anthropology

CONTACT INFORMATION
Colleges: Arts and Sciences
   Public Health
Departments: Anthropology, Public Health
Contact Information: www.grad.usf.edu
   http://anthropology.usf.edu/graduate/

MAJOR INFORMATION

Students interested in combining a program of study leading to a doctorate plus master’s degree have two choices: they may obtain a Ph.D. in Applied Anthropology with an M.P.H. in a Public Health concentration; or they may obtain a Ph.D. in Public Health with an M.A. in Applied Anthropology. For the doctoral/master’s combination, students develop individual programs of study in consultation with an interdisciplinary academic advisory committee. The Committee must approve the plan of study as well as the proposal to fulfill the thesis and dissertation requirements or dissertation and special project requirements through a single project.

The two majors review applicants independently. After admission to both majors, the Graduate Admissions office instructs the Registrar’s Office to classify the student as concurrently enrolled in Anthropology and Public Health. In choosing which major to apply to first, students should take into consideration the following: requirements in Anthropology for admission are different than in Public Health; admission to one major does not guarantee admission to the other; and of course, the student’s interests and career plans. Upon completion of all requirements for the Concurrent Degrees, the student submits separate applications for graduation to Anthropology and Public Health, and is certified for graduation by both majors and receives two diplomas. Concurrent Degree students can also select elective courses to fulfill a concentration in Bio-cultural Medical Anthropology.
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- GRE required, no minimum score
- a statement of purpose
- a signed research ethics statement
- at least 3 letters of recommendation
- a resume or curriculum vitae
- graduate assistant application form (optional)
- writing sample (optional)
- see the Catalog listing for admission requirements for each major
- admission to any of the Concurrent Degree programs will consider letters of recommendation, past experience, goal statement and availability of faculty

CURRICULUM REQUIREMENTS

Ph.D. in Applied Anthropology - 46 hours beyond the M.A.

For specific information on the requirements for the Ph.D. in Applied Anthropology (including optional concentrations), please refer the Catalog listing for that major

Paul D. Coverdell Fellows Program in Applied Anthropology for Returning Peace Corps Volunteers

Students in the Coverdell Program are required to complete internships related to the program of study in underserved American Communities.

For more information on the Fellows Program: https://www.peacecorps.gov/volunteer/university-programs/coverdell-fellows/

M.P.H. in Public Health - 42 hours

Requirements include public health core courses, concentration area courses, electives, supervised field placement, comprehensive exam, and special project.

For specific information on the requirements please refer to the Catalog listing for the MPH in Public Health

COURSES

See http://www.ugs.usf.edu/course-inventory/
BIOLOGY

Master of Science (M.S.) Degree

DEGREE INFORMATION

<table>
<thead>
<tr>
<th>Priority Admission Application Deadlines:</th>
<th>CONTACT INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall: November 30</td>
<td>College: Arts and Sciences</td>
</tr>
<tr>
<td>Spring: July 1</td>
<td>Departments: Cell Biology, Microbiology, and Molecular Biology (CMMB)</td>
</tr>
</tbody>
</table>

International applicant deadlines: http://www.grad.usf.edu/majors

Minimum Total Hours: 30
Level: Masters
CIP Code: 26.0101
Dept. Code: BIO
Major/College Codes: BIO AS
Approved: 1965

Concentrations:
Cell Biology and Molecular Biology (CMB)
Ecology and Evolution (EEV)
Environmental and Ecological Microbiology (EVM)
Physiology and Morphology (PMY)

MAJOR INFORMATION

The Department of Biology was expanded into the Department of Cell Biology, Molecular Biology and Microbiology (CMMB) and the Department of Integrated Biology (IB) in 2009. Each Department has its own Chair and Graduate Director and offers students a Master of Science in Biology with a specific concentration associated with either CMMB or IB. There is no general Biology MS major. The CMMB and IB Departments are located in modern, well-equipped buildings. Research in the CMMB Department is done by faculty housed in Interdisciplinary Science Building and the Bio-Science Faculty building (BSF), and most of the research within the IB Department is conducted by faculty housed in the Science Center building (SCA). Because of the interdisciplinary aspect of most research projects, faculty and graduate students often work together on broad training research projects that bring together many of the traditionally separate areas of biology. Many of the faculty within CMMB and IB are involved in cooperative research with their colleagues in Chemistry, Public Health, Nursing, Medicine, Geology, Psychology, Geography, Marine Science, and Environmental Science. Often CMMB and IB graduate students have faculty members from these other areas of USF as members of their graduate committees.

Because of the many undergraduate courses that require hands-on experimental laboratories, both CMMB and IB support many graduate students as Teaching Assistants. CMMB and IB values high quality teaching at all levels of instruction. Research Assistant positions also are available to support research with specific faculty members depending on an individual faculty members funding. Numerous scholarship opportunities are also offered on a competitive basis through the USF Office of Graduate Studies.

Application to the Biology Major is through one of the two departments, with students selecting a formal Concentration. Refer to the Concentration listing in the Catalog for specific information and requirements.
Major Research Areas: Cell Biology, Molecular Biology, Signal Transduction and Gene Regulation, Cancer Biology, Developmental Biology, Microbiology, Ecology and Evolution, Environmental and Ecological Microbiology, Physiology and Morphology

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- Prospective students must apply to the Biology MS major with a specific concentration via the online application process through the USF Office of Graduate Admissions.
- Must have 3.00 GPA last 60 hours of B.S. degree
- GRE: Preferred scores of 500V, 600Q, 4.5AW prior to August 1, 2011; GRE: Preferred scores of 153V, 148Q, 4.5AW for GRE revised general test taken after August 1, 2011
- All international students are required to submit the TOEFL test. Non-native English speaking graduate students must score a minimum of at least 570 on the paper based test or a minimum total score of 79 on the internet based test on the TOEFL and at least 50 on the TSE to be eligible for a teaching assistantship.
- For acceptance into the IB Department, acceptance by a faculty member in IB is MANDATORY. IB encourages applicants to contact faculty via email to indicate an interest in the research being conducted in their laboratory. IB will make every effort to pair potential graduate students with appropriate faculty; however, it is recommended that applicants make direct contact with individual faculty.
- It is expected that candidates for the M.S. degrees will have completed courses equivalent to those required for the B.S. in Biology at U.S.F.

Applying to the Department of Cell Biology, Microbiology and Molecular Biology

Students interested in attending graduate studies within the CMMB Department should visit the CMMB website that can be accessed from the main USF site and review the current CMMB faculty. It is recommended that potential students consider at least 2-3 CMMB faculty that they would be interested in working with and communicate this information in their letter of application. It is also recommended that potential students contact the CMMB Graduate Director as well as the individual faculty members they are interested in working with via email. Such communication will facilitate the assignment of the laboratory rotations that CMMB students will participate in during their first semester of residency and also allow the applicant to determine whether the desired faculty member has positions available in the laboratory. All students admitted to the Masters concentration in Cell Biology and Molecular Biology must establish a Graduate Supervisory Committee. The Graduate Committee shall constitute the major professor and at least two additional credentialed faculty. At least one of the committee members must be a faculty member at USF. Supervisory committee must be formed within two semesters after matriculation. Refer to Committee information in the University Requirements Section of the Catalog for more information.

The CMMB Graduate Director, CMMB Chair, and the College Associate Dean (or designee) must approve the Graduate Committee. Once a major professor has been assigned and/or a student occupies or utilizes significant space or facilities for research or analogous scholarly activity directly pertinent to the generation of a thesis, the student shall enroll for two (2) hours of research credit each semester (other than summer semester), until eligible to enroll in thesis credits.

Applying to the Department of Integrative Biology

Students interested in attending graduate studies within the IB Department should contact potential major professors to communicate their research ideas and establish that the professor will consider the student’s application. The IB
Department requires that all students admitted into the MS in Biology major have the approval of a major professor. Applicants should contact faculty conducting research in the student’s area of interest well in advance of the application deadline.

For all master’s students, the major professor and at least two additional faculty constitute the student’s supervisory committee, the major professor and at least one of the committee members must be from the Integrative Biology Department. Supervisory committees must be established within two semesters after matriculation. Failure to do so will be cause for dismissal.

The IB Graduate Director, IB Chair, and the College Associate Dean (or designee) must approve the Supervisory Committee. Once a major professor has been assigned and/or a student occupies or utilizes significant space or facilities for research or analogous scholarly activity directly pertinent to the generation of a thesis, the student shall enroll for a minimum of two (2) hours of research credit each semester (other than summer semester), until eligible to enroll in thesis credits.

Materials necessary for a complete application are listed below.

The following items should be submitted in the envelope provided to:

Integrative Biology Graduate Office
Attention: IB Graduate Director
University of South Florida
4202 E. Fowler Ave – SCA110
Tampa, FL 33620–5150

CMMB Graduate Office
Attention: CMMB Graduate Director
University of South Florida
4202 E. Fowler Ave, ISA 2015
Tampa, FL 33620-5150

1. Two official transcripts in a sealed envelope from each post-secondary institution. Transcripts of work completed at USF will be secured by the Office of Admissions. Thus, applicants need only to secure transcripts from other institutions for your application packet.

2. Three letters of recommendation from faculty in sealed envelopes (on their university letterhead) with the envelope seal signed by the recommender. Students shall complete a Student Recommendation Form that can be found on the CMMB and IB website and submit it to the recommenders.

3. A brief essay stating your intended field of research and professional goals. Please indicate your specific research interests, in order that we may refer your application to appropriate CMMB or IB faculty members. In the essay please list 2-3 CMMB or IB faculty members that you would like to have review your file. Acceptance into the IB graduate major requires the identification of specific faculty who are willing to direct your research. This final requirement does not apply to students wishing to study in the CMMB Department.

4. Applicant must complete the Application for Teaching Assistantship (TA) Form that can be found on the CMMB or IB website if they wish to be considered for a TA position. Applicants who do not return this form will not be considered for a teaching position. Applicants should attach a resume to the Application for Teaching Assistantship (TA) Form that highlights any previous teaching experience.

5. OFFICIAL test scores must be sent to USF directly from the testing agency. The University of South Florida’s 4-Digit Institution Code is: 5828. Official GRE scores: This exam must have been taken within the last five years.
CURRICULUM REQUIREMENTS

The thesis based M.S. in Biology Major requires successful completion of the following:

1. structured coursework
2. an oral qualifying exam
3. research thesis
4. comprehensive final examination

The Master’s Degree Requirements should be completed in two to three years. The CMMB and IB Departments require all graduate work applied toward the completion of degree requirements be completed within a five-year period after matriculation. Thesis research should be publishable and students are encouraged to publish their findings. Students must choose a specific concentration in the M.S. degree that will be completed within either the CMMB or IB Department. The specific requirements for the Master of Science (M.S.) and the specific concentrations are provided below.

1. Credit hour requirement: A total of 30 semester hour credits beyond the Baccalaureate Degree is required. (Including BSC 6910, BSC 6971, BSC 6935, and other structured and unstructured courses approved by CMMB or IB).

2. Students admitted to the CMMB Department must complete three laboratory rotations during their first semester of residency.

3. Successful completion of the oral comprehensive qualifying examination. The exam should be taken at the end of the first year, or early in the second year of study. The examination is administered and evaluated by the student’s graduate committee.

4. Submission of a thesis proposal and approval by the major professor, graduate committee and graduate director.

5. A minimum of eight (8) thesis research credit hours (BSC 6971).

6. Seminar requirement: One presentation, excluding the thesis seminar and defense. Students should present posters or oral presentations based on their thesis research at national/regional professional meetings. The student’s graduate committee must approve the presentation.

7. Submission of an acceptable thesis.

8. Presentation of the thesis seminar (BSC 6935) and successful defense of the thesis.

Degree Progress
A student must be registered for an appropriate load (in no case fewer than two [2] graduate hours) in the College for the semester in which all degree requirements are satisfactorily completed. A student who receives three grades below “B” in structured courses required by the advisory committee will be dropped from the program. Registration in courses entitled Directed Research; thesis must be with the approval of the major professor and must be commensurate with each student’s research plan. Students may not register in Thesis: Master’s until a Supervisory Committee has been formed and completed the oral qualifying examination. A student who enrolls in courses entitled Thesis: Master’s but does not submit a thesis will not be certified for graduation.

CORE REQUIREMENTS

M.S. in Biology Core (4 credit hours)
BSC 6930 Lectures in Contemporary Biology (1)

Enrollment in this course is required for at least two semesters of residency. (Note: Students in the Integrated Biology Department are required to enroll in this course for an additional semester for a total of three semesters)
CONCENTRATION REQUIREMENTS

CELL BIOLOGY AND MOLECULAR BIOLOGY (CMM)
Offered from the Department of Cell Biology, Molecular Biology and Microbiology (CMMB)

Description: See program description.

Concentration Requirements
BSC 6932 Advances in Scientific Review 2
PCB 6956 Scientific Grant Writing 3
PCB 6930 Advances in Cell and Molecular Biology 1

Electives* (minimum of 6 credit hours)
MCB 5206 Public Health and Pathogenic Microbiology 3
MCB 5655 Applied and Environmental Microbiology 3
PCB 5235 Principles of Immunology 3
PCB 6236 Advanced Immunology 4
MCB 5815 Medical Mycology 3
BSC 5931 Molecular Microbial Ecology 3
BSC 5931 Prokaryotic Molecular Genetics 3
MCB 5410 Cellular Microbiology 3
PCB 5256 Developmental Mechanisms 3
BSC 5420 Genetic Engineering and Recombinant DNA Technology 3
PCB 5616 Molecular Phylogenetics 3
PCB 6255 Molecular Genetics 3
PCB 6107 Advanced Cell Biology 4
BSC 5931 Eukaryotic Genomics 3

*The supervisory committee may approve additional courses not listed here.

ACCELERATED NON-THESIS B.S./M.S. PROGRAM OPTION

This program allows B.S. majors to take graduate courses for the elective part of the Biology degree and apply them to a non-thesis M.S. degree with a Biology Major. Successful students will be able to earn the M.S. degree in two additional semesters beyond the completion of the B.S. degree. This accelerated program shares 12 credits between already existing degrees/concentrations:

B.S. in Cell and Molecular Biology M.S in Biology, Concentration in Cell and Molecular Biology (non-thesis option)

Description and Requirements

Biology majors who have completed the following courses may apply to this program:

PCB3023 Cell Biology
PCB3063 Genetics
MCB3410 Cell Metabolism
PCB4024 Molecular Biology of the Cell or PCB4026 Molecular Biology of the Gene

Students who have been admitted to the accelerated program but subsequently fail to achieve a 3.0 GPA in the last 60 hours of their B.S. degree, or who do not complete at least 30 of their last 60 hours at USF, will be dismissed.

Once accepted, students must meet with BioAdvise (the advising office for biological sciences within the College of Arts and Sciences) to prepare an action plan to complete the B.S. /M.S. accelerated program. This requires them to take all the courses required for the B.S. in Biology: Concentration in Cell and Molecular Biology. Students may take up to 12 credits of graduate courses as electives in CMMB and apply those courses to both the B.S. and M.S. degrees. They will not be admitted as graduate students until they have completed their B.S. degree and met all the requirements for admission to CMMB as graduate students. The action plan should include a schedule of coursework to complete their B.S. degrees and a date in their last year in the B.S. program to take the GRE.
For fall admission to the M.S. portion of the accelerated program, all application materials must be received by February 15 of the same year. For spring admission, the deadline is August 1 of the previous year. Application materials are the same as the M.S. in Biology:

1. Two official transcripts of undergraduate work from other institutions. Applicants need not supply USF transcripts.
2. Three letters of recommendation
3. A brief essay stating your professional goals
4. GRE scores must be sent to USF directly from the testing agency (USF institution code is 5828).

Graduate Degree Requirements
Students admitted into the M.S. portion of the program must complete all the requirements for the M.S. degree (non-thesis) within three semesters of admission. The requirement is 30 hours of graduate work with at least 16 of these hours completed at the 6000 level; 26 hours must be formally structured courses; and at least 15 hours must be in CMMB courses. Students will be required to take 3 core-courses from the list below as part of these 26 hours. Of the required 26 hours, 9 hours will be derived from the core-CMMB graduate courses listed below (see associated curriculum). These requirements can be partially met by up to 12 hours of graduate courses taken as undergraduates. Any graduate class taken outside of CMMB must be approved by the CMMB Graduate Director. Students should be aware that a B grade or better is required for every graduate class applied to the MS portion of their degree. In addition, students will be required to pass an oral qualifying exam based on a review paper submitted in their final semester. Students must form a committee as part of their action plan to complete their graduate work. This committee will be comprised of at least 3 CMMB faculty, and will serve as the examination committee for the review paper required as part of the M.S. portion of their degree. Upon approval of that paper, students must successfully complete a comprehensive oral exam by their committee.

Timeline and benchmarks:

1. Completion of prerequisite upper division courses and application to the accelerated program. Typically students will be in their junior year.
2. Acceptance into the program and an action plan within a semester of application.
3. Students will take up to 12 credits of graduate credit in CMMB courses following acceptance into the program. Typically, these courses will be taken in the latter half of the junior year and in the senior year. BioAdvise will monitor the progress of the students and ensure they follow their action plan. Students who do not complete at least 9 hours of graduate work by graduation will be dropped from the accelerated M.S. program.
4. GRE exams will be taken in a timely manner so scores will be available for admission to the M.S. portion of the program. Students who do not complete the GRE in time will not be admitted to the accelerated M.S. program.
5. Students must apply for admission to the M.S. portion of the program in a timely manner (Fall admission deadline is February 15, Spring deadline is August 1).
6. Students admitted to the accelerated program must form a committee prior to the beginning of their first semester in the M.S. portion of the program and must continue to follow the action plan which will be monitored by BioAdvise.
7. Students admitted to the accelerated M.S. program must complete the requirements within three semesters or will be dismissed from the program.
## Model Curriculum for Accelerated Non-thesis M.S./B.S.

### Year 1
BSC 2010 and BSC 2011 with labs 8

### Year 2
- MCB 3410 – Cell Metabolism 3
- PCB 3063 – Genetics and lab 4
- PCB 3023 – Cell Biology and lab 4

### Year 3
- PCB 4024 – Molecular Biology of the Cell 3
- PCB 4026 – Molecular Biology of the Gene 3
- 3 hour graduate elective structured course (5000) 3

### Year 4
- 9 hour graduate elective courses (5000 or 6000 9

### Year 5
- 18 hour graduate courses
- 9hr of which must be derived from the list below

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSC6932 – Bioinformatics</td>
<td>1-4</td>
</tr>
<tr>
<td>BSC6932 – Virology</td>
<td>1-4</td>
</tr>
<tr>
<td>PCB6525 – Molecular Genetics</td>
<td>3</td>
</tr>
<tr>
<td>BSC5425 – Genetic Engineering</td>
<td>3</td>
</tr>
<tr>
<td>PCB6236 – Advanced Immunology</td>
<td>4</td>
</tr>
<tr>
<td>BSC6932 – Prokaryotic Molecular Genetics</td>
<td>1-4</td>
</tr>
</tbody>
</table>

4 hour non-structured (seminar, independent study, laboratory research)
Oral exam and review paper done at the end of year 5

### ECOLOGY AND EVOLUTION (EEV)

**Offered from the Department of Integrative Biology (IB)**

**Description:** See Program listing.

**Concentration Requirements** –17 hours minimum
Seventeen (17) credit hours of course work selected from the list below: The graduate student, major professor and Graduate committee will establish the specific courses for each graduate student. Other courses, not listed below, can be substituted if approved by the Graduate Committee. Specific course training beyond this point will be determined in each individual case by the special needs of the student as decided by the student’s Graduate Committee.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSC 5931 – Conservation Biology</td>
<td>3</td>
</tr>
<tr>
<td>BOT 5185 – Marine Botany</td>
<td>4</td>
</tr>
<tr>
<td>PCB 6455 – Statistical Ecology</td>
<td>3</td>
</tr>
<tr>
<td>PCB 6456 – Biometry I</td>
<td>4</td>
</tr>
<tr>
<td>PCB 6458 – Biometry II</td>
<td>3</td>
</tr>
<tr>
<td>BSC 5931 – Comparative Approaches in Evolution</td>
<td>3</td>
</tr>
<tr>
<td>PCB 6426 – Population Ecology</td>
<td>3</td>
</tr>
<tr>
<td>ZOO 5463 – Herpetology</td>
<td>4</td>
</tr>
<tr>
<td>ZOO 5456 – Ichthyology</td>
<td>4</td>
</tr>
<tr>
<td>BSC 6932 – Advances in Population Biology</td>
<td>1</td>
</tr>
</tbody>
</table>
BSC 6932 – Advances in Ichthyology 1
BSC 6932 – Advances in Herpetology 1
BSC 6932 – Advances in Marine Ecology 1
BSC 6932 – Scientific Writing 2
BSC 6932 – Restoration Ecology 3
BSC 6447 – Community Ecology 3
PCB 6933 – Seminar in Ecology (variable credit)

ENVIRONMENTAL AND ECOLOGICAL MICROBIOLOGY (EVM)
Offered from the Department of Integrative Biology
Description: See Program listing.

Concentration Requirements – 17 hours minimum
A minimum of 17 credit hours of course work selected from the list below. The graduate student, major professor and graduate committee will establish the specific courses for each graduate student. Other courses, not listed below, can be substituted if approved by the Graduate Committee. Specific course training beyond this point will be determined in each individual case by the special needs of the student as decided by the student’s Graduate Committee. Graduate students concentrating in the area of Environmental and Ecological Microbiology will select from the following list of courses:

MCB 5206 – Public Health and Pathogenic Microbiology 3
MCB 5655 – Applied and Environmental Microbiology 3
PCB 5235 – Principles of Immunology 3
MCB 6930 – Seminar in Applied and Environmental Microbiology 1
PCB 6525 – Molecular Genetics 3
BSC 5931 – Genomics 4
PCB 6456 – Biometry I 4
PCB 6458 – Biometry II 3
PCB 6455 – Statistical Ecology 3
BSC 6932 – Advances in Environmental Ecology 1

PHYSIOLOGY AND MORPHOLOGY (PMY)
Offered from the Department of Integrative Biology
Description: See Program listing.

Concentration Requirements – 17 hours minimum
A minimum of 17 credit hours of course work selected from the list below. The graduate student, major professor and graduate committee will establish the specific courses for each graduate student. Other courses, not listed below, can be substituted if approved by the Graduate Committee. Specific course training beyond this point will be determined in each individual case by the special needs of the student as decided by the student’s Graduate Committee. Graduate students concentrating in the area of Environmental and Ecological Microbiology will select from the following list of courses:

MCB 5206 – Public Health and Pathogenic Microbiology 3
MCB 5655 – Applied and Environmental Microbiology 3
PCB 5235 – Principles of Immunology 3
MCB 6930 – Seminar in Applied and Ecological Microbiology 1
PCB 6525 – Molecular Genetics 3
BSC 5931 – Genomics 4
PCB 6456 – Biometry I 4
PCB 6458 – Biometry II 3
PCB 6455 – Statistical Ecology 3
BSC 6932 – Advances in Environmental Ecology 1
M.S. in Biology Non-Thesis Option

Comprehensive Oral Qualifying Examination. A comprehensive examination (thesis proposal, seminar/presentation and defense of thesis proposal) is required for all master’s students. This examination is open to all departmental faculty. Students must take their comprehensive exam within two semesters of matriculation and the exam is normally taken after the completion of all formal course work. Thesis students must take the examination at least one semester before the thesis is presented. Any graduate work counted toward the requirement for the M.S. degree must be completed within five (5) years after matriculation.

Non-Thesis. For students enrolled in the non-thesis program, a 30-hour minimum is required at the 5000-6000 level; 26 hours must be in formally structured courses, 16 hours must be at the 6000 level; 15 structured hours must be offered by Biology. A review paper of a topic approved by the supervisory committee is required as well as successful completion of the comprehensive oral qualifying exam after all course work has been completed. For non-thesis master’s students, this exam will occur at the end of the program of study.

All thesis-based Master’s Degree students must present a seminar to the Department of either CMMB or IB and must be enrolled in BSC 6935, during the final semester. The seminar should be a concise summary of the CMMB or IB research completed to satisfy the requirements for the M.S. Degree. The seminar is open to the general public and must be announced two weeks prior to the presentation. Upon completion of the seminar, the general public will be invited to ask questions. At the discretion of the student’s graduate committee, members of the committee may continue to question the graduate student after the general public has departed the seminar room. Each student is expected to defend his/her research to the unanimous satisfaction of the graduate committee.

COURSES
For updated list of courses see: http://www.ugs.usf.edu/course-inventory/
CANCER BIOLOGY

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: January 15

Minimum Total Hours: 96
Level: Doctoral
CIP Code: 26.0911
Dept. Code: BIO
Major/College Codes: CNB AS
Approved: 2001

CONTACT INFORMATION

College: Arts and Sciences
Department: Cell Biology, Microbiology, and Molecular Biology (CMMB)
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Cancer Biology Major consists of interdisciplinary training in multiple fields emphasizing the facets which impact cancer. This will prepare students to enter the emerging new technological workforce required to implement biomedical advances that will have a key impact on global health and yield significant societal advantages.

The Major is a joint endeavor between the Moffitt Cancer Center and the University of South Florida. Tremendous advances in the detection and treatment of cancer has occurred through basic research and translational medicine, yet cancer continues to adversely affect millions of people worldwide in terms of quality of life, life span, and economic burden. The Moffitt Cancer Center located at the University of South Florida is a leading institution of basic research, clinical research, and patient treatment with a focused mission “to contribute to the prevention and cure of cancer.” The Moffitt Cancer Center is officially designated as a Comprehensive Cancer Center by the National Cancer Institute of the National Institutes of Health.

The Cancer Biology Ph.D. Major’s goal is to train the next generation of cancer researchers. Studies of cancer require specific knowledge in multiple fields that have traditionally been independent. Our Cancer Biology Ph.D. Major emulates the Moffitt Cancer Center and eliminates these boundaries. Students receive cancer oriented training in multiple areas include: molecular biology, immunology, functional genomics, bioinformatics, drug discovery & development, cancer genetics, cancer prevention & control, cancer therapeutics, cell biology, biochemistry, and proteomics.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- Extensive background in field of biology or chemistry
- GRE required for full consideration
- GPA of at least 3.00 or greater
- Advanced coursework and research experience preferred
CURRICULUM REQUIREMENTS

All students are required to successfully complete the Cancer Biology Major Core Courses. Dissertation Committees may require students to take additional course work if needed to correct deficiencies. In special circumstances the Cancer Biology Education Committee can waive course requirements, if the student has recently completed identical coursework elsewhere. Students are required to achieve a minimum GPA of B in all Cancer Biology Core courses and an overall GPA of 3.00 (B) in order to remain in good standing.

Stipends
All Cancer Biology Ph.D. students in good standing will receive a highly competitive stipend. All students also receive student health insurance coverage and direct payment in full of all required tuition and required fees. Please visit the Program’s website for current stipend levels.

Total Minimum Hours: 96 credit hours

CORE REQUIREMENTS

<table>
<thead>
<tr>
<th>Required Cancer Biology Core Courses</th>
<th>16 hours minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSC 6457 Cancer Research Techniques</td>
<td>2</td>
</tr>
<tr>
<td>PCB 6230 Basics of Molecular Oncology</td>
<td>3</td>
</tr>
<tr>
<td>PCB 6231 Cancer Immunology</td>
<td>4</td>
</tr>
<tr>
<td>PCB 6205 Cancer Genomics and Drug Discovery</td>
<td>3</td>
</tr>
<tr>
<td>PCB 6521 Cancer Genetics</td>
<td>3</td>
</tr>
<tr>
<td>PCB 6932 Bioethics for Cancer Researchers</td>
<td>1</td>
</tr>
</tbody>
</table>

Lab Rotations: 2 Hours minimum
PCB 6910 Cancer Laboratory Rotations 1-3

During the first year, students will be required to complete two or three laboratory rotations according to their interest. Laboratory rotations may be for a full semester or 10 weeks for students that choose to do three rotations. Students doing rotations will need to enroll in the laboratory rotation course. If a student has not chosen a major professor after two semesters, they may enroll in an additional summer rotation. Rotations have several purposes. The foremost is to help the students choose a compatible major professor and an exciting research project. A second purpose is for students to develop necessary technical skills. Students will be evaluated by the host professor and the Graduate Advisor will assign a grade to each student at the end of the semester.

Other Course Requirements: 18 Hours minimum
BSC 7911 Directed Research 4-12
PCB 6931 Advances in Cancer Biology 4-12
PCB 6930 Current Topics in Oncology 4-8

Optional Cancer Biology Courses: 1-6
BCS 6939 Selected Topics in Cancer Biology 1-6

Qualifying Exam
The required qualifying exam consists of a written research proposal and an oral defense of the proposal by the student.

Dissertation 24 hours minimum
BSC 7980 Dissertation
Prior to the dissertation defense, students must have an original first-author research report accepted for publication in a peer reviewed scientific journal.

Other Requirements 36 hours minimum
Remaining credit hours required to meet the 96 hour minimum for graduation will consist of additional Dissertation hours (BSC7980), Selected Topics in Cancer Biology (BCS6939), and/or Program approved electives.

COURSES - See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
CELL AND MOLECULAR BIOLOGY

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Domestic
Fall: January 1
Spring: August 1
Summer: No Admission

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 90
Level: Doctoral
CIP Code: 26.0406
Dept Code: BCM
Major/College Codes: CBO AS
Implemented: 2014

CONTACT INFORMATION

College: Arts and Sciences
Department: Cell Biology, Molecular Biology and Microbiology (CMMB)
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

Major Research Areas: Cell Biology, Molecular Biology, Cancer Biology, Signal Transduction and Gene Regulation, Developmental Biology, Applied and General Microbiology

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- 3.00 GPA last 60 hours of B.S. degree.
- GRE: 57th percentile Verbal, 35th percentile Quantitative, 73rd percentile AW
- All international students are required to submit the TOEFL test. Non-native English speaking graduate students must score a minimum of at least 570 on the paper based or a minimum total score of 79 on the internet-based test TOEFL and at least 50 on the TSE to be eligible for a teaching assistantship.
- It is expected that candidates for the Ph.D. degree will have completed courses equivalent to those required for the B.S. in Biology at U.S.F.
- Interview
- Personal Statement of goals, experience
- Three letters of recommendation
CURRICULUM REQUIREMENTS

Total Minimum Program Hours 90

Core Requirements 6 Hours
- PCB 6525 Molecular Genetics 3
- PCB 6956 Scientific Grant Writing 3

Other Required Courses 7 Hours
- PCB 6920 Advances in Cellular and Molecular Biology 1
- BSC 6930 Lectures in Contemporary Biology (1) taken four times 4
- PCB 6093 Advances in Scientific Review 2

Electives* 6 hours minimum
Selected from:
- PCB 5616 Molecular Phylogenetics 3
- PCB 6107 Advanced Cell Biology 4
- BSC 5425 Genetic Engineering and Recombinant DNA Technology 3
- MCB 5206 Public Health & Pathogenic Microbiology 3
- PCB 6236 Advanced Immunology 4
- PCB 5256 Developmental Mechanisms 3
- BSC 6932 Selected Topics 1-4

*Classes not on this list may be used with the approval of the CMMB Graduate Director

Research Requirements 71 hours minimum
- BSC 7910 Directed Research 32 hours minimum
- BSC 7980 Dissertation Research 38 hours minimum
- BSC 7936 Ph.D. Seminar 1 hour

Qualifying Exams
All students in the Cell and Molecular Biology Ph.D. program must complete a written and oral qualifying examination.

The written exam shall be in the format of a grant proposal and contain the following sections:
- Abstract [300 words]
- Specific Aims [1 page]
- Background and Significance of topics [4-5 pages]
- Proposed research program (conducted over 3-year period) [9-10 pages]
- Bibliography (no page limit)

The length of the proposal shall be no more than 15 pages (the abstract and bibliography does not count in the page limit). The topic of the exam shall meet the following guidelines:
- The written proposal cannot be based in the same model organism that the student will use to carry out their dissertation research
- The written proposal cannot be based on the analysis of the same gene/protein that the student will investigate during their dissertation research
- The written proposal cannot be based on the analysis of the same pathway that the student will investigate during their dissertation research

The oral exam is centered around a formal dissertation proposal presentation, followed by a period of questioning by the dissertation advisory committee.

Admission to Candidacy
The doctoral student is eligible for admission to candidacy after completing structured course requirements, passing the qualifying examinations and approval by the supervisory committee. Appropriate forms to document promotion to candidacy must be completed and to the Office of Graduate Studies. Following admission to candidacy, a student must enroll in BSC 7980 when engaged in research, data collection, or writing activities.
relevant to the doctoral dissertation. Advisors should assign the number of credits in this course in accordance
with policy and appropriate to the demands made on faculty, staff, and University facilities, but in no event will
the total number of earned dissertation credits be fewer than 38. Students not admitted to candidacy are not
eligible to enroll in BSC 7980.

Dissertation Requirements
BSC 7980 Dissertation Research
The dissertation of all graduate students admitted to a graduate degree program at the University of South
Florida must conform to the guidelines of the Handbook for Graduate Thesis and Dissertations available from the

Doctoral Seminar and Defense
All doctoral students must present a public seminar to the CMMB Department and must be enrolled in BSC 7980,
during the semester in which the seminar is given. The seminar should be a concise summary of the research
completed to satisfy the requirements for the Ph.D. The seminar is open to the general public and must be
announced two weeks prior to the presentation. Upon completion of the seminar, the general public will be
invited to ask questions. At the discretion of the student’s advisory committee, members of the committee may
continue to question the graduate student after the general public has departed the seminar room. Each student
is expected to defend his/her research to the unanimous satisfaction of the advisory committee. Following the
defense, students will make any editorial modifications to the dissertation as recommended by the advisory
committee and submit the dissertation to the Office of Graduate Studies.

Other Requirements
1 Scientific Publication
2 presentations at Scientific Meetings

Course Sequence

Fall year 1
BSC7910 Directed Research (2)
BSC6093 Advances in Scientific Review (2)
PCB6920 Advances in Cellular & Molecular Biology (1)
BSC6930 Lectures in Contemporary Biology (1)
PCB6525 Molecular Genetics (3)

Spring year 1
BSC7910 Directed Research (2)
BSC6956 Scientific Grant Writing (3)
Elective (3)
BSC6930 Lectures in Contemporary Biology (1)

Summer year 1
BSC7910 Directed Research (6)

Fall year 2
BSC7910 Directed Research (5)
Elective (3)
BSC6930 Lectures in Contemporary Biology (1)

Spring year 2
BSC7910 Directed Research (8)
BSC6930 Lectures in Contemporary Biology (1)

Summer year 2
BSC7910 Directed Research (6)

Fall year 3*
BSC7910 Directed Research (9)

*students should advance to candidacy by the close of the Fall of year 3. Until candidacy is attained, students must enroll in
BSC 7910. Once candidacy has been achieved, students must enroll in BSC 7980, starting with the semester following admission
to candidacy.

Spring year 3
BSC7980 Doctoral Dissertation (9)

Summer year 3
BSC7980 Doctoral Dissertation (6)

Fall year 4
BSC7980 Doctoral Dissertation (9)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Term</th>
</tr>
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<tr>
<td>BSC7980</td>
<td>Doctoral Dissertation (8)</td>
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<td>Spring</td>
</tr>
<tr>
<td>BSC7936</td>
<td>Ph.D. Seminar (1)</td>
<td></td>
<td>Spring</td>
</tr>
</tbody>
</table>

*Students are expected to finish in their 4th year but some may require additional time*

**COURSES**

For an updated list of course offerings see: [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
CHEMISTRY (NON-THESIS OPTION)

Master of Arts (M.A.) Degree

DEGREE INFORMATION

<table>
<thead>
<tr>
<th>Priority Admission Application Deadlines:</th>
<th>CONTACT INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall: February 15</td>
<td>College: Arts and Sciences</td>
</tr>
<tr>
<td>Spring: October 1</td>
<td>Department: Chemistry</td>
</tr>
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</table>

International applicant deadlines: http://www.grad.usf.edu/majors

Minimum Total Hours: 30
Level: Masters
CIP Code: 40.0501
Dept. Code: CHM
Major/College Codes: CHA AS
Approved: 1985

CONTACT INFORMATION

College: Arts and Sciences
Department: Chemistry
Contact Information: www.grad.usf.edu
Other Resources: http://chemistry.usf.edu

MAJOR INFORMATION

The Department of Chemistry offers Doctor of Philosophy, Master of Science, and Non-thesis Master of Arts degrees. The Chemistry graduate faculty is comprised of full-time senior faculty members, all holding the Ph.D. degree. The combination of a large and strong faculty with a wide variety of courses and electives provides students with programs of study that can be tailored to fit individual needs, while maintaining a sound background in all general aspects of Chemistry. The excellent research facilities and low student-faculty ratio combine to afford unique opportunities for advanced study in Chemistry.

Major Research Areas:

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below. Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- a baccalaureate degree in Chemistry or a closely related discipline.
- a preferred minimum score of 149 V (430/800, 47th percentile) and 147 Q (570/800, 28th percentile) on the GRE (the Chemistry subject exam is not required, but recommended).
- a minimum of a 3.00 grade point average (based on a 4.00 scale) in all undergraduate coursework, as verified by an official transcript from the applicant’s undergraduate institution.
- at least three letters of recommendation from professionals familiar with the student’s academic background.
- Applicants whose native language is not English must obtain at least a score of 79 on the Internet-based Test of English as a Foreign Language (TOEFL).
CURRICULUM REQUIREMENTS

Total Minimum Hours – 30 Credit Hours (Post-Baccalaureate)
Twenty-six hours of formally structured courses, sixteen hours of which must be at the 6000 level, as approved by the student’s Supervisory Committee.

Core Requirements – 6 Credit Hours
CHM 6935 3 credits  Graduate Seminars in Chemistry
CHM 6978 3 credits  Advanced Research in Chemistry

Electives - 24 Credit Hours
Students may select from the following list of 5000 or 6000 level courses in the Chemistry Department and/or related departments, such as Public Health, Education, Chemical Engineering, Physics, Biology, and Mathematics, with advisement of the student’s Supervisory Committee.

BCH 5045 3 credits  Biochemistry Core Course
BCH 5105 1-3 credits  Biochemistry Laboratory Rotations
CHM 5225 3 credits  Advanced Organic Chemistry I
CHM 5226 3 credits  Advanced Organic Chemistry II
CHM 5452 3 credits  Polymer Chemistry
CHM 5621 3 credits  Principles of Inorganic Chemistry
CHM 5931 1-3 credit(s)  Selected Topics in Chemistry
CHM 6036 3 credits  Chemical Biology
CHM 6150 3 credits  Advanced Analytical Chemistry
CHM 6235 3 credits  Spectroscopic Analysis of Organic Compounds
CHM 6250 3 credits  Advanced Organic Chemistry I: Synthesis
CHM 6263 3 credits  Advanced Organic Chemistry II: Physical-Organic
CHM 6279 3 credits  Introduction to Drug Discovery
CHM 6936 1 credit  Chemistry Colloquium
CHM 6938 1-3 credit(s)  Selected Topics in Chemistry
CHM 6945 3 credits  Investigating Chemical Education Research in the United States

Comprehensive Exam
M.A. students are required to prepare a review article that requires integration of topics covered in multiple courses. The topic for the review must be approved by the student’s advisor and Supervisory Committee. While there is no requirement to orally present the article to the Supervisory Committee, the student may opt for an oral presentation. The review paper will serve as the final comprehensive examination required by the University.

COURSES
See http://www.ugs.usf.edu/course-inventory/
CHEMISTRY

Master of Science (M.S.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15
Spring: October 1

Minimum Total Hours: 30
Level: Masters
CIP Code: 40.0501
Dept. Code: CHM
Major/College Codes: CHM AS
Approved: 1965

CONTACT INFORMATION

College: Arts and Sciences
Department: Chemistry
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Department of Chemistry offers Doctor of Philosophy, Master of Science, and Non-thesis Master of Arts degrees. The Chemistry graduate faculty is comprised of full-time senior faculty members, all holding the Ph.D. degree. The combination of a large and strong faculty with a wide variety of courses and electives provides students with programs of study that can be tailored to fit individual needs, while maintaining a sound background in all general aspects of Chemistry. The excellent research facilities and low student-faculty ratio combine to afford unique opportunities for advanced study in Chemistry.

Major Research Areas:

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below. Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- a baccalaureate degree in Chemistry or a closely related discipline.
- a preferred minimum score of 149 V (430/800, 47th percentile) and 147 Q (570/800, 28th percentile) on the GRE (the Chemistry subject exam is not required, but recommended).
- a minimum of a 3.00 grade point average (based on a 4.00 scale) in all undergraduate coursework, as verified by an official transcript from the applicant’s undergraduate institution.
- at least three letters of recommendation from professionals familiar with the student’s academic background.
- Applicants whose native language is not English must obtain at least a score of 79 on the Internet-based Test of English as a Foreign Language (TOEFL).
CURRICULUM REQUIREMENTS

Total Minimum Hours – 30 Credit Hours (Post-Baccalaureate)

Twenty hours must be in formally structured courses of which sixteen hours must be at the 6000 level, as approved by the student’s Supervisory Committee.

Core Requirements- 10 Credits Hours

CHM 6935 3 credits  Graduate Seminars in Chemistry
CHM 6978 3 credits  Advanced Research in Chemistry
CHM 6973 4 credits  Directed Research

Electives - 18 Credit Hours

Students may select from the following list of 5000 or 6000 level courses in the Chemistry Department and/or related departments, such as Public Health, Education, Chemical Engineering, Physics, Biology, and Mathematics, with advisement of the student’s Supervisory Committee.

BCH 5045 3 credits  Biochemistry Core Course
BCH 5105 1-3 credits  Biochemistry Laboratory Rotations
CHM 5225 3 credits  Advanced Organic Chemistry I
CHM 5226 3 credits  Advanced Organic Chemistry II
CHM 5452 3 credits  Polymer Chemistry
CHM 5621 3 credits  Principles of Inorganic Chemistry
CHM 5931 1-3 credit(s)  Selected Topics in Chemistry
CHM 6036 3 credits  Chemical Biology
CHM 6150 3 credits  Advanced Analytical Chemistry
CHM 6235 3 credits  Spectroscopic Analysis of Organic Compounds
CHM 6250 3 credits  Advanced Organic Chemistry I: Synthesis
CHM 6263 3 credits  Advanced Organic Chemistry II: Physical-Organic
CHM 6279 3 credits  Introduction to Drug Discovery
CHM 6936 1 credit  Chemistry Colloquium
CHM 6938 1-3 credit(s)  Selected Topics in Chemistry
CHM 6945 3 credits  Investigating Chemical Education Research in the United States

Comprehensive Exam

The comprehensive exam for the MS takes the form of an oral defense of a written thesis.

Thesis – 2 credit hour

CHM 6971 2 credit  Thesis

Other Program Requirements

Oral Defense of a Research Thesis

The student must submit and orally defend before the Supervisory Committee a written thesis based on original research in an area approved by the student’s Supervisory Committee. This will serve as the final comprehensive examination required by the USF Office of Graduate Studies.

COURSES

See http://www.ugs.usf.edu/course-inventory/
CHEMISTRY

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15
Spring: October 1

Minimum Total Hours: 72
Level: Doctoral
CIP Code: 40.0501
Dept. Code: CHM
Major/College Codes: CHM AS
Approved: 1971

CONTACT INFORMATION

College: Arts and Sciences
Department: Chemistry
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Department of Chemistry offers Doctor of Philosophy, Master of Science, and Non-thesis Master of Arts degrees. The Chemistry graduate faculty is comprised of full-time senior faculty members, all holding the Ph.D. degree. The combination of a large and strong faculty with a wide variety of courses and electives provides students with programs of study that can be tailored to fit individual needs, while maintaining a sound background in all general aspects of Chemistry. The excellent research facilities and very low student-faculty ratio combine to afford unique opportunities for advanced study in Chemistry.

Major Research Areas:

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below. Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- A B.A. or B.S. degree in Chemistry. Applicants with other degrees are considered on a case-by-case basis.
- A preferred minimum score of 149 V (430/800, 47th percentile) and 147 Q (470/800, 28th percentile) on the GRE (the Chemistry subject exam is not required, but recommended) a minimum of a 3.00 grade point average (based on a 4.00 scale) in all undergraduate coursework, as verified by an official transcript from the applicant’s undergraduate institution
- At least three letters of recommendation from people familiar with the student’s academic background
CURRICULUM REQUIREMENTS

Total Minimum Hours – 72 credit hours (Post-Baccalaureate) 42 credit hours (Post-Masters)

Core requirements – 9 credit-hours minimum
Additional Coursework – 61 (post-Baccalaureate) or 31 (post-masters) hours minimum
Dissertation – 2 credit-hours minimum

Core Requirements – 9 credit-hours minimum
CHM 6935 6 Graduate Seminars in Chemistry
CHM 6978 3 Advanced Research in Chemistry

Additional Course Requirements- 61 (Post-Baccalaureate) or 31 (post-masters)
Students may select from the following list of 5000, 6000, or 7000 level courses in the Chemistry Department and/or related departments, such as Public Health, Education, Chemical Engineering, Physics, Biology, and Mathematics, with advisement of the student’s Supervisory Committee.

BCH5045 3 Biochemistry Core Course
BCH5105 1-3 Biochemistry Laboratory Rotations
CHM5225 3 Intermediate Organic Chemistry I
CHM5226 3 Intermediate Organic Chemistry II
CHM5452 3 Polymer Chemistry
CHM5621 3 Principles of Inorganic Chemistry
CHM5931 1-3 Selected Topics in Chemistry
CHM6036 3 Chemical Biology
CHM6150 3 Advanced Analytical Chemistry
CHM6235 3 Spectroscopic Analysis of Organic Compounds
CHM6250 3 Advanced Organic Chemistry I: Synthesis
CHM6263 3 Advanced Organic Chemistry II: Physical-Organic
CHM6279 3 Introduction to Drug Discovery
CHM6936 1 Chemistry Colloquium
CHM6938 1-3 Selected Topics in Chemistry
CHM6945 3 Investigating Chemical Education Research in the United States
CHM 7820 varies Directed Research

Other Requirements

Qualifying Exam
Students must successfully pass at least three of the five ACS undergraduate Chemistry proficiency exams in the subject areas of Analytical Chemistry, Biochemistry, Inorganic Chemistry, Organic Chemistry, and Physical Chemistry. A student may attempt each area exam three times and must score above the national norms.

Promotion to Candidacy
Before the end of the third academic semester (not counting the summer), the student should present to the Supervisory Committee a written document outlining the student’s research progress and future plans. This research summary is also to be presented orally to the committee, and a successful defense results in the student being promoted to candidacy for the Ph.D. degree.

Original Research Proposal (ORP) Examination
An original research proposal must be written and defended by the end of the student’s fifth semester (excluding summers), and after the student has already obtained Ph.D. candidacy.

Research Data Presentation
The student must give a research data presentation to his or her Dissertation Committee preferably by the end of the fourth year (eight semesters, excluding summers), and at least one semester prior to the final oral thesis defense.
Publication and Presentation Requirements
The student must publish at least one peer-reviewed manuscript on his or her doctoral research topic, and make at least two presentations at a scientific meeting.

Oral Defense of the Ph.D. Dissertation
Upon completing all the research and other program requirements, the student will schedule a final oral defense of the written dissertation. This presentation is open to the public and will serve as the final comprehensive examination required by the USF Office of Graduate Studies.

Dissertation (2 Credit Hours minimum)
CHM 7980  2 credits  Dissertation
Students who take more dissertation hours may apply these toward the additional course requirements.

COURSES
See http://www.ugs.usf.edu/course-inventory/
COMMUNICATION

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: January 15
Spring: October 15

International applicant deadlines: http://www.grad.usf.edu/majors

Minimum Total Hours: 36
Level: Masters
CIP Code: 23.1001
Dept. Code: SPE
Major/College Codes: SPE AS
Approved: 1967

CONTACT INFORMATION

College: Arts and Sciences
Department: Communication
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Department of Communication offers a broad and integrated approach to communication studies that embraces the traditions of the humanities, the convergence of rhetorical and communication theory, and the relations among aesthetic, humanistic, and scientific approaches to inquiry. Students are encouraged to examine the pragmatics of rhetorical and communication theory in such settings as business and industry, government, education, medicine and health care, media, the arts, and the family. The department offers course work leading to the Master of Arts degree and the Doctor of Philosophy.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- two letters of recommendation;
- a writing sample,
- a statement of purpose.
- GRE with preferred scores of at least 153V (500V prior to August 1, 2011)
- TOEFL Scores
- Transcripts
- CV or resume

CURRICULUM REQUIREMENTS

Total minimum hours 36 credit hours

Major Requirements
1) Establish a supervisory faculty committee consisting of a major professor and two additional members, at least one of whom is a member of the Department of Communication. The supervisory committee must be approved by the Director of Graduate Studies.
2) Prepare a Plan of Study approved by the student's supervisory committee. The Plan of Study expresses the ways in which the student will show evidence of the following:
   a) expertise in one or more of the central domains of communication study
   b) expertise in the research methodologies needed to carry out original research in the specialized area of concentration (Thesis Program students only)

Core Requirements 3 hours
COM 6001 Theories and Histories of Communication (3)
This course must be taken the first time it is offered after the student is admitted to the graduate program.

Select an option, either Thesis or Non-Thesis.

Thesis 33 hours
In addition to the three (3) hours of core requirements, each student must also take
COM 7325 Seminar in Communication Research Methods (3) - either Qualitative Methods OR Critical Methods

Electives
24 hours of elective course work, six (6) hours of which may consist of a graduate course or courses from other departments and must have advisor approval.

Thesis Requirements
SPC 6971 Thesis (6)
Each student must complete at least six (6) hours of thesis credit (SPC 6971) and submit an approved thesis. In consultation with the major professor, Thesis Program students will select a thesis topic, constitute a thesis committee, and write orally defend a thesis proposal. The thesis is an extended research project within a specific area of communication research culminating in a written academic analysis. Upon completion of the thesis, the student must pass an oral defense.

Non-Thesis 33 hours
In addition to the three (3) hours of core requirements

Electives
33 hours of elective course work are required, six (6) hours of which may consist of graduate courses from other departments and must have advisor approval.

Comprehensive Exam Requirements
All Non-Thesis students must pass both written and oral comprehensive examinations. Thesis students do not complete comprehensive exams.

COURSES
See http://www.ugs.usf.edu/course-inventory/
COMMUNICATION

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: January 15
Fall admission only

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 51 post-masters
Level: Doctoral
CIP Code: 23.1001
Dept. Code: SPE
Major/College Codes: SPE AS
Approved: 1990

CONTACT INFORMATION

College: Arts and Sciences
Department: Communication
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Department of Communication offers a broad and integrated approach to communication studies that embraces the traditions of the humanities, the convergence of rhetorical and communication theory, and the relations among aesthetic, humanistic, and scientific approaches to inquiry. Students are encouraged to examine the pragmatics of rhetorical and communication theory in such settings as business and industry, government, education, medicine and health care, media, the arts, and the family. The Department offers course work leading to the Master of Arts degree and the Doctor of Philosophy.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- three letters of recommendation;
- a writing sample,
- a statement of purpose
- GRE with preferred scores of at least 153V (500V prior to August 1, 2011)
- TOEFL Scores
- Transcripts
- CV or resume

CURRICULUM REQUIREMENTS

Total Minimum hours: 51 credit hours post-masters

Major Requirements
1. Establish a supervisory faculty committee consisting of a major professor and at least two additional members from the Department of Communication and at least one member outside the Department of Communication. The supervisory committee must be approved by the Director of Graduate Studies.
2. Prepare a Plan of Study approved by the student’s supervisory committee. The Plan of Study expresses the ways in which the student will show evidence of the following:

- expertise in one of the central domains of communication study;
- expertise in the research methodologies needed to carry out original research in the specialized area of concentration

**Core Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 6001</td>
<td>Theories and Histories of Communication (3)</td>
<td>6</td>
</tr>
<tr>
<td>COM 7325</td>
<td>Seminar in Communication Research Methods (3) - either Qualitative Methods OR Critical Methods Course</td>
<td>6</td>
</tr>
</tbody>
</table>

**Requirements**

In addition to the six (6) hours of core requirements, students are required to take a minimum of 33 hours of coursework beyond the M.A. degree (not counting credits for dissertation research). Six (6) hours of graduate coursework must be in an area of study outside the department. Students must enroll in and successfully complete a minimum of 12 hours designated as Ph.D. Seminars (COM 7933) as part of their elective coursework.

**Research Tool Requirement**

In addition to COM 7325, complete an additional six (6) hours of coursework to fulfill the research tool requirement. If students elect to take both Qualitative and Critical Methods, they must take an additional methods course (3 hours) subject to the approval of their major professor.

**Qualifying Exam Requirement**

All students must pass a written and oral qualifying examination covering the student’s area of specialization and methodological competence. This examination will be prepared and evaluated by the student’s supervisory committee.

**Dissertation**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPC 7980</td>
<td>Dissertation</td>
<td>6 credit hours minimum</td>
</tr>
</tbody>
</table>

In consultation with the major professor and supervisory committee, students will select a dissertation topic and write and orally defend a dissertation proposal. Upon completion of the dissertation, the student must pass an oral defense.

**COURSES**

See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
CREATIVE WRITING

Master of Fine Arts (M.F.A.) Degree

DEGREE INFORMATION

<table>
<thead>
<tr>
<th>Priority Admission Application Deadlines:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall: January 1</td>
</tr>
<tr>
<td>Fall admission only</td>
</tr>
</tbody>
</table>

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 45
Level: Masters
CIP Code: 23.1302
Dept. Code: ENG
Major/College: CWR AS
Approved: 2008

Concentrations:
Fiction (CFI)
Poetry (CPO)

CONTACT INFORMATION

College: Arts and Sciences
Department: English
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Master of Fine Arts in Creative Writing is a graduate-level major offering concentrations in fiction and poetry (with the opportunity to study other genres of writing such as screenwriting and creative nonfiction). The Major emphasizes the craft of writing and concentrates on the student’s original work. The MFA requires 45 hours of coursework and typically will take three years for the student to complete. Our goal is to help MFA students to produce publishable theses and secure teaching or editing positions upon graduation.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.
Students accepted into the program will begin coursework in the fall. No applications will be considered for spring or summer admission.

- An undergraduate degree, preferably in English, from an accredited institution, with a 3.20 average, or its equivalent
- A competitive Verbal aptitude score on the GRE general test, with a target Analytical Writing score of 4.0 (while the Quantitative score is not a determining factor in our admission decisions, both Verbal and Quantitative scores are factors in some university scholarships and fellowships)
- Three (3) letters of recommendation, preferably from former English instructors, assessing the student’s potential to do graduate level work
- A writing sample in one genre only: 12-20 pages of double-spaced fiction; 12-20 pages of double-spaced creative nonfiction, or 10-15 pages of single-spaced poetry
- A two-to-three page personal statement, describing the student’s background, purpose for attending graduate studies, and career goals
A completed application submitted online through the Graduate Admissions Office

All supplementary application materials (i.e., statement, writing sample, and letters of recommendation) may be submitted electronically through the online application or may be submitted directly to the Department at the following address:

Graduate Director
Department of English, University of South Florida
4204 E. Fowler Ave., CPR107
Tampa, FL 33620-5550

Materials including GRE scores and transcripts must be received by the application deadline in order for students to be considered for admission. Graduates of USF do not need to order official transcripts. Applications are reviewed by an admissions committee after the deadline. Students will be notified by mail of the admissions decision within four to six weeks after the deadline.

CURRICULUM REQUIREMENTS

To complete the Master of Fine Arts in Creative Writing, students must satisfy the following requirements:

Total Minimum Hours: 45 hours

Earn 45 credit hours with an overall grade point average of 3.00 or better in the required courses. The distribution of the requirements will be

- 18 hours in writing workshops and craft seminars
- 3 hours in graduate studies
- 15 hours in pedagogy and literature courses, and
- 9 hours in thesis studies (taken in the final year of the program).

Complete a book-length manuscript in creative nonfiction, fiction, or poetry that will meet departmental and university requirements for the thesis. The thesis shall consist of 48-64 pages of poems (single- or double-spaced), at least 100 pages of fiction (double-spaced) or at least 100 pages of creative nonfiction (double-spaced). All students must write a three- to ten-page introduction to their thesis that explains their goals for the work.

Core Requirements 18 hours minimum

Select Six (6) courses (18 hours) from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRW 6130</td>
<td>Fiction Writing</td>
<td>3*</td>
</tr>
<tr>
<td>CRW 6331</td>
<td>Poetry Writing</td>
<td>3*</td>
</tr>
<tr>
<td>CRW 6236</td>
<td>Non-fiction Writing</td>
<td>3*</td>
</tr>
<tr>
<td>CRW 6164</td>
<td>The Craft of Fiction</td>
<td>3</td>
</tr>
<tr>
<td>CRW 6352</td>
<td>The Craft of Poetry</td>
<td>3</td>
</tr>
<tr>
<td>CRW 6025</td>
<td>The Craft of Nonfiction</td>
<td>3</td>
</tr>
<tr>
<td>CRW 6025</td>
<td>Special Topics in Creative Writing</td>
<td>3</td>
</tr>
</tbody>
</table>

*may be taken up to three times for a maximum of 9 credits.

CRW 6164 The Craft of Fiction
Required for students admitted to the fiction concentration, optional for others.

CRW 6352 The Craft of Poetry
Required for students admitted to the poetry concentration; optional for others.

CRW 6025 The Craft of Nonfiction
Required for students admitted to the nonfiction track, optional for others.

CRW 6025 Special Topics in Creative Writing
This course concentrates on screenwriting, translation, editing, creative writing pedagogy (with a community service component), or study of a particular genre or technique.
Course (3 credits) in graduate studies

ENG 6009 Introduction to Graduate Studies 3
Must be taken in the student’s first or second semester of graduate studies.

Other Course requirements

5 courses (15 credits) in any combination of the courses below:

ENC 6745 Practice in Teaching Composition 3
Required of all first-year teaching assistants in composition

CRW 6025 Practice in Teaching Creative Writing 3
Required of all teaching assistants in creative-writing courses. This course may be taken more than once, but will only count for a total of three credits toward degree requirements.

LIT 6934 Selected Topics: Literary Editing and Publishing 3
Required of all students working on Saw Palm, USF’s creative writing journal. This course may be taken more than once, but will only count for a total of three credits toward degree requirements.

Any of the following graduate-level (6000 and above) literature courses offered by the English Department. These courses are coded AML 6---, ENL 6---, and LIT 6---. Sample courses include:

AML 6017 Studies in American Literature to 1860 3
AML 6018 Studies in American Literature 1860-1920 3
AML 6027 Studies in Modern American Literature 3
AML 6608 Studies in African-American Literature 3
ENL 6206 Studies in Old English 3
ENL 6216 Studies in Middle English 3
ENL 6226 Studies in Sixteenth-Century British Literature 3
ENL 6228 Studies in Seventeenth-Century British Literature 3
ENL 6236 Studies in Restoration and Eighteenth-Century British Literature 3
ENL 6246 Studies of the English Romantic Period 3
ENL 6256 Studies in Victorian Literature 3
ENL 6276 Studies in Modern British Literature 3
LIT 6096 Studies in Contemporary Literature 3
LIT 6105 Studies in Continental Literature 3
LIT 6934 Selected Topics in English Studies 3

Comprehensive Exam

9 hours minimum

Thesis

ENG 6971 Thesis: Master’s (9 hours total) — taken in the student’s final year of study.
The student must be registered in at least 3 hours of ENG 6971 during the semester prior to graduation.

Graduate Certificates

For information on Graduate Certificates please visit http://www.outreach.usf.edu/gradcerts/

English Graduate Certificates Offered:

Creative Writing — Contact Professor Rita Ciresi at rciresi@usf.edu
Comparative and Interdisciplinary Literary Studies — Contact Dr. Susan Mooney at smooney@usf.edu
Teaching Composition — Contact Dr. Debra Jacobs at djacobs@usf.edu
Professional & Technical Communication — Contact Dr. Meredith Zoetewey at Zoetewey@usf.edu

COURSES

See http://www.ugs.usf.edu/course-inventory/
ECONOMICS

Master of Arts (M.A.) Degree

DEGREE INFORMATION

<table>
<thead>
<tr>
<th>Priority Admission Application Deadlines:</th>
<th>CONTACT INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall: June 1</td>
<td>College: Arts and Sciences</td>
</tr>
<tr>
<td>Spring: October 15</td>
<td>Department: Economics</td>
</tr>
<tr>
<td>Summer: No admission</td>
<td>Contact Information: <a href="http://www.grad.usf.edu">www.grad.usf.edu</a></td>
</tr>
</tbody>
</table>

Minimum Total Hours: 30
Level: Masters
CIP Code: 45.0601
Dept. Code: ECN
Major/College Codes: ECO/AS
Approved: 2010

Also offered as an Accelerated Major

MAJOR INFORMATION

The M.A. in Economics prepares students for careers as professional economists in business and government. It is also excellent preparation for continued graduate study in economics.

Major Research Areas:
Health economics, public economics, urban and regional economics, international trade, economic development, industrial organization, advanced theory, and advanced econometrics

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- Bachelor’s degree or equivalent from a regionally accredited university or international equivalent.
- Must have a 3.00 or higher upper-level GPA.
- Must have taken the GRE within the preceding five years with target scores of 152 (490) on the verbal portion and 152 (670) on the quantitative portion.
- International applicants from non-English-speaking countries must also have a TOEFL score of 550 or higher on the written version, a minimum score of 213 on the computer-based test or a 79 on the internet-based test.
- Minimum of 1 course in calculus.*
- Minimum of 1 course in statistics.*
- Undergraduate Intermediate-level microeconomics and undergraduate intermediate-level macroeconomics*

*Applicants must earn a grade of B or better in each of these courses.
CURRICULUM REQUIREMENTS

Total Minimum hours - 30 hours

All students are required to take courses in advanced economic theory and econometrics. Undergraduate economics majors at USF may complete the major in one year beyond the B.A. in the Accelerated B.A./M.A.. Students preparing for doctoral studies select from these and additional courses in economic theory, mathematics, and quantitative methods. Where appropriate students may select courses in other departments in the University.

Students must satisfy all University requirements for the M.A. degree. Departmental requirements include 30 hours of graduate credit selected with the approval of the department’s graduate advisor. At least 24 hours must be in Economics not including Independent Study (ECO 6906) and Directed Research (ECO 6917). To graduate, a student must have at least an overall 3.00 GPA and at least a 3.00 GPA for all economics courses, and pass an oral examination.

### Core Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECO 6115</td>
<td>Microeconomics I</td>
<td>3</td>
</tr>
<tr>
<td>ECO 6206</td>
<td>Macroeconomics I</td>
<td>3</td>
</tr>
<tr>
<td>ECO 6405</td>
<td>Mathematical Economics I</td>
<td>3</td>
</tr>
<tr>
<td>ECO 6424</td>
<td>Econometrics I</td>
<td>3</td>
</tr>
</tbody>
</table>

12 hours

### Electives

**Economics** at least 12 credits

**Unrestricted** at most 6 credits at the graduate level

Economics electives must be drawn from the following set of graduate-level courses offered in the Department of Economics:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECO 6120</td>
<td>Economic Policy Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ECO 6305</td>
<td>History of Economic Thought</td>
<td>3</td>
</tr>
<tr>
<td>ECO 6425</td>
<td>Econometrics II</td>
<td>3</td>
</tr>
<tr>
<td>ECO 6505</td>
<td>Public Finance</td>
<td>3</td>
</tr>
<tr>
<td>ECO 6525</td>
<td>Public Sector Economics</td>
<td>3</td>
</tr>
<tr>
<td>ECO 6706</td>
<td>International Trade: Theory and Policy</td>
<td>3</td>
</tr>
<tr>
<td>ECO 7116</td>
<td>Microeconomics II</td>
<td>3</td>
</tr>
<tr>
<td>ECO 7207</td>
<td>Macroeconomics II</td>
<td>3</td>
</tr>
<tr>
<td>ECO 7406</td>
<td>Mathematical Economics II</td>
<td>3</td>
</tr>
<tr>
<td>ECO 7426</td>
<td>Econometrics III</td>
<td>3</td>
</tr>
<tr>
<td>ECP 6405</td>
<td>Industrial Organization I</td>
<td>3</td>
</tr>
<tr>
<td>ECP 6408</td>
<td>Economics of Organization</td>
<td>3</td>
</tr>
<tr>
<td>ECP 6415</td>
<td>Issues in Regulation and Anti-Trust</td>
<td>3</td>
</tr>
<tr>
<td>ECP 6456</td>
<td>Law and Economics</td>
<td>3</td>
</tr>
<tr>
<td>ECP 6536</td>
<td>Economics of Health Care I</td>
<td>3</td>
</tr>
<tr>
<td>ECP 6614</td>
<td>Urban Economics</td>
<td>3</td>
</tr>
<tr>
<td>ECP 6624</td>
<td>Regional Economics</td>
<td>3</td>
</tr>
<tr>
<td>ECP 7406</td>
<td>Industrial Organization II</td>
<td>3</td>
</tr>
<tr>
<td>ECP 7537</td>
<td>Economics of Health Care II</td>
<td>3</td>
</tr>
<tr>
<td>ECS 6015</td>
<td>Economic Development</td>
<td>3</td>
</tr>
</tbody>
</table>

With the approval of the Graduate Director, unrestricted elective courses may be satisfied either by graduate-level courses offered by any department within the University or by certain MBA courses taught within the Department of Economics.

### Comprehensive Exam

In addition to completing the 30 hours of coursework with overall and major GPAs of at least 3.00, a student must pass an oral examination conducted by a panel of three faculty members who have taught courses in the student’s major. At least one faculty member must be drawn from those who teach the core courses. The oral examination provides a forum for the student to provide evidence that s/he has sufficient knowledge and breadth of fundamental economic concepts so as to be able to undertake rigorous economic analysis, both theoretical and empirical in nature.
ACCELERATED BA/MA OPTION
The accelerated option will allow students to earn a BA in Economics and then an MA in Economics in at least one fewer semesters than if earned separately.

GPA Requirements
- Minimum undergraduate overall GPA of 3.33
- Minimum undergraduate major GPA of 3.50
- Minimum of 15 hours in the undergraduate major. ECO 2013, ECO 2023, and QMB 2100 do not count towards these 15 hours. QMB 3200, ECO 3101, and ECO 3203 must count towards these 15 hours.

Policy for where a student earns less than a “B” in a graduate course:
Any graduate course in which a student receives a grade of B- or lower may be used to satisfy the requirements of the BA degree, but not the MA degree. In this case, the student will have fewer than 9 hours shared between degrees and will be required to take additional graduate courses as needed once s/he is pursing the MA degree full-time.

List of courses to be shared
Nine (9) hours of graduate coursework may be shared between the BA and MA degrees. Of these, six (6) hours will be mandatory:
- ECO 6115 and ECO 6405 (which satisfies ECO 4401) and three (3) hours will be chosen from ECO 6206 and the following list of undergraduate replacement courses:
  - ECO 4421 satisfied by ECO 6424
  - ECO 4504 satisfied by ECO 6505
  - ECO 3403 satisfied by ECP 6408
  - ECP 3413 satisfied by ECP 6415
  - ECP 3613 satisfied by ECP 6614
  - ECP 4451 satisfied by ECP 6456

Note: ECO 6115 and ECO 6206 do not replace ECO 3101 and ECO 203 as the latter two courses constitute six (6) hours of the 15 hours in the major that are required to be admitted to the Accelerated Major

COURSES
See [http://www.ups.usf.edu/course-inventory/](http://www.ups.usf.edu/course-inventory/)
ECONOMICS

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: January 31

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 72 post-bacc
Level: Doctoral
CIP Code: 45.0601
Dept. Code: ECN
Major/College Codes: ECO/AS
Approved: 2010

CONTACT INFORMATION

College: Arts and Sciences
Department: Economics
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Doctor of Philosophy in Economics prepares students for careers as professional economists in academia, business and government.


ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.
- Bachelor’s degree or equivalent from a regionally accredited university or international equivalent
- 3.00 GPA or better in all upper division undergraduate classes
- Must have taken the GRE within the preceding five years with target scores of 65th percentile on the verbal portion and 65th percentile on the quantitative portion.
- International applicants from non-English-speaking countries must also have a TOEFL score of 550 or higher on the written version, a minimum score of 213 on the computer-based test or a 79 on the Internet-based test.
- Minimum of 2 courses in calculus*
- Minimum of 1 course in probability and statistics*
- Undergraduate Intermediate-level microeconomics and undergraduate intermediate-level macroeconomics*

*Applicants must earn a grade of B or better in each of these courses.
CURRICULUM REQUIREMENTS

Total Minimum Hours - 72 hours
Core Requirements - 27
Fields - 12
Electives/Dir Research- 22
Dissertation - 11

CORE REQUIREMENTS - 27 hours
ECO 6115 Microeconomics I 3
ECO 6206 Macroeconomics I 3
ECO 6405 Mathematical Economics I 3
ECO 6424 Econometrics I 3
ECO 6425 Econometrics II 3
ECO 7116 Microeconomics II 3
ECO 7207 Macroeconomics II 3
ECO 7406 Mathematical Economics II 3
ECO 7426 Econometrics III 3

Fields - 12 hours
Select two pairs from the groupings below or from other pairs that the department may choose to offer:
ECO 6536 Economics of Health Care I 3
ECO 7537 Economics of Health Care II 3
ECS 6015 Economic Development 3
ECO 6706 International Trade: Theory and Policy 3
ECP 6405 Industrial Organization I 3
ECP 7406 Industrial Organization II 3
ECO 6505 Public Finance 3
ECO 6525 Public Sector Economics 3
ECP 6614 Urban Economics 3
ECP 6624 Regional Economics 3

Electives/Directed Research/Dissertation - 33 hours
Of this 33 hours minimum at least six hours must be met with additional graduate-level structured coursework approved by either the Graduate Director or the student's (Co-) Major Professor(s) and at least 21 hours by a combination of Directed Research (EDO 6917) and Dissertation (EDO 7980) with Dissertation comprising at least 11 of these 21 hours.

Qualifying Examination
The qualifying examination is offered in two parts. The first part covers Mathematical Economics I (ECO 6405), Mathematical Economics II (ECO 7406), Microeconomics I (ECO 6115), and Macroeconomics I (ECO 6206). The second part covers Microeconomics II (ECO 7116), Econometrics II (ECO 6425), and Econometrics III (ECO 7426).

Dissertation - 11 hours minimum
ECO 7980 Dissertation

Graduation Requirements:
- Complete 27 credit hours of required coursework with required GPA.
- Complete 12 credit hours of economics field coursework with required GPA.
- Complete all credit hours of electives, of which there must be at least six with the required GPA.
- Pass both parts of the qualifying examination
• Complete at least 21 credit hours of directed research/dissertation with a minimum of 11 of these credit hours being dissertation.
• Write and successfully defend the doctoral dissertation proposal.
• The sum total of elective/directed research/dissertation credit hours must be at least 33.
• Write and successfully defend the doctoral dissertation.

Students with MA Degrees in Economics from External Institution

Students who already hold an MA degree in Economics from an external institution prior to entering the Ph.D. program are offered the opportunity to take the First-Year Qualifying Examination in the summer before entering the program. Students who chose this option and pass the exam are waived from taking the associated four required classes: Mathematical Economics I, Mathematical Economics II, Microeconomics I, and Macroeconomics I. In addition, the total number of coursework credit hours for these students is reduced from 45 to 39. The minimum total number of graduate level credit hours required is still 72. Students who choose to take the First-Year Qualifying Exam, but do not pass, will take these four required courses during their first year in the major. They will then take the First-Year Qualifying Exam the following summer.

COURSES

For an updated list of course offerings see: http://www.ugs.usf.edu/course-inventory/
ENGLISH

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: January 1
Fall admission only

Minimum Total Hours: 33
Level: Masters
CIP Code: 23.0101
Dept. Code: ENG
Major/College Codes ENG AS
Approved: 1967

Concentrations:
Literature (LIT)
Rhetoric and Composition (RAC)

Also offered as an Accelerated Program

CONTACT INFORMATION

College: Arts and Sciences
Department: English
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The M.A. in English with a concentration in Literature is a continuation of the B.A. with greater depth in literary knowledge and an introduction and implementation of methods, standards, and conventions of scholarship on literature. It is a generalist degree with broad-based distribution requirements, but it has the flexibility to study cutting-edge theories and newly emerging fields of interests (including cultural and comparative studies, ethnic literatures, and genre studies such as film). The major will conclude with a portfolio of two essays of 5000-6000 words each and an oral defense.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- B.A. in English
- A competitive Verbal aptitude score on the GRE general test, with a target Analytical Writing score of 4.0 (while the Quantitative score is not a determining factor in our admission decisions, both the Verbal and Quantitative score are factors in some university scholarships and fellowships)
- Undergraduate GPA 3.50
- Three (3) letters of recommendation
- Scholarly writing sample of approximately 2500 words (ten double-spaced pages) excluding bibliography or works cited; applicants may excerpt from a longer essay. Generally, the committee seeks to review academic writing from an English course.
- A two-to-three page personal statement describing the student’s background, purpose for attending graduate studies, and career goals

All supplementary application materials (i.e. statement, writing sample, and letters), may be submitted electronically through the online application or may be submitted directly to the department at the following address:
All materials, including GRE scores and transcripts, must be received by the application deadline in order for students to be considered for admission. Graduates of USF do not need to order official transcripts. Applications are reviewed by an admissions committee after the deadline. Students will be notified by mail of the admissions decision within four to six weeks after the deadline.

CURRICULUM REQUIREMENTS

Minimum Hours - 33 Credit Hours
Core Requirements – 3 hours
Concentration – 27 hours (Literature) / 36 hours (Rhetoric)

CORE REQUIREMENTS - 3 hours
ENG 6009 3 Introduction to Graduate Studies (this should be taken in the first semester of coursework)

CONCENTRATION REQUIREMENTS:
In addition to the core requirements, students must complete the requirements below for the selected concentration:

Literature Concentration - 27 hours
Requirements - 3 credits
ENG 6018 3 Studies in Criticism and Theory I
OR
ENG 6019 3 Studies in Criticism and Theory II

Historical Distribution* - 12 credits
Four courses chosen from the following:
1 Medieval or Renaissance (including 17th Century)
ENL 6206 3 Studies in Old English
ENL 6216 3 Studies in Middle English
ENL 6226 3 Studies in Sixteenth-Century British Literature
ENL 6228 3 Studies in Seventeenth-Century British Literature

1 18th Century (Either British tradition or Literature of the Americas)
AML 6017 3 Studies in American Literature to 1860
ENL 6236 3 Studies in Restoration and Eighteenth-Century British Literature

1 19th Century (Either British tradition or Literature of the Americas):
AML 6017 3 Studies in American Literature to 1860
AML 6018 3 Studies in American Literature to 1860 to 1920
ENL 6246 3 Studies of the English Romantic Period
ENL 6256 3 Studies in Victorian Literature

1 20th Century (Either British traditions or Literature of the Americas):
AML 6027 3 Studies in Modern American Literature
ENL 6276 3 Studies in Modern British Literature
LIT 6096 3 Studies in Contemporary Literature
Cultural & Critical Studies* - 6 credits
Two courses in ethnic literature (including African-American, Latino/a, post-colonial), world literature, women’s literature or gender studies, critical theory, film, or genre
AML 6608  3  Studies in African American Literature
ENG 6018  3  Studies in Criticism and Theory I
ENG 6019  3  Studies in Criticism and Theory II
ENG 6067  3  History of the English Language
LIT 6934  1-6  Selected Topics in English Studies
Or other courses as approved by the Graduate Director

*Of the six courses in Historical Distribution and Cultural-Critical Studies, two must be from British traditions and two from American Traditions.

Electives - 6 credits
Students taking ENC 6745 Teaching Practicum must use this as an elective if they count it toward the 33 credits in the degree. No CRW courses will be allowed in the literature track. Only one practicum will be allowed to satisfy degree requirements (including ENC 6745). One Directed Study may be used to substitute for degree requirement with the approval of the Graduate Director.

Portfolio and Defense - 3 credits
Three directed study hours to prepare portfolio. In their fourth and final semester (excluding summer terms), MA students will submit a portfolio for review to a two-member faculty committee six weeks prior to the Office of Graduate Studies deadline for thesis/dissertation submission. Upon submission, the student and chair of the committee will establish a defense date with the Graduate Program Specialist.

The portfolio will contain the following:

- An introductory first-person essay in which the student offers a self-evaluation of the contents of the portfolio and how it reflects his or her own process of revision, intellectual growth, plans for publication/dissemination, and professional development (minimum five pages, not to exceed fifteen).
- Two revised seminar papers 5000-6000 words in length, including appropriate MLA or Chicago Style documentation.
  - Papers should be developed under the direction of two different faculty members from the English Department, who then will form the committee for the defense. One member of the committee will serve as the chair, who will coordinate the circulation of the portfolio, the scheduling of the defense, and the submission of evaluation forms to the graduate director within specified deadlines.

The portfolio will be reviewed and evaluated by this two-member faculty committee using the published assessment rubric.

Members of the portfolio committee will be asked to work with the student to revise the papers she/he wrote for class. The goal is to get the papers into a form that might reasonably be published.

Because this option is not a thesis, it does not have to be submitted to the Office of Graduate Studies, and so it does not need to adhere to the Office of Graduate Studies deadlines. Defenses should be concluded two weeks before the end of classes. The whole portfolio, along with the revised papers and the introductory essay, should be circulated two weeks prior to the defense, to give committee members an opportunity to read it through.

Oral Defense
The committee chair convenes a meeting with the committee and student for 30 minutes; this oral examination provides the opportunity for faculty to question the student on various aspects of the portfolio, and it gives the student the opportunity to expand upon and refine ideas represented in writing. The defense also provides an opportunity for further suggestions on publication and revision. After 30 minutes, the committee will convene without the student to discuss a final assessment for the portfolio using the published rubric.
Rhetoric and Composition Concentration - 33 hours

Requirements - 12 credits
ENC 6700 3 Studies in Composition Theory
ENC 6720 3 Studies in Composition Research
ENC 6421 3 Studies in Rhetoric and Technology
ENC 6336 3 Studies in the History of Rhetoric

Electives - 15 credits
Three (3) electives within Literature or Rhetoric and Composition from the following (9 credit hours):
ENC 3 Advanced Technical Writing
ENC 6261 3 Professional and Technical Communication
ENC 6333 3 Contemporary Rhetorics
ENC 6422 3 New Media Production
ENC 6740 3 Theory and Development of Writing Programs
LAE 6375 3 Contemporary Composition Studies

Two additional electives in English or outside department, related to course of study (6 credit hours at the graduate level.)

Thesis - 6 credits minimum
ENG 6971 6 Thesis or Portfolio: Master’s

MA Thesis or Portfolio on a Rhetoric and Composition subject plus an oral defense

The M.A. thesis – 40-50 pages, typed body in 12 point Times New Roman font, double-spaced – should be based on student’s specialization in Rhetoric and Composition. This manuscript can be a revision and extension of a course paper or conference paper. It must contribute to the discipline by advancing scholarly discussions in Rhetoric and Composition studies and offering new knowledge.

MA students may submit portfolios in lieu of traditional theses. Variable portfolio contents will be determined in concert with candidates’ professional goals. Portfolio contents will range from 40-50 pages or equivalent (excluding works cited).

Comprehensive Exam
Students in the Literature Concentration complete a capstone requirement/portfolio, including an oral defense, in lieu of a comprehensive exam. For students in the Rhetoric and Composition Concentration, the thesis defense serves in lieu of a comprehensive exam.

Graduate Certificate Program
For information on Graduate Certificates please visit http://www.outreach.usf.edu/gradcerts/

English Graduate Certificates Offered:
Creative Writing – Contact Professor Rita Ciresi at rciresi@usf.edu
Comparative and Interdisciplinary Literary Studies – Contact Dr. Susan Mooney at smooney@usf.edu
Teaching Composition – Contact Dr. Debra Jacobs at djacobs@usf.edu
Professional & Technical Communication – Contact Dr. Meredith Zoetewey at zoetewey@usf.edu

ACCELERATED BA/MA OPTION
This Accelerated Major option allows B.A. majors in Literary Studies to take graduate course in the M.A. degree in English with a Concentration in Literature during their senior year. These shared credits will be applicable to the M.A. degree, thus accelerating the time to completion, with successful students able to earn the M.A. degree in two additional semesters beyond the completion of the B.A. Degree. This accelerated program shares 12 credits between already existing degrees:

B.A. in Literary Studies and M.A. in English with a Concentration in Literature

Target students and expected outcomes
This program builds on the department’s B.A. and M.A. degrees. It will give talented Literary Studies majors the opportunity to take graduate courses and apply them to an M.A. in Literary Studies. If successful, students will be able to
complete an M.A. two semesters after the B.A. requirements have been met. This will allow them to more expeditiously pursue career opportunities requiring a graduate degree in Literary Studies or pursue Ph.D. studies.

**Description and Requirements**

For admission to the Accelerated Option, a student must:

1. have completed at least 15 hours in the Literary Studies undergraduate major, including ENG 3014.
2. have a minimum undergraduate 3.33 GPA overall; and
3. have a minimum undergraduate 3.5 GPA in the major.

Application may be made by any student who has satisfied the minimum requirements. Applications should be addressed to the Department Undergraduate and Graduate Directors and should include a statement by the student affirming satisfaction of minimum requirements (with supporting documentation) and a letter of recommendation from a Literary Studies faculty member familiar with the student’s academic performance.

**Policy for where a student earns less than a “B” in a graduate course:**

No grade lower than a B will be accepted in a graduate course in this program. Students earning less than a B in a graduate course must retake the course and earn a B or higher, to apply it to their graduate degree.

**List of courses to be shared**

Twelve (12) hours of graduate credit may be shared as follows:

ENG 6018 or ENG 6019 Studies in Criticism and Theory I & II will satisfy the ENG 4013 Literary Criticism requirement.

9 hours at the 4000 level are satisfied by 9 hours at the 6000 level in the English Literature Concentration as approved by the Graduate Director. Please see Advising list.

Refer to Undergraduate Catalog – B.A. in Literary Studies for undergraduate requirements

Refer to the M.A. in English with a Concentration in Literature requirements, posted above, for graduate requirements.

**COURSES**

See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
ENGLISH

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: January 1
Fall admission only

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 40 Post-Masters
Level: Doctoral
CIP Code: 23.0101
Dept. Code: ENG
Major/College Codes: ENG AS
Approved: 1971

Concentrations:
Literature (LIT)
Rhetoric and Composition (RAC)

CONTACT INFORMATION

College: Arts and Sciences
Department: English
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Ph.D. in English with a concentration in Literature seeks to produce teacher-scholars who have a sound general knowledge of British and American literature and a specialized knowledge of their fields of concentration. Each student in the program must take courses in teaching college English. These courses in teaching are practicums that include actual teaching experience.

The Ph.D. in English with a concentration in Rhetoric and Composition seeks to equip teacher-scholars with both a robust familiarity with critical, literary, and rhetorical theory and with the pedagogical experiences requisite for quality instruction. Students will specialize their studies toward a particular field of concentration.

The Ph.D. in English involves a minimum of 30 hours of course work beyond the M.A. degree, exclusive of credits devoted to the foreign language requirement and to the doctoral dissertation after included in these hours must be ENG 6005 Scholarly Research and Writing, ENG 6018 or ENG 6019 and one other theory-rich course, and two courses designated as Doctoral Seminars, with an extra credit of ENG 7939. After completing the necessary course work, students must take a written qualifying exam with oral defense. Students passing this exam and fulfilling the foreign language requirement are then admitted to doctoral candidacy. Students who carry deficiencies on this exam for more than two terms, or who fail this exam more than once, are dismissed from the program. Upon the completion and approval of the dissertation, students will defend the dissertation in an oral examination. After successful completion of the dissertation and defense, students are awarded the doctoral degree.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

• M.A. in English from a regionally-accredited university
• A competitive Verbal aptitude score on the GRE general test, with a target Analytical Writing score of 4.0 (while the Quantitative score is not a determining factor in our admission decisions, both Verbal and Quantitative scores factor in some university scholarships and fellowships)
• GPA – minimum 3.70 graduate GPA
• Three (3) letters of recommendation, at least two of these letters should be from professors who have taught the applicant at the graduate level
• A two-to-three page personal statement describing the student’s background, purpose for attending graduate studies, and career goals
• A scholarly writing sample of approximately 2500 words (ten double-spaced pages) excluding bibliography or works cited; applicants may excerpt from a longer essay. Generally, the committee seeks to review academic writing from an English course.

All supplementary application materials (i.e., statement, writing sample, and letters), may be submitted electronically through the online application or may be submitted directly to the department at the following address:

Graduate Director
Department of English
University of South Florida
4202 E. Fowler Ave., CPR 107
Tampa, FL 33620-5550

All materials, including GRE scores and transcripts, must be received by the application deadline in order for students to be considered for admission. Graduates of USF do not need to order official transcripts. Applications are reviewed by an admissions committee after the deadline. Students will be notified by mail of the admissions decision within four to six weeks after the deadline.

CURRICULUM REQUIREMENTS

Total Minimum hours: 40 hours beyond the MA degree

CORE REQUIREMENTS
ENG 6005 — Scholarly Research and Writing (3)

CONCENTRATION REQUIREMENTS
Students select from the following concentrations:

**Literature Concentration**

ENG 6018 or ENG 6019 Studies in Criticism and Theory I & II (May have been taken at the MA level) 3 credits

One theory-rich course chosen from the following 3 credits
ENC 6336 Studies in the History of Rhetoric 3
ENG 6018 Criticism & Theory I 3
ENG 6019 Criticism & Theory II 3

Or other courses designated theory-rich in the department’s Graduate Bulletin or otherwise approved by the Graduate Director

**ENG 7939 Doctoral Seminar**

Must be taken twice (two credits total) in conjunction with a three-credit course; the two courses plus the two seminar credits total 8 credits

**One practicum in teaching or in tutoring for the Writing Center**

ENC 6745 Teaching Practicum 3
LAE 6375 Contemporary Composition Studies 3
LAE 6389 Practice in Teaching Literature 1-3

Or other courses as approved by the Graduate Director
Electives 10 credits
10 hours minimum from other graduate courses in the Department of English

Other
Demonstrated proficiency in one foreign language by one of the following means:
- Place beyond Level IV in a language placement test (administered by World Language Education Department)
- Earn a B or better in one of the graduate courses Reading for French, Spanish, or German
- Earn a B or better in two semester courses of an intermediate foreign language (e.g., Spanish III and Spanish IV)
- Earn a B or better in a fourth semester language course (e.g., Spanish IV)
- Earn a B or better in a second semester Latin course

Qualifying Exam
Ph.D. qualifying exam (students may enroll in directed reading hours with exam committee members)

<table>
<thead>
<tr>
<th>Rhetoric &amp; Composition Concentration</th>
<th>32 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Requirements</strong></td>
<td>12 credits</td>
</tr>
<tr>
<td>ENC 6700  Studies in Composition Theory</td>
<td>3</td>
</tr>
<tr>
<td>ENC 6720  Studies in Composition Research</td>
<td>3</td>
</tr>
<tr>
<td>ENC 6421  Studies in Rhetoric and Technology</td>
<td>3</td>
</tr>
<tr>
<td>ENC 6336  Studies in the History of Rhetoric</td>
<td>3</td>
</tr>
<tr>
<td>ENG 7939 Doctoral Seminar</td>
<td>8 credits</td>
</tr>
<tr>
<td>Must be taken twice (two credits total) in conjunction with a three-credit course; the two courses plus the two seminar credits total 8 credits</td>
<td></td>
</tr>
</tbody>
</table>

Electives 12 credits minimum
(12-15 credits, dependent upon whether ENC 6745 was taken at the MA level)

Four or five elective courses in Rhetoric and Composition chosen from the following:
- ENC 6261 Professional and Technical Communication
- ENC 6333 Contemporary Rhetorics
- ENC 6422 New Media Production
- ENC 6740 Theory and Development of Writing Programs
- LAE 6375 Contemporary Composition Studies

Other: Foreign Language Requirement
Demonstrated proficiency in one foreign language by one of the following means:
- Place beyond Level IV in a language placement test (administered by World Language Education)
- Earn a B or better in one of the graduate courses Reading for French, Spanish, or German
- Earn a B or better in two semester courses of an intermediate foreign language (e.g., Spanish III and Spanish IV)
- Earn a B or better in a fourth semester language course (e.g., Spanish IV)
- Earn a B or better in a second semester Latin course

Ph.D. Qualifying Exam
After completing 30 hours of coursework, the language requirement, and all incomplete grades, a student may take the Ph.D. examination. The standardized exam will be offered twice each academic year for all eligible students and consists of:
- A 24-hour take-home exam divided into four written sections (1,000 words apiece), the content of which corresponds to the four core courses: Composition Theory, Research Methods, Rhetoric and Technology, and Historical Rhetorics. Questions will be available in Canvas office at 9:00 a.m. on the
day of the exam. Questions will be digitally submitted to the exam chair by 9:00 a.m. on the following day for SafeAssign (or other software as approved by University and Department) submission in Canvas.

- A manuscript suitable for publication in a specified scholarly journal (7,000-8,500 words) to be turned in at the same time as the 24-hour exam. The topic of the manuscript should be based on the student’s specialization in Rhetoric and Composition. This manuscript can be a revision of a course paper or conference paper or an extension of their project from the Scholarly Writing and Research class. It must contribute to the discipline by advancing scholarly discussions in Rhetoric and Composition studies and offering new knowledge.

Both parts of the exam carry equal weight. All exams will be assessed by a rotating committee of at least 3 Rhetoric and Composition faculty representing different areas of disciplinary expertise. Every exam question will be graded by each member of the committee, although emphasis will be placed upon readers' areas of specialization when determining the final score for each question.

**Dissertation**

**10 hours minimum**

ENG 7980 Dissertation: Doctoral—Minimum of 10 dissertation hours (no maximum), plus oral defense

**Graduate Certificates**

For information on Graduate Certificates please visit [http://www.outreach.usf.edu/gradcerts/](http://www.outreach.usf.edu/gradcerts/)

English Graduate Certificates Offered:

- Creative Writing — Contact Professor Rita Ciresi at rciresi@cas.usf.edu
- Comparative and Interdisciplinary Literary Studies — Contact Dr. Susan Mooney at smooney@cas.usf.edu
- Teaching Composition — Contact Dr. Debra Jacobs at djacobs@cas.usf.edu
- Professional & Technical Communication — Contact Dr. Meredith Zoetewey at zoetewy@usf.edu

**COURSES**

See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
ENVIRONMENTAL SCIENCE AND POLICY

Master of Science (M.S.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15
Fall Admission Only

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 36
Level: Masters
CIP Code: 3.0104
Dept. Code: ESP
Major/College Codes: ESP AS
Approved: 1999

CONTACT INFORMATION

College: Arts and Sciences
Department: Geography, Environment and Planning
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

Contact the department for information.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- Applicant must hold B.S. or B.A. degree in a relevant subject area
- Applicant must submit transcripts of undergraduate degree and results of GRE taken at most five (5) years before the application.
- Applicant must submit a statement of interests, documenting capabilities, achievements, goals and intended area of academic and research concentration in the Department if admitted.
- Applicant must submit at least three (3) letters of recommendation from persons familiar with the applicant’s achievements, capabilities, and potential, including two persons qualified to judge the applicant’s academic performance.
- Program may have additional requirements; check before applying. It is strongly recommended that the applicant contact the Department’s Graduate Director for guidance in applying to the M.S..

Applicant must submit:

- GRE scores
- A GPA of at least 3.0 in his/her last 60 undergraduate hours
- If non-native English speaker, TOEFL of at least 600.
CURRICULUM REQUIREMENTS

The curriculum consists of 36 credits divided into three categories:

1) Core Requirements 15 credits
2) Elective Requirements 12 credits
3) Research Requirements 9 credits

Core Requirements

Applications/Tools: Students select a course whose primary objective is mastery of research tools or methods with applications to research in the environmental field, subject to the approval of the Graduate Director and the student’s Supervisory Committee. Courses that meet these criteria include:

a) GIS 5049 – Geographic Information Systems for Non-Majors 3
b) GIS 6100 – Advance Geographic Information Systems 3
c) STA 5166 – Computational Statistics 3
   (or other statistics course approved by the Graduate Director such as PCB 6456 or GEO 6166)
d) PCB 6456 – Biometry 4
e) GEO 6166 – Multivariate Statistical Analysis 3

Advanced topics in Environmental Science - Students must complete both of the following courses:

a) GEO 6116 – Perspective in Environmental Thought 3
b) EVR 6922 – ESP Capstone Seminar 3
   (taken after a minimum of 24 major hours have been completed)

Elective Requirements

Students must complete 12 credit hours of graduate level elective courses within an area of concentration selected according to their interests and career goals. Students should select appropriate advanced coursework within their chosen area of concentration, in close consultation with their major professor and Supervisory Committee, to develop programs of study that fit their scholarly and career interests, and for thesis option students, the needs of their research. Students completing an approved (by the Graduate Director) graduate certificate as part of their major can count 12 hours from the certificate towards the M.S. degree elective requirements. Students completing the Environmental Policy and Management Certificate can apply GEO 6116 and EVR 6922 (or approved course substitutions) toward the M.S. degree core requirements. Additional certificate courses that meet M.S. degree core requirements will be applied to the core and remaining courses will be counted as electives in the MS. Each student’s elective program of study is subject to the approval of the
Graduate Director. Areas in which students may decide to complete their electives, where graduate-level courses are supported by the ES&P Major and/or affiliated Departments, include:

1. **Ecology.** 12 credits primarily from courses offered within the ES&P Major in the Department of Geography, and courses in the Department of Biology, to be selected in consultation with the student’s major professor and Supervisory Committee. This area features a particular concentration in landscape ecology, wildlife ecology and management, conservation biology, ecological modeling, and field methods, including the use of GIS, GPS, and remote sensing technologies.

2. **Environmental Policy and Management.** 15 credits (only 12 hours can be applied towards the MS) guided by the guidelines for the Graduate Certificate in Environmental Policy and Management. Credits will be applied to the core and elective requirements for the M.S. as described above.

3. **Geology.** 12 credits primarily from courses offered within the ES&P Major in the Department of Geography and courses in the Department of Geology to be selected in consultation with the student’s Supervisory Committee. This area features a particular concentration in karst geology and public policy planning in karstic environments: and a concentration in paleogeology.

4. **Hydrogeology.** 15 credits (only 12 hours can be applied towards the MS) as required by the Graduate Certificate in Hydrogeology, as specified by the Department of Geology.

5. **Hazards Assessment and Mitigation.** 12 credits primarily from courses offered within the ES&P Major in the Department of Geography, and courses in the Department of Geology, and Civil Engineering, to be selected in consultation with the student’s major professor and Supervisory Committee.

6. **Urban Environment.** 12 credit hours primarily in the Department of Geography, to be selected in consultation with the student’s major professor and Supervisory Committee.

7. **Water Quality and Policy.** 12 credits drawn from relevant courses offered within the ES&P Major in the Department of Geography, and courses in the Department of Civil and Environmental Engineering, and the School of Public Affairs, to be selected in consultation with the student’s major professor and Supervisory Committee. This area features a particular concentration in urban runoff water quality, watershed-based water quality assessment, and watershed planning and management for water quality protection.

8. **Other.** 12 credits in other areas of concentration are also considered. The student may select an area of concentration that is strongly supported by graduate studies at USF and by one or more faculty members in the Department of Geography. The student should be able to describe how the courses form a coherent area of concentration relevant to his or her scholarly interests, research objectives, and/or career goals, and prepare a brief statement to that effect for the approval of the Graduate Director. The student should then select courses in consultation with his/her major professor and Supervisory Committee.

**Research Requirements (9 credits)**

The M.S. in ES&P is a research-oriented degree. Thesis track students complete a Thesis that constitutes an original scholarly contribution and is conducted under the direction of a Major Professor and a 3-member Faculty Supervisory Committee (of which the Major Professor serves as chair). Students should form their Supervisory Committee before completion of 18 credits of coursework, typically near the end of their first full year in the Major. Students complete a Thesis Proposal subject to approval of the Supervisory Committee typically early in the second year of studies. Students defend their Thesis in an oral presentation, and submit a written document for the approval of the Supervisory Committee, which is then submitted to the University as a requirement for earning the degree.

The research requirements include the following coursework, for a minimum total of 9 credit hours:

1. **Directed Research (Thesis Preparation, EVR (6920)):** Students complete at least 6 credit hours of thesis research under the direct supervision of their major professor, typically during the second year of studies. After completion of all Core and Elective requirements, students remain enrolled in at least 2 credit hours
per semester of EVR 6920 until the completion and submittal of the Thesis which completes the requirements for the degree. Throughout this period students must work in close cooperation with their major professor and Supervisory Committee, and provide the Committee a summary of progress at least once per semester.

2. Research Methods/Design Preparation: All students selecting the Thesis option will complete a research methods/design course (GEO 6970 – Research Methods in Geography). Other courses may be substituted for this requirement with the permission of the student’s advisor and the Graduate Director.

3. Research Colloquium (EVR 6930), 1 credit hour

Thesis/Non-Thesis Options

There are two options to complete the M.S. Degree:

A. **Thesis Option.** The thesis option is designed for students who wish to complete original research as part of their graduate studies. The thesis option is a viable option for all students. Those intending to continue graduate work to the Ph.D. level are strongly encouraged to complete a thesis.

B. **Non-Thesis Option.** Students complete a minimum of 36 hours for the Major, with 24 hours of electives, keeping in mind that a minimum degree requirement is 16 hours at the 6000 level. Students must pass a comprehensive written examination that is administered during the semester they plan to graduate.

Comprehensive Examination

**Thesis Option:**

1. The student is required to present his/her thesis research at a public thesis defense.

2. As part of the thesis defense, an oral comprehensive exam is also administered. The defense and oral exam is scheduled and organized by the student’s major professor, in consultation with the student’s Supervisory Committee and the Graduate Director. As part of this process, a Presentations Form (available in the department office) needs to be completed one week prior to the defense date.

3. The exam can be completed only during the spring and fall Semesters.

4. A copy of the thesis must be made available in the department office one week prior to the defense for public review.

**Non-Thesis Option:**

1. The examining committee will be comprised of the student’s Supervisory Committee.

2. Non-thesis students are required to complete a six-hour long, written, closed book, comprehensive exam, which typically consists of series of questions that are prepared by the examination committee. Students are not allowed any outside materials during the exam, which is to be hand-written on paper supplied by the examination committee.

3. The exam can be completed during the spring or fall semesters, but not during the summer.

4. Students are encouraged to complete the exam during the last semester of their coursework. The exam must be completed no later than one semester after the student completes the coursework for the degree. You must be registered for two credits in that semester in the semester that the exam is completed.

5. All non-thesis examinations will be scheduled for the same day each semester (i.e. all students will sit for the exam at the same time), the date being set by the Graduate Director. Students must coordinate with their major professors when they will take the exam.
6. Questions are solicited and organized by the student’s major professor in consultation with the student’s examination committee.

7. The answers to the questions are evaluated by the student’s Supervisory Committee within two weeks of the exam.

8. If the answer to any question is determined to be incorrect or incomplete, the student may be required to retake that portion of the exam in the form of an oral exam that is only open to the committee. Students are encouraged to complete the oral exam in the same semester they completed the first written exam.

9. If the student fails all portions of the exam, they will have one opportunity to retake the entire exam. This second exam must be completed no later than the semester after the student receives notification that a second exam is necessary.

10. If it is determined that the student did not successfully complete his/her comprehensive exam after their second attempt, he/she will be dismissed from the Major.

COURSES

See http://www.ugs.usf.edu/course-inventory/
FRENCH

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priorit Admission Application Deadlines:
Fall: February 15
Spring: October 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 34
Level: Masters
CIP Code: 16.0901
Dept. Code: WLE
Major/College Codes: FRE AS
Approved: 1967

Also offered as a Concurrent Degree with Linguistics:
English as a Second Language (MA)

CONTACT INFORMATION

College: Arts and Sciences
Department: World Languages
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

Contact Department for Information.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- 2-3 letters of recommendation,
- A writing sample in French, and
- An oral interview in French (can be done by phone).
- GRE is not required.

CURRICULUM REQUIREMENTS

Total Minimum Hours: 33 hours

Core — 6 credit hours
Coursework — 21 credit hours minimum
Non-Thesis — 9 hours
Thesis — 6 hours minimum

Core requirements 6
FRW 5829 3 An Introduction to Modern French Literary Criticism
FRW 6405 3 Old French
Required Coursework – 24 hours minimum
Students select from FRW courses that are 5000-level and up, such as those listed below. Students may take up to 9 credits of courses from a different section/department upon approval of the Graduate Director.

FRW 5222 3 Classical Prose and Poetry
FRW 5226 3 20th Century Poetry and Theatre
FRW 5286 3 The 20th Century Novel
FRW 5314 3 Classical Drama
FRW 5415 3 Literature of the Middle Ages
FRW 5425 3 Literature of the Renaissance
FRW 5445 3 18th Century Literature
FRW 5535 3 Romanticism and Early Realism
FRW 5556 3 Naturalism and Realism
FRW 5745 3 French Literature of Quebec
FRW 5755 3 African and Caribbean Literature
FRW 5829 3 An Introduction to Modern French Literary Criticism
FRW 5934 3 Special Topics: varies
Or other courses approved by Graduate Director

Comprehensive Exam
Satisfactory performance on the written comprehensive examination is required.

Non-Thesis – 9 hours minimum
Students in the non-thesis option take an additional 9 credit hours of graduate coursework from the French courses listed above, as approved by the Graduate Director.

Thesis – 6 hours minimum
FRE 6971 6 Thesis
Students in the non-thesis option complete an additional 6 hours of graduate coursework.

Additional requirements
Proficiency in a second foreign language

OTHER INFORMATION

Special Programs Overseas
The Department of World Languages, in cooperation with the USF World, offers several study programs overseas. These include study in several locations in France and Canada. For complete details, contact the graduate advisors or USF World.

COURSES
See http://www.ugs.usf.edu/course-inventory/
FRENCH
AND LINGUISTICS: ENGLISH AS A SECOND LANGUAGE

Concurrent Degrees:
Master of Arts (M.A.)/Master of Arts (M.A.) Degrees

DEGREE INFORMATION

Refer to individual Majors for deadlines

International applicant deadlines: http://www.grad.usf.edu/majors

Minimum Total Hours: 36 (ESL), 33 (FRE)
Level: Masters
CIP Codes: 16.0102, 16.0901
Dept. Codes: WLE
Major/College Codes: ESL/AS, FRE/AS

CONTACT INFORMATION

Colleges: Arts and Sciences
Department: World Languages
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

This is a concurrent degree between the MA in Linguistics: ESL and the MA in French. Students will need to meet the admissions requirements for each individual major to qualify for the concurrent degree option. Also, students will need to complete all curriculum requirements for both majors, including both sets of comprehensive/exit exams.

Major Research Areas:
Individual differences, Corpus linguistics, Second language phonology, Second language writing, Second Language Acquisition, Discourse Analysis, and second language learning and teaching. French language, Cultural studies, Film, Literature, and Linguistics

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements specified in the Catalog list for each major.

CURRICULUM REQUIREMENTS

For specific information on the requirements for the major, please refer the Catalog listing for that major.

M.A. in Linguistics: English as a Second Language (ESL) – total minimum hours: 36
M.A. in French – total minimum hours: 33
Total hours: 69, with 9 shared. Total combined: 60 credit hours

Shared Courses: The following courses are approved to be shared with both majors:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSL 5371</td>
<td>3</td>
<td>Methods of Teaching English as a Second Language – (required for Linguistics; elective for French)</td>
</tr>
<tr>
<td>LIN 5700</td>
<td>3</td>
<td>Applied Linguistics – (required for Linguistics; elective for French)</td>
</tr>
<tr>
<td>FRW 5829</td>
<td>3</td>
<td>An Introduction to Modern French Literary Criticism – (required for French; elective for Linguistics)</td>
</tr>
</tbody>
</table>

For all other curriculum requirements, including Thesis/non-Thesis, Internship, Comprehensive Examination, etc., refer to the Catalog listing for that major.
GEOGRAPHY

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15 (GA Application)

Fall Admission Only

Minimum Total Hours:
30 Thesis Option
36 Non-Thesis Option

Level: Masters

CIP Code: 45.0701
Dept. Code: GPY
Major/College Codes: GPY AS
Approved: 1970

Concentrations:
Human Geography (USG)
Environmental Geography (EVG)
Geographic Information Science & Spatial Analysis (TGP)

CONTACT INFORMATION

College: Arts and Sciences
Department: Geography, Environment, and Planning
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

Geography is the study of the human-environment relationship either in a global or more regional context.

Human Geography studies the construction of space, place, and power. It encompasses the study of economic geographies (e.g. globalization and development), political geographies (e.g. geopolitical struggles and new social movements), and social and cultural geographies (e.g. identities and exclusions). Human geography is key to providing insights into contemporary spatial arrangements, including the role of cities within the global economy, locating urban-rural intersections in the production of uneven development, and how class, gender, and race shape struggles for social justice.

Environmental Geography links the study of nature and society and considers the ways in which conventional divisions between human and non-human (natural) worlds are bridged through the production of socio-natures. This understanding is crucial to explaining and ameliorating contemporary environmental problems, including the privatization of natural resources, inequalities in access to food and water, injustices associated with environmental hazards and undesirable land uses, and the role of human activities in spurring large-scale environmental change.

GI Science and Spatial Analysis concentrates on the use of advanced geospatial technologies, and the development and use of spatial analysis methodologies, to applied research problems in human and environmental geography. A thorough understanding of such geospatial technologies as Remote Sensing, GIS, and GPS, as well as modern methods of spatial statistical analysis and emerging spatial analytical techniques such as agent-based modeling, is a critical aspect of developing appropriate approaches to the analysis of geographic data.

http://www.cas.usf.edu/
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- At least two letters of recommendation,
- transcripts,
- A letter of intent, and
- A graduate assistant application if the applicant is applying for a GA position.
- GRE is required.
- BA with 3.0 GPA

CURRICULUM REQUIREMENTS

The Department of Geography, Environment, and Planning offers a Masters of Arts (M.A.) in Geography with a thesis and non-thesis option. Students must complete a minimum of 30 semester hours of graduate level course work for the thesis option and 36 hours for the non-thesis option.

Core Requirements 9 hours

**Required Core Courses (9 Hours)**

All students must take the following core courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO 6058</td>
<td>Geographic Literature and History</td>
<td>3</td>
</tr>
<tr>
<td>GEO 6116</td>
<td>Perspectives in Environmental Thought</td>
<td>3</td>
</tr>
</tbody>
</table>

Based upon the student’s area of interest, he/she must take one course from the following Quantitative or Qualitative course offerings:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO 6166</td>
<td>Multivariate Statistical Analysis</td>
<td>3</td>
</tr>
<tr>
<td>GEO 6119</td>
<td>Geographical Techniques and Methodology: Qualitative Research Methods</td>
<td>3</td>
</tr>
</tbody>
</table>

**Regional:**

Students are strongly encouraged to complete at least one of the following regional courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEA 6195</td>
<td>Seminar in Advanced Regional Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEA 6215</td>
<td>Seminar in North American Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEA 6252</td>
<td>Seminar in the Geography of the American South</td>
<td>3</td>
</tr>
<tr>
<td>GEA 6406</td>
<td>Seminar in Latin American and Caribbean Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEA 6504</td>
<td>Seminar in European Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEA 6745</td>
<td>Asian Geography Seminar</td>
<td>3</td>
</tr>
</tbody>
</table>

**Concentration Requirements**

Students specialize in one of the three concentrations (A, B, and C) that the department offers. Students must select a minimum of three courses (9 credits) from the selected concentration.

**Thesis option**

Students take six credit hours of electives at a level of 5000 or higher, keeping in mind that a minimum of ten hours is required at the 6000-level. At least one of the electives must be taken outside of the student’s concentration excluding GEO 6908, 6918, and 6944. Electives may also be selected from courses offered outside of the Department, with the consent of the student’s advisor and the graduate coordinator. A maximum of six approved hours taken outside the department can be used in the student’s major. The remaining 6 credit hours are taken as Thesis (GEO 6971). Students in the thesis option can only apply three credit hours of Internship (GEO 6944), and three credit hours of Directed Research (GEO 6918) or Independent Research (GEO 6908) toward the degree. Upon completion of a minimum of 18 hours students are required to defend a thesis proposal. Students must also complete
a thesis defense during the semester they plan to graduate, and they must be enrolled in a minimum of 2 semester hours of thesis credit during the semester in which they submit their thesis to the Office of Graduate Studies.

Non-thesis option Students complete a total of 36 hours, with 27 hours of electives completed at a level of 5000 or higher, keeping in mind that a minimum degree requirement is 16 hours at the 6000 level. Students can also take up to nine hours at the graduate level outside the department with the consent of their advisor and the Graduate Coordinator, to apply toward their major. Students can apply three credit hours of Internship (GEO 6944), three credit hours of Directed Research (GEO 6918) and/or Independent Research (GEO 6908) toward their major. Students must pass a comprehensive written examination that is administered during the semester in which they plan to graduate.

Students select one of the following concentrations:

**Human Geography**

- GEO 6058 Geographic Literature and History 3
- GEO 6428 Seminar in Advanced Human Geography 3
- GEO 6605 Contemporary Urban Issues 3
- GEO 6475 Political Geography Seminar 3
- GEO 6345 Technological Hazards and Environmental Justice 3
- GEO 6545 Economic Geography Seminar 3
- GEO 6627 Site Feasibility Analysis 3
- GEO 6704 Transportation Geography 3
- GEO 6119 Geographical Techniques and Methodology: Qualitative Research Methods 3
- GEO 6166 Multivariate Statistical Analysis 3
- GEO 7606 Seminar in Urban Environments 3
- GIS 6307 Socioeconomic Applications of GIS 3

A regional geography (GEA) course may be substituted for a course in the Human Geography concentration.

**Environmental Geography**

- GEO 6116 Perspective of Environmental Thought 3
- GEO 6345 Technological Hazards and Environmental Justice 3
- GEO 6209C Physical Geography Seminar 3
- GEO 6215 Geomorphology Seminar 3
- GEO 6217 Karst Geomorphology 3
- GEO 6255 Weather, Climate, and Society 3
- GEO 6263 Soils Seminar 3
- GEO 6286 Water Resources 3
- GEO 6288 Hydrological Systems 3
- GEO 6347 Natural Hazards 3
- GEO 6166 Multivariate Statistical Analysis 3
- GIS 6038C Advanced Remote Sensing 3
- GIS 6039 Readings in Remote Sensing 3
- GIS 6306 Environmental Applications of GIS 3
- GIS 6355 Water Resources Applications of GIS 3

**Geographic Information Science and Spatial Analysis**

- GEO 5075 Global Positioning Systems 3
- GIS 6038C Remote Sensing 3
- GIS 6039 Remote Sensing Seminar 3
- GIS 6100 Geographic Information System 3
- GIS 6103 Programming for GIS 3
- GIS 6112 Spatial Database Development 3
- GEO 6115 Field Techniques 3
- GEO 6119 Geographical Techniques and Methodology 3
- GIS 6146 GIS Seminar 3
- GEO 6166 Multivariate Statistical Analysis 3
- GIS 6306 Environmental Applications of GIS 3
GIS 6307   GIS Seminar           3
GIS 6355   Water Resources Applications of GIS 3

The same course cannot be used to satisfy both the required core and concentration course requirements.

**Comprehensive Exam**
Non-thesis students must pass a comprehensive written examination that is administered during the semester in which they plan to graduate.

**COURSES**
See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
GEOGRAPHY AND ENVIRONMENTAL SCIENCE AND POLICY

Doctor of Philosophy (Ph.D.)

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall:  February 15
Fall Admission Only

Minimum Total Hours:  60 (post-Master’s)
                     90 (post-Bachelor’s)
Level:              Doctoral
CIP Code:           45.0799
Dept. Code:         SGS
Major/College Codes: GEP AS
Approved:          2005

CONTACT INFORMATION

College:         Arts and Sciences
Departments:    School of Geosciences
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Ph.D. degree in Geography and Environmental Science and Policy is an interdisciplinary major, the curriculum of which is designed to take advantage of the School of Geoscience’s (SGS) strengths in critical areas of geography and environmental science and policy, as well as geology. Emphasis is placed on providing theoretical rigor and methodological skills enabling students to make significant and original research and policy contributions in an integrated interdisciplinary environment. In addition, the degree has a very strong applied component reflecting the School’s strong emphases in working on solutions to real-world geographical and environmental problems.

Areas of Emphasis:
Geography
Environmental Science and Policy

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- A Master’s degree, or its equivalent, from an approved regionally accredited university with preparation in geography, environmental science and policy, or a related discipline. Highly qualified applicants can enter directly into the doctoral program from a Bachelor’s degree but must complete a minimum of 90 hours prior to obtaining the Ph.D., including the required coursework in either the Geography or Environmental Science and Policy Master’s majors.

- Graduate Record Exam (GRE) taken within the last 5 years

- GPA at least 3.20 in upper division undergraduate and graduate credits

- If non-native English speaker, TOEFL score of at least 79 on internet based test or equivalent for other forms of test or IELTS (minimum score 6.5)

- Completed online application through the USF Graduate Admissions’ webpage

- A letter of intent. The letter should outline the applicant’s specific academic interests and goals and identify faculty members whose interests align with that of the applicant.

http://www.cas.usf.edu/
• Three letters of recommendation. Arrange to have letters of recommendation sent to the Office of Graduate Admissions online prior to the application deadline. Prospective students should solicit the letters of recommendation from sources who are familiar with the applicant’s academic/work history and performance. Signatures and letterheads are required for letters of recommendation.

Students Upgrading into the Doctoral Degree from the Master’s Degree
After completing a minimum of one semester of course work, an admitted master’s student may apply for the doctoral degree with the consent of his/her major professor (must be the major professor and not simply the initial advisor). When the student applies to the Ph.D. degree, the application is then reviewed by the Graduate Committee via the established application process, and recommendations are made regarding admission to the major and funding.

CURRICULUM REQUIREMENTS

Total Minimum Hours: 60 hours post-Master’s
90 hours post-Bachelor’s

Post-Bachelor’s (Bachelor’s to Ph.D.) (90 minimum hours)
Core Requirements - 12 hours
Electives - 66 hours
Dissertation – 12 hours

Post-Master’s (60 minimum hours)
Core Requirements - 12 hours
Electives - 36 hours
Dissertation – 12 hours

Core Requirements (12 credits)
All students must complete the following courses:
EVR 7021 3 Doctoral Dissertation Preparation
GEO 7606 3 Seminar in Urban and Natural Environments
GEO 6116 3 Perspectives in Environmental Thought
Or
GEO 6058 3 Geographic Literature and History

One of these methods courses:
GIS 6100 3 Geographic Information Systems
GIS 6038 3 Advance Remote Sensing
GEO 6119 3 Qualitative Research Methods
GEO 6166 3 Multivariate Statistical Analysis

Electives - 36 credits (post-Master’s); 66 credits (post-Bachelor’s)
Students complete 36 (post-master’s) or 66 (post-bachelor’s) credit hours in the form of elective coursework related to their area of interest. A Minimum of nine (9) structured credit hours is required for students with a master’s degree. Students entering the Ph.D. who have not completed a Master’s Degree in either Geography or Environmental Science and Policy should expect to complete coursework equivalent to the requirements of one of those Masters, in addition to these nine (9) minimum structured credit hours. The student’s Major Professor and Faculty Supervisory Committee will advise students on the selection of the proper mix of coursework and other study to support the agreed upon dissertation research. Students can include coursework from a variety of departments to support the elective requirements, and students may choose to complete a Graduate Certificate in a particular field, from GEP or another department, as part of their studies.

EVR 6101 Geomorphology for Environmental Scientists
EVR 6216 Advances in Water Policy and Management
EVR 6320 Environmental Management
EVR 6408 Wildlife Ecology
EVR 6922 EPS Capstone seminar
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVR 6936</td>
<td>Seminar in Environmental Science</td>
</tr>
<tr>
<td>EVR 6937</td>
<td>Seminar in Environmental Policy</td>
</tr>
<tr>
<td>GEA 6195</td>
<td>Seminar in Advanced Regional Geography</td>
</tr>
<tr>
<td>GEA 6215</td>
<td>Seminar in North American Geography</td>
</tr>
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<td>GEA 6252</td>
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<td>Seminar in European Geography</td>
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<tr>
<td>GEA 6745</td>
<td>Asian Geography Seminar</td>
</tr>
<tr>
<td>GEO 6115</td>
<td>Field Techniques</td>
</tr>
<tr>
<td>GEO 6209</td>
<td>Physical Geography Seminar</td>
</tr>
<tr>
<td>GEO 6215</td>
<td>Geomorphology Seminar</td>
</tr>
<tr>
<td>GEO 6217</td>
<td>Karst Geomorphology</td>
</tr>
<tr>
<td>GEO 6255</td>
<td>Weather, Climate, and Society</td>
</tr>
<tr>
<td>GEO 6263</td>
<td>Soils Seminar</td>
</tr>
<tr>
<td>GEO 6286</td>
<td>Advances in Water Resources</td>
</tr>
<tr>
<td>GEO 6288</td>
<td>Hydrological Systems</td>
</tr>
<tr>
<td>GEO 6347</td>
<td>Natural Hazards</td>
</tr>
<tr>
<td>GEO 6345</td>
<td>Technological Hazards and Environmental Justice</td>
</tr>
<tr>
<td>GEO 6428</td>
<td>Seminar in Advanced Human Geography</td>
</tr>
<tr>
<td>GEO 6475</td>
<td>Political Geography Seminar</td>
</tr>
<tr>
<td>GEO 6545</td>
<td>Economic Geography Seminar</td>
</tr>
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<td>GEO 6605</td>
<td>Contemporary Urban Issues</td>
</tr>
<tr>
<td>GEO 6627</td>
<td>Site Feasibility Analysis</td>
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<tr>
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<td>CWR 6305</td>
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<tr>
<td>URP 6232</td>
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Doctoral Qualifying Exam
As soon as the substantial majority of the course work is completed, the student must pass a written qualifying examination covering the subject matter in the major and related fields. This examination may be supplemented by an oral examination. Students must be enrolled for a minimum of two (2) hours of graduate credit in their discipline at the time they take the qualifying examination. If the exam is taken between semesters, students must be enrolled for a minimum of two (2) hours of graduate credit in the semester before or following the exam.

Dissertation hour requirement and directed research (12 Credit hours)
Directed Research hours shall not exceed 50% of the doctoral dissertation hour requirement. Directed research hours cannot retroactively be converted to dissertation hours.

- EVR 7980  Doctoral Dissertation
- GEO 7980  Doctoral Dissertation
- GEO 6918  Directed Research

Other Requirements and Information:

Advising
When a student is admitted to the Major, the student, with the assistance of the Graduate Director, will have an initial advisor based upon mutual interests of the student and faculty member. The role of the advisor is to guide the student in selecting appropriate coursework for his/her program of study and to work with the student in developing research ideas and an eventual dissertation topic. In consultation with his/her advisor, the student will select a committee that will serve not only as the student’s dissertation committee, but as the qualifying exam committee as well (See procedures for Academic Progress for SGS Ph.D. students).

Policy for Taking Graduate Courses outside USF and the Tampa campus
Graduate courses offered at other universities or other USF campuses can have a different focus than those offered on the USF Tampa campus. Students must get approval from their advisors and the Graduate Director prior to taking any outside courses to verify that these courses will count toward their degrees. Additionally, only faculty at the School of Geosciences Tampa campus can serve as the major professor/advisor for graduate students enrolled on the Tampa campus.

COURSES
See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
GEOLOGY

Master of Science (M.S.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15
Spring: October 15*

*Spring admission only

For students entering the Professional Science Master’s Degree option

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 30
Level: Masters
CIP Code: 40.0601
Dept. Code: GLY
Major/College Codes: GLY AS
Approved: 1976

CONTACT INFORMATION

College: Arts and Sciences
Department: Geology

Contact Information: www.grad.usf.edu

*Deadline for students seeking assistantship/fellowship support is one month earlier. Foreign student applicants should provide their materials as early as is feasible to permit time to meet immigration and visa requirements if admitted.

MAJOR INFORMATION

Geology incorporates the fundamentals of biology, chemistry, mathematics, and physics to study the earth and the processes that affect our planet.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- 3 letters of recommendation,
- personal statement,
- listing of previous coursework,
- transcripts, and
- GRE required, but no minimum specified.

CURRICULUM REQUIREMENTS

Total Minimum Hours: 30 hours
Core Requirements: 24 hours

Structured coursework, of which at least ten hours must be at 6000 level, selected with the advisor from the following list, or other course as approved by the Graduate Director:

GLY 5786 Geological Field Excursion 2
GLY 5865 Statistical Models in Geology 3
GLY 5932 Selected Topics in Geology 1-4
GLY 6075 Greenhouse-Icehouse Earth 3
GLY 6156 Geology of North America 2
GLY 6246 General Geochemistry 3
GLY 6248 Sedimentary Geochemistry 3

http://www.cas.usf.edu/
COURSES

See http://www.ugs.usf.edu/course-inventory/
GEOLOGY

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15
Spring: October 15
Summer: February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 60 (post-master’s)
90 (post-bachelor’s)

Program Level: Doctoral
CIP Code: 40.0601
Dept. Code: GLY
Program (Major/College): GLY AS
Approved: 1976

CONTACT INFORMATION

College: Arts and Sciences
Department: Geology
Contact Information: www.grad.usf.edu

*Deadline for students seeking assistantship/fellowship support is one month earlier. Foreign student applicants should provide their materials as early as is feasible to permit time to meet immigration and visa requirements if admitted.

MAJOR INFORMATION

Geology incorporates the fundamentals of biology, chemistry, mathematics, and physics to study the earth and the processes that affect our planet.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- 3 letters of recommendation,
- personal statement,
- listing of previous coursework,
- transcripts, and
- GRE is required, but no minimum specified.

CURRICULUM REQUIREMENTS

Total Minimum Hours: 60 hours post master’s
90 hours post bachelors

Post-Master’s
Core requirements 15 hours
Structured coursework, of which at least fifteen hours must be at 6000 level, selected with the advisor from the following list, or other graduate course as approved by the Graduate Director:

GLY 5752 (GLY 5786 as of Jan 2017) 2
GLY 5865 Statistical Models in Geology
GLY 5932 Selected Topics in Geology
GLY 6075 Greenhouse-Icehouse Earth

Geological Field Excursion 3

1-4
3

http://www.cas.usf.edu/
GLY 6156  Geology of North America  2
GLY 6246  General Geochemistry  3
GLY 6248  Sedimentary Geochemistry  3
GLY 6255  Tracer Geochemistry  3
GLY 6285C  Analytical Techniques in Geology  3
GLY 6345  Sedimentary Petrography  3
GLY 6395C  Topics in Igneous and Metamorphic Petrology  2-4
GLY 6424  Global Tectonics  2
GLY 6475C  Principles of Applied Geophysics  4
GLY 6492  Hydrogeology Internship Project  3
GLY 6573  Fluvial Hydrology and Geomorphology  3
GLY 6575C  Coastal Sedimentation  3
GLY 6739  Selected Topics in Geology  1-4
GLY 6824  Ecohydrology  3
GLY 6827C  Advanced Hydrogeology  4
GLY 6828  Ground-Water Geochemistry  3
GLY 6836  Numerical Modeling of Hydrogeologic Systems  3
GLY 6905  Independent Study  1-19

Other Course Requirements  33 hours
Determined at the discretion of the student’s committee
May include GLY 7912 Directed Research

Qualifying Exam and Admission to Candidacy
Admission to candidacy will be based on the results of a general examination administered by the student’s committee. The format of the exam will be determined by the committee at least one week prior to the onset of the examination. Normally, it will consist of a written section or sections, followed by an oral examination chaired by the student’s research advisor. After admission to candidacy, all doctoral students will make at least one formal presentation of their research prior to graduation. Any appropriate venue is acceptable, e.g., Dept. colloquium, oral or poster sessions at a scientific meeting of at least regional scope.

General examinations and presentations of dissertation proposals should be completed no later than the end of the second year in the doctoral major or at the time determined by the student’s committee. The examining and dissertation committees are the same and will be comprised of no less than five members, at least three of which must be USF faculty, and at least one member from outside the department.

Dissertation  12 hours
GLY 7980 Dissertation

Other Information
A minimum of 90 credit hours will be required for students pursuing a Ph.D. degree from a B.S. degree. This includes any graduate credits earned prior to admission to the doctoral major. Compared to the requirements starting from a M.S. degree as described in the paragraph below, 30 additional credit hours are required for students starting from a B.S. degree. Students are recommended to satisfy the requirements similar to that of a MS degree during the first two years of the Ph.D. study.

All doctoral students must maintain good standing in the Office of Graduate Studies (overall GPA =3.0) and maintain satisfactory academic progress toward the degree. Any student who receives a C in a structured course will be placed on academic probation. This probation can be terminated by achieving grades of B or higher in the subsequent semester of full-time enrollment. If a second grade of C is received, the student is terminated from the doctoral major. Only courses in which the student receives at least a B may be counted toward the structured-course requirement. There is also a requirement that Ph.D. students have at least two semesters of full-time residence. While meeting the residency requirements, candidates must be full-time students in good academic standing.

COURSES
See http://www.ups.usf.edu/course-inventory/
GOVERNMENT

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: January 5
Fall admissions only

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 72-hours post-bachelors
Level: Doctoral
CIP Code: 45.0901
Dept. Code: IGS
Major/College Codes: GOV AS
Approved: 2009

CONTACT INFORMATION

College: Arts and Sciences
Department: School of Interdisciplinary Global Studies (SIGS)
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

Contact department for information.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

Students apply for admission directly into the Ph.D.. Those who are interested in first earning a Master’s in Political Science need to apply to that major separately.

Applicants must submit
• a completed application,
• 2 official transcripts from their undergraduate or graduate institutions,
• GRE Required
• 3 letters of recommendation (from academic sources or from those able to judge the applicant’s academic abilities),
• a 500 word personal statement expressing reasons for pursuing a Ph.D. in Government at the University of South Florida, and
• a writing sample

A Master’s degree in Political Science, Public Administration, International Studies, or a related field will count favorably towards admission, but it is not a requirement for admission.
CURRICULUM REQUIREMENTS

Total Minimum hours - 72 credit hours post-bachelor’s

Core – 6 hours
Disciplinary Requirements – 9 hours
Methods – 9 hours
Major Field – 9 hours
Minor Field – 6 hours
Electives – 9 hours
Teacher Training – 3 hours
Capstone – 3 hours
Dissertation – 18 hours

Core Requirements - 6 credit hours
POS 6735 3 Foundations of Political Inquiry
POS 6933 3 Selected Topics in Political Science: Interdisciplinary Professional Seminar

Disciplinary Requirements - 9 credit hours
Select three of the following:
POS 6045 3 Seminar in American Government
POT 6007 3 Seminar in Political Theory
INR 6007 3 Seminar in International Relations
CPO 6091 3 Seminar in Comparative Politics

Methods Requirements - 9 credit hours
POS 6746 3 Quantitative Analysis I
POS 6707 3 Qualitative Analysis

Select one of the following:
POS 6933/6747 3 Advanced Topics in Quantitative Political Analysis
POS 6942 3 Field Work in Political Science & Public Admin
AFA 6355 3 African American Community Research: Ethnography
Or other graduate course approved by the Graduate Director

Major Field - 9 credit hours
The options for major field are International Relations, Comparative Politics, American Government and Political Theory. With graduate committee approval, students will be encouraged to take courses in other disciplines.

Minor Field - 6 credit hours
The options for minor field are International Relations, Comparative Politics, American Government and Political Theory. With graduate committee approval, students will be encouraged to take courses in other disciplines.

Electives - 9 credit hours
Students will enhance their major or minor areas of specialization with a three credit hour course
With graduate committee approval, students will be encouraged to take courses in other disciplines.

Students Teacher Training Requirement - 3 credit hours
POS 6933 Selected Topics in Political Science

Foreign Language
All students must demonstrate competency in at least one foreign language. Students must pass the competency exam administrated by the World Language Education Department. Additionally, students, whose research focuses on a particular area of the world, must be proficient in language(s) native to that region.
Comprehensive Exam
All students must pass a comprehensive examination, consisting of two separate exams, to be administered on consecutive days, one in their major field and one in their minor field. Major Field exams will be limited to 8 hours and minor field examinations will be limited to 6 hours. A standing committee of faculty members composes and grades those exams.

Selected Topics/Capstone - 3 credit hours
POS 6933 3 Selected Topics in Political Science

Dissertation Proposal – Capstone Interdisciplinary Seminar
Students will enroll in POS 6933 as their Capstone Interdisciplinary Seminar. During the Seminar, students develop their dissertation proposals. Students must present their dissertation proposal to their dissertation committee and obtain consent from all committee members before proceeding to the dissertation work.

Dissertation - 18 credit hours
POS 7980 18 Dissertation
Students must present their dissertation at an oral defense, and their committees determine whether the student passed. Finally, students must submit written copies of their dissertation with signature of their committee members. All dissertations must conform to University of South Florida format rules.

COURSES
See http://www.ugs.usf.edu/course-inventory/
HISTORY

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: December 1
Fall admission only

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 30
Level: Masters
CIP Code: 54.0101
Dept. Code: HTY
Major/College Codes: HTY AS
Approved: 1969

Concentrations:
American History (AHY)
Ancient History (AHS)
European History (EHS)
Latin American History (LAH)
Medieval History (MHS)

CONTACT INFORMATION

College: Arts and Sciences
Department: History
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Department of History offers the M.A. degree. Members of the graduate faculty in History have earned recognition as teachers, scholars, and contributors to the community. The Department offers a Master of Arts degree organized around the following fields:

Field 1: American History to 1877
Field 2: American History since 1877
Field 3: Ancient History
Field 4: Medieval History
Field 5: Early Modern Worlds
Field 6: Modern Europe since 1789
Field 7: Latin America

Across these fields, students can request, in consultation with their major professor, concentrations organized thematically or geographically.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- GPA of at least 3.00
- GRE Scores of at least 160 (85th percentile) Verbal, 144 (18th percentile) Quantitative, and 4.5 (80th percentile) in writing. Only current scores within the last 5 years will be accepted.
- **Letters of Recommendation:** Two letters of recommendation on behalf of the applicant are required. These letters should come from academic sources familiar with the quality of the applicant’s college-level work and indicate his/her graduate program potential. Once the online application is completed, requests for recommendations will be emailed to recommenders.

- **Statement of Purpose:** A two-page statement is required that delineates historical and intellectual areas of interest, proposed fields of study, educational and professional goals, the faculty with whom the applicant is potentially interested in working, and why the applicant sees him/herself as a good fit with our program.

- **Writing Sample:** A sample of written work which indicates the applicant’s ability to write effectively and preferably, to conduct historical research and analysis must be submitted. The sample should be approximately 15 pages in length. Appropriate examples include a term paper, research paper, or thesis chapter.

A B.A. in History is preferred. The Department will consider applicants without a recent background in undergraduate history, but they may be required to complete Theory of History (HIS 4104) as well as some upper division and/or graduate level courses in relevant fields with a grade of “B” or higher. These will be determined in consultation with the Graduate Director or Major Professor.

**CURRICULUM REQUIREMENTS**

Total Minimum Hours: 30
Core Course – 3 hours
Concentrations – 21 hours
Thesis/non-thesis – 6 hours

**Core Course Requirement (3 hours)**
HIS 6112  3  Analysis of Historical Knowledge

**Concentrations (21 hours)**
Students may select from the following Concentration areas:

- American History (AHY)
- Ancient History (AHS)
- European History (EHS)
- Latin American History (LAH)
- Medieval History (MHS)

Students complete coursework for the Major and Minor fields, in the concentration they choose.

**Major Field (15 hours – any combination of the following):**
- HIS 6939  3  Seminar in History
- HIS 6925  3  Colloquium in History

**Minor Field (6 hours – any combination of the following)**
- HIS 6939  3  Seminar in History
- HIS 6925  3  Colloquium in History

**Other Requirements**
Of the 30 hours required for the Master of Arts, at least 20 must be in formal, regularly scheduled course work. A minimum of 16 must be at the 6000 level. Subject to the satisfaction of above requirements, courses at the 5000 level are acceptable as part of a planned degree program. Students may take a maximum of 6 hours in HIS 6914 Directed Research and/or HIS 6908 Independent Study and a maximum of 6 hours in HIS 6925 Colloquia.

After beginning course work, M.A. students select an advisor in their anticipated major field of study. Students arrange their programs and schedules of appropriate courses with their major professor. Additionally, the student in consultation with the major professor asks on or two other members (normally one from the major and one from the minor fields) to serve...
on a supervisory committee. The student is required to have completed successfully at least 3 credits of course work with each member of his/her committee. Students with two unresolved “Incomplete” grades (of any credit total) will not be permitted to register for additional history courses until at least one “Incomplete” grade is resolved.

Students may opt to do either a thesis or non-thesis tract.

**Thesis (6 hours)**

HIS 6971 6 Thesis

**Non-Thesis (6 hours)**

Any combination that totals six hours:

- HIS 6939 3 Seminar in History
- HIS 6925 3 Colloquium in History
- HIS 6914 3 Directed Research
- HIS 6908 3 Independent Study

**Comprehensive Examinations:**

A six-hour written comprehensive examination will consist of answering two questions in a major field and one in a minor field. In addition, at the discretion of the committee, an oral examination may be administered. The examination questions and student answers will form part of the student’s Department file. A student must have no “Incomplete” grades and be enrolled for a minimum of two (2) hours during the term the comprehensive examination is taken.

**Language Requirements:**

M.A. students must demonstrate a reading proficiency in one foreign language most applicable to a student’s field of research (as determined by the Major Professor). The language requirement will be fulfilled in one of two ways:

1) A two-hour examination administrated by the Department. The student will be expected to translate satisfactorily a 500-word passage, with the assistance of a dictionary.

2) With the approval of the major professor, the student may take two semesters of an intermediate level foreign language. In order to fulfill the foreign language requirement, the student must receive a “B” or above in each semester’s course. Those students who have met these requirements as an undergraduate may have the language requirement waived by petitioning the Graduate Committee.

Students with a major field in American History and with a thesis topic that does not require the use of a foreign language may substitute quantitative methods for the language requirements. The quantitative methods option will be fulfilled by successful completion with a grade of at least “B” in one of the following courses:

- ANG 5486 3 Quantitative Methods in Anthropology
- EDF 6407 4 Statistical Analysis in Educational Research
- POS 6736 3 Political Research Methods
- MAT 5932 3 Selected Topics

**Graduation and Master’s Thesis:**

- A satisfactory performance in the core course, two fields, and the completion of a comprehensive examination are required of all M.A. students for graduation.
- In order to graduate, a student must apply for graduation through OASIS using their Net ID and self-assigned password by the deadline noted in the Academic Calendar for the term during which graduation is anticipated.
- Students selecting the thesis option must follow the final submission process in the Office of Graduate Studies to be considered for graduation. For information refer to the Office of Graduate Studies website [www.grad.usf.edu](http://www.grad.usf.edu)
- Students may not participate in commencement unless all requirements have been satisfactorily completed.
- All requirements for master’s degrees must be completed within five (5) calendar years from the student’s date of admission for graduate study.

**COURSES** See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
HISTORY

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: December 1
Fall admission only

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours:
72 (post-bachelor’s)
42 (post-masters)

Level:
Doctoral

CIP Code:
54.0101

Dept. Code:
HTY

Major/College Codes:
HTY AS

Approved:
2009

CONTACT INFORMATION

College: Arts and Sciences
Department: History
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The History Department’s nationally and internationally recognized faculty creates a dynamic learning environment that fosters close interaction between students and professors. Our Ph.D. features an innovative model of doctoral education designed to insure broad interdisciplinary connection with related disciplines. We pride ourselves on training students to be scholars and teachers at all levels of education, while also offering preparation for careers outside academia in government agencies, historical societies, libraries and museums. The addition of training and internship opportunities in digital humanities is also designed to introduce students to tech industries as well.

Our faculty have expertise in a wide range of period, regional, and thematic specializations. Students may organize their major and minor fields around traditional chronological and regional specialties such as Ancient, Medieval, and Early Modern Worlds; Colonial through Modern U.S.; Latin America; and Modern Europe, but they may also build their fields around themes in such areas as digital humanities, gender and sexuality, race and ethnicity, regional history, science and medicine, comparative empires, and public history.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- Graduate Coursework and Grade Point Average: Applicants must have completed at least 18 hours of graduate credit before entering the Ph.D. and should have earned at least a 3.50 in their history courses as demonstrated by official transcripts.

- Letters of Recommendation: Applicant must solicit three letters of recommendation on his/her behalf. These letters should come from academic sources familiar with the quality of the applicant’s scholarly work and indicate his/her doctoral major potential. The online application must be completed before the system will send requests to submit to recommenders.
• **Statement of Purpose:** The applicant must submit a statement that indicates his/her historical and intellectual areas of interest, outline proposed fields of study, educational and professional goals, names the faculty with whom the applicant is potentially interested in working, and explains why the applicant sees him/herself as a good fit with our major.

• **Sample of Writing:** Applicants must submit a sample of written work that indicates the applicant’s ability to conduct primary source based research and to write effectively. The sample may include a publication, seminar paper, or a thesis chapter but ought not be longer than 30 pages.

• **Language:** Applicants will provide evidence of proficiency in the foreign language(s) of their primary field of study.

**Students Advancing directly into the Doctoral Program from the Master’s Degree Program**

After completing a minimum of 18 graduate hours, an admitted MA student may apply for the doctoral major with the consent of his/her major professor (must be the major professor and not simply the initial advisor). The standard University application process and fees apply. When the student applies to the Ph.D., the application is then reviewed by the Graduate Committee via the established application process, and recommendations are made regarding admission to the major and funding.

**CURRICULUM REQUIREMENTS**

Total Minimum Hours: 72 -post-baccalaureate (42 hours post-masters)

Core Requirements – 6 hours
Major and Minor Fields – 39 hours
Capstone – 3 hours
Dissertation – 18 hours

**Plan of Study**

In addition to the general requirements of the University as explained in the USF Graduate Catalog, a candidate is required to complete a total of 72 post-baccalaureate credit hours. The following distribution assumes that the applicant has already earned an MA or completed 30 credit hours of post-baccalaureate coursework. Up to 30 hours of M.A. level work may may be counted towards the total 54 hours of required coursework. Students must petition the Graduate Director for an MA level course audit to determine which courses will be counted against the 54 hours. These 30 hours must be from structured coursework and students must have earned at least a 3.0 in each. Adjustments will be made for MA students who have not yet finished their degrees:

**Core Requirements – 6 hours**

HIS 7937 Interdisciplinary Ph.D. Pro-Seminar 3 hours
This course is as an Introduction to the interdisciplinary nature of this unique Ph.D., and will offer new students to the History major the opportunity to engage with their colleagues in Government and International Affairs and Sociology. This Pro-Seminar is organized around one common theme and focuses on the methodologies and theories of these related disciplines to educate students as to the complementary aspects of these fields.

HIS 6112 Analysis of Historical Knowledge 3 hours
*Analysis of Historical Knowledge* examines both the theories behind and the practical methodological approaches in historical research. If a student has satisfactorily completed HIS 6112 Analysis of Historical Knowledge before admission into the Ph.D., it will be waived. If the student has taken a similar course elsewhere, this requirement may be waived subject to the approval of the Graduate Director.

**Major and Minor Field Studies – 39 hours**

Students will complete at least five courses devoted to their major and minor fields of study. A student must have a minimum of six (6) History credit hours in her major historical field and 3 in her minor. The remaining 3-6 hours may be filled by either by the HIS 7289 Seminar in Comparative Studies course or with 6000 or 7000 level courses from outside the Department, or by a combination of these courses. The electives must be selected in consultation with the student’s Major Professor and approved by the Graduate Director.
Major Field Studies: 24 credit hours in the following variable topic courses that pertain to the student’s major:
- HIS 6935 Graduate Reading Seminar in History 3 hours
- HIS 6939 Seminar in History 3 hours
- HIS 7939 Selected Topics for Doctoral Students 3 hours

Minor Field Studies: 15 credit hours in the following variable topic courses that pertain to the student’s minor:
- HIS 6935 Graduate Reading Seminar in History 3 hours
- HIS 6939 Seminar in History 3 hours
- HIS 7939 Selected Topics for Doctoral Students 3 hours

Electives: 6 hours of any combination of the following.
- XXX XXXX Graduate level elective 3 hours
  This course must not be offered by History department and should be selected in conjunction with Major Professor and approved by the Graduate Director. The interdisciplinary elective must in some way pertain to the student’s major or minor field.
- HIS 7289 Seminar in Comparative Studies 3 hours
  This course compares issues such as globalization, imperialism, identity, urbanization, etc. as expressed through a range of historical period and regions.

HIS 7938 Ph.D. Capstone Seminar 3 hours

Students in this course will develop their dissertation prospectus in consultation with their Major Professor. History, School of Interdisciplinary Global Studies and Sociology faculty members will take turns teaching the course each year.

Language Requirement for Ph.D. Students

Students must demonstrate proficiency in their primary language of research by the end of the first year of study. In fields where more than one language is required, students must complete their language exams before they can take the comprehensive exam. Language requirements must be fulfilled before students can progress to the dissertation stage. Written examinations to test a student’s language proficiency will be administered either by the History Department or through the USF Dept. of World Languages. The precise format of the exam and the level of language competency needed to pass will be determined in each case by the student’s advisor.

<table>
<thead>
<tr>
<th>Field</th>
<th>Language(s) Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ancient</td>
<td>Classical Greek, Classical Latin, French, and German</td>
</tr>
<tr>
<td>Byzantine</td>
<td>Byzantine Greek, Latin, French, and German</td>
</tr>
<tr>
<td>Early Modern Europe</td>
<td>Primary European language of research plus one additional European language (Latin may be required in some cases)</td>
</tr>
<tr>
<td>Modern Europe</td>
<td>Primary European language of research plus on additional European languages</td>
</tr>
<tr>
<td>Latin America</td>
<td>Spanish and Portuguese</td>
</tr>
<tr>
<td>Medieval Europe</td>
<td>Medieval Latin, plus two additional European languages</td>
</tr>
<tr>
<td>Middle East</td>
<td>Primary Middle Eastern language of research plus one additional language</td>
</tr>
<tr>
<td>United States</td>
<td>Foreign language most pertinent to research agenda</td>
</tr>
</tbody>
</table>

With the approval of their Major Professor, students may fulfill their foreign language with the successful completion (a “B” or above) in a quantitative methods course. This course will not count towards the required 54 hours of coursework. Any one of the following courses will satisfy the requirement.

- ANG 5486 Quantitative Methods in Anthropology 3 hours
- EDF 6407 Statistical Analysis in Educational Research 4 hours
- LIN 7639 Quantitative Methods in Applied Linguistics 3 hours
- POS 6736 Political Research Methods 3 hours
- MAT 5932 Selected Topics 3 hours

Or other graduate course approved by Graduate Director

Comprehensive Exam
- Before taking comprehensive exams, student must have completed a majority of their coursework.
• Exams will be conducted by the student’s Supervisory Committee. The oral exams shall be taken within one week after the written exams have been completed. Exams may be retaken once if necessary.

Dissertation Proposal
Students must complete an oral dissertation defense with the members of the dissertation committee. Dissertation committees must be composed of a minimum of four faculty members, one of whom may be drawn from an academic institution other than USF. Faculty from fields other than History may serve on dissertation committees upon approval of the Graduate Director.

Dissertation – 18 credit hours
HIS 7980 18 Dissertation Writing Hours

These hours are intended to give students the opportunity to work closely with their dissertation committee and focus on research, writing, and revision.

Timeframe
All requirements must be completed within the university-mandated time frame after admission to the Ph.D.

COURSES

See http://www.ugs.usf.edu/course-inventory/
INTEGRATIVE BIOLOGY

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
- Fall: November 30
- Spring: July 1
- Summer: No Admission

Minimum Total Hours: 90
Level: Doctoral
CIP Code: 26.1399
Dept Code: BIO
Major/College Codes: IBO AS
Approved: 2014

Concentrations:
- Ecology and Evolution (EEV)
- Environmental and Ecological Microbiology (EVM)
- Physiology and Morphology (PMY)

CONTACT INFORMATION

College: Arts and Sciences
Department: Integrated Biology (IB)
Contact Information: www.grad.usf.edu

International applicant deadlines:
http://www.grad.usf.edu/majors

MAJOR INFORMATION

Major Research Areas: Ecology and Evolution, Environmental and Ecological Microbiology, and Physiology and Morphology,

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- It is expected that candidates for the Ph.D. degree will have completed courses equivalent to those required for the B.S. in Biology at U.S.F.
- 3.00 GPA last 60 hours of B.S. degree.
- GRE: 70%V, 70%Q, 70% AW
- Acceptance by a faculty member in the Department of Integrative Biology is mandatory. Students are expected to contact faculty via email to indicate an interest in the research being conducted in their laboratory. The Department will make every effort to pair potential graduate students with appropriate faculty.
- All international students are required to submit the TOEFL test. Non-native English speaking graduate students must score a minimum of at least 570 on the paper based or a minimum total score of 88 on the internet-based test TOEFL and at least 50 on the TSE to be eligible for a teaching assistantship.
CURRICULUM REQUIREMENTS

Total Minimum Hours 90 hours post-bacc

The graduate student, major professor and Graduate Committee will establish the specific course requirement for each graduate student. Every graduate student must satisfy minimum course requirements. The Graduate Committee consists of four individuals; three must be members of the Integrative Biology Department.

Core Requirements 8 hours
PCB 6456C Biometry I 4
BSC 6932 Lectures in Contemporary Biology (1) – take 4 times 4
  Enrollment in this course is required during four semesters of residency

Additional Structured Coursework 6 hours
An additional six hours of structured coursework is required. The structured courses are listed below for each of the three concentrations. The Major Professor and Graduate Committee may approve courses from outside the Department to satisfy this requirement. Doctoral students typically will take 20-25 semester hours of coursework selected from the lists of courses presented below. The remainder of the required 90 hours is obtained through research credits.

Concentrations
Students select from one of the following Concentrations:

ECOLOGY AND EVOLUTION (EEV)
A minimum of two courses selected from the list below for a minimum of 6 credit hours.

  Any course approved by the Graduate Committee.
  BSC 5931 – Conservation Biology 3
  BOT 5185 – Marine Botany 4
  PCB 6455 – Statistical Ecology 3
  PCB 6458 – Biometry II 3
  BSC 5931 – Comparative Approaches in Evolution 3
  PCB 6426 – Population Ecology 3
  ZOO 5463 – Herpetology 4
  ZOO 5456 – Ichthyology 4
  BSC 6932 – Advances in Population Biology 1
  BSC 6932 – Advances in Ichthyology 1
  BSC 6932 – Advances in Herpetology 1
  BSC 6932 – Advanced in Marine Ecology 1
  BSC 6932 – Scientific Writing 2
  BSC 6932 – Restoration Ecology 3
  BSC 6447 - Community Ecology 3
  PCB 6933 – Seminar in Ecology (variable credit)

ENVIRONMENTAL AND ECOLOGICAL MICROBIOLOGY (EVM)
A minimum of two courses selected from the list below for a minimum of 6 credit hours.

  Any course approved by the Graduate Committee.
Integrative Biology (Ph.D.)

MCB 5206 – Public Health and Pathogenic Microbiology  3
MCB 5655 – Applied and Environmental Microbiology  3
PCB 5235 – Principles of Immunology  3
MCB 6930 – Seminar in Applied and Ecological Microbiology  1
PCB 6525 – Molecular Genetics  3
BSC 5931 – Genomics  4
PCB 6455 – Statistical Ecology  3
PCB 6458 – Biometry II  3
BSC 6932 – Scientific Writing  2
BSC 6932 – Advances in Environmental Ecology  1

**PHYSIOLOGY AND MORPHOLOGY (PMY)**

A minimum of two courses selected from the list below for a minimum of 6 credit hours.

Any course approved by the Graduate Committee.

- PCB 6458 – Biometry II  3
- BSC 6932 – Scientific Writing  2
- ZOO 5463 – Herpetology  4
- ZOO 5456 – Ichthyology  4
- ZOO 54xx – Ornithology  3
- PCB 5256 – Developmental Biology  3
- BSC 6932 – Physiological Ecology  3
- BSC 6932 – Advances in Physiology  1
- BSC 6932 – Ecomimunology  3
- BSC 5931 – Comparative Approaches in Evolution  3
- BSC 5931 – Ecological and Functional Morphology  3

**Qualifying Exam**

All students in the IB Ph.D. degree must complete a qualifying examination. Successful completion of the preliminary doctoral examination by the end of the 4th semester. The exam consists of 3 parts:

1. Dissertation proposal
2. Seminar/presentation of proposal
3. Defense of dissertation proposal

**Admission to Candidacy**

The doctoral student is eligible for admission to candidacy after completing structured course requirements, passing the qualifying examination and approval by the supervisory committee. Appropriate forms to document promotion to candidacy must be completed and to the Office of Graduate Studies. Following admission to candidacy, a student must enroll in BSC 7980 when engaged in research, data collection, or writing activities relevant to the doctoral dissertation. Advisors should assign the number of credits in this course in accordance with policy and appropriate to the demands made on faculty, staff, and University facilities, but in no event will the total number of earned dissertation credits be fewer than 16. Students not admitted to candidacy are not eligible to enroll in BSC 7980.

**Dissertation Requirement**

BSC 7980 Dissertation - 24

**Doctoral Seminar and Defense**

All doctoral students must present a public seminar to the IB Department and must be enrolled in BSC 7980, during the semester in which the seminar is given. The seminar should be a concise summary of the research completed to satisfy the requirements for the Ph.D. The seminar is open to the general public and must be announced two weeks prior to the presentation. Upon completion of the seminar, the general public will be invited to ask questions. At the discretion of the student’s graduate committee, members of the committee may continue to question the graduate student after the general public has departed the seminar room. Each student is expected to defend his/her research to the unanimous satisfaction of the graduate committee. Following the
defense, students will make any editorial modifications to the dissertation as recommended by the supervisory committee and submit the dissertation to the Office of Graduate Studies.

Dissertation
Submission of a doctoral research proposal must be approved by the Major Professor, Graduate Committee, and Graduate Director. Successful completion of the dissertation proposal, presentation of a dissertation seminar and passing the doctoral examination enables the student to become a doctoral candidate. Submission of an acceptable dissertation, presentation of the doctoral seminar (BSC 7936) and successful defense of the dissertation enable the student to obtain the Ph.D. Degree.

Other Requirements

Presentation requirement:
Two presentations, excluding the doctoral seminar and defense are required. Students are expected to present posters or oral presentations based on their dissertation research at two national/regional professional meetings. The Graduate Committee must approve the presentation.

Publication requirement:
One research paper must be submitted for publication to a refereed scientific journal by the date of the Doctoral Seminar and Defense. The paper may be sole or coauthored, but it must be based on the dissertation research. The student’s supervisory committee must approve the paper prior to submission. The Graduate Committee must approve the journal to which the paper is submitted.

COURSES
For an updated list of course offerings see: http://www.ugs.usf.edu/course-inventory/
INTELLIGENCE STUDIES

Master of Science (M.S.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: June 1
Spring: October 15
Summer: February 15

Minimum Total Hours: 36
Level: Masters
CIP Code: 11.0401
Dept Code: LIS
Major/College Codes: ILS / AS

Concentrations:
- Cyber Intelligence CYI
- Strategic Intelligence SGI

CONTACT INFORMATION

College: Arts and Sciences
Department: School of Information
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Master of Science (MS) in Intelligence Studies is an online, applied graduate major designed to train a “next generation” of information and intelligence professionals for the private and public sectors. USF’s Intelligence Studies major is built around an innovative STEM-based model for professional analytic education. The curriculum focuses primarily on developing analytic competencies, and subsequently allows students to focus on specialized subject-matter areas. The principal aim is to train problem-solvers who understand strategic concepts and analytic methodologies and can apply that knowledge to advance an organization’s interests and objectives. Graduates will be capable of developing and evaluating new knowledge; generating and analyzing courses of action; expressing clearly reasoned opinions; and communicating effectively in writing, oral presentation, and visual display.

Major Research Areas: Strategic Intelligence, Cyber Intelligence, Intelligence Analysis, Information Studies, Information Analytics, Cybersecurity

ADMISSIONS INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- 3.00 minimum undergraduate GPA
- Applicants whose native language is not English or who have not earned a degree in the United States must also submit TOEFL scores earned within two (2) years of the desired term of entry. A minimum total score of 79 on the Internet-based test or 550 on the paper-based test are required. Applications submitted with TOEFL scores that do not meet the minimum requirements will be denied. The TOEFL requirement may be waived if the applicant meets one of the following conditions:
  - Applicant’s native language is English,
  - Has scored 500 or higher on the GRE Verbal test,
  - Has earned a college degree at a U.S. institution of higher learning,
  - Has earned a college degree from an institution whose language of instruction is English (must be noted on the transcript)
  - Has scored 6.5 on International English Language Testing System (IELTS) http://www.ielts.org/
- GRE is not required
- 250-500 word essay describing academic and professional background, reasons for pursuing the degree, and professional goals pertaining to intelligence, analytics, and/or information
- Professional resume or CV
- Students applying to the Cyber Intelligence Concentration must also have technical knowledge, to include a basic understanding of:
  - Programming/coding (e.g. Python, Java, C++), computational problem solving, and of
  - major computer Operating Systems and how they function

CURRICULUM REQUIREMENTS

Minimum Hours - 36 hours

Core Requirements – 18 hours
Concentrations - 6-12 hours
Electives – 6-9 hours
Comprehensive Exam/Capstone - 3 hours
Internship – 3 hours
Courses may be taken online or on-campus, pending availability.

Core Requirements - 18 hours
LIS 6700 3 Information, Strategy, and Decision Making
LIS 5937 3 Information Analytics (using R)
LIS 5937 3 Advanced Information Retrieval
LIS 6260 3 Information Science Foundations
LIS 6937 3 Project Management
LIS 6107 3 Advanced Professional and Technical Communication for Analysts

Concentrations
Students select from the following Concentrations:

Strategic Intelligence - 6 hours
LIS 6703 3 Core Concepts in Intelligence
LIS 6702 3 Advanced Intelligence Analytic Methods (as restricted elective for “methods”)

Cyber Intelligence - 12 hours
LIS 6709 3 Cyber Intelligence
LIS 6670 3 Advanced Cyber Intelligence
LIS 6703 3 Core Concepts in Intelligence
LIS 6702 3 Advanced Intelligence Analytic Methods (as restricted elective for “methods”)

Electives - 6 to 9 hours
There is one restricted elective in analytic methods (LIS 6702). In addition to the required elective noted in the Concentrations, students in the Strategic Intelligence concentration can take an additional 6 hours of approved electives

Thesis/Non-Thesis: No thesis is required.

Comprehensive Exam - 3 hours
LIS 6906 3 Independent Study Internship (or equivalent) - Capstone (Integrated Portfolio of Competencies)
The successful completion of the Capstone Portfolio serves in lieu of the Comprehensive Exam.

Internship - 3 hours
LIS 6946 3 Supervised Field Work - Experiential Learning (Internship or Equivalent)

COURSES
See http://www.ugs.usf.edu/course-inventory/
LATIN AMERICAN, CARIBBEAN, AND LATINO STUDIES

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: June 1
Spring: October 15

Minimum Total Hours: 36
Level: Masters
CIP Code: 5.0107
Dept. Code: IGS
Major/College Codes: LAS AS
Approved: 2000

CONTACT INFORMATION

College: Arts and Sciences
Department: School of Interdisciplinary Global Studies
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The mission of ISLAC is to promote research and study in and about Latin America and the Caribbean. ISLAC is an academic unit devoted to interdisciplinary research and teaching focused on economic, social, political and cultural formations in Latin America and the Caribbean and among the Hispanic/Latino populations in North America. The Institute fosters greater knowledge of Latin America and the Caribbean and Latino issues, through partnerships with community organizations and other USF departments to sponsor lectures and cultural events that are open to the public throughout the year. We also support graduate students and faculty research in the area, and provide opportunities for Latin Americanist scholars at USF to collaborate and disseminate their work.

Faculty Interests Include:
ISLAC’s affiliate faculty members are drawn from the social sciences, humanities, arts, and human service fields. We include faculty from the following departments: History, Spanish-American and Caribbean Languages and Literature, Humanities, Anthropology, Political Science, Sociology, Economics, Business, Geography, Public Administration, Fine Arts, Public Health, Education, Africana Studies, Women’s and Gender Studies and Mental Health.

Research Areas:
Includes, but is not limited to: Afro-descendants in Latin America and the Caribbean, transatlantic studies, human rights, citizenship, race and ethnicity, education and public health migration and Diaspora.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- 3.00 GPA
- three letters of recommendation
- statement of purpose
- resume
- GRE not required, but suggested for full financial consideration

http://www.grad.usf.edu/majors
CURRICULUM REQUIREMENTS

Total Minimum Hours: 36

Core – 9 credit hours
Specialization – 12 credit hours
Electives – 9 credit hours
Thesis/Non-Thesis – 6 credit hours

Core Requirements - (9 credit hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Hours</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAS 6220</td>
<td>3</td>
<td>Issues and Perspectives in Latin American Studies</td>
</tr>
<tr>
<td>LAS 6936</td>
<td>3</td>
<td>Seminar in Latin American Studies</td>
</tr>
<tr>
<td>Methods</td>
<td>3</td>
<td>(the methods class must be approved by the Graduate Director)</td>
</tr>
</tbody>
</table>

The core seminars, directed by a faculty member from one of the participating departments, will familiarize students with the literature, existing knowledge, and research approaches of the various fields of area studies and invited to acquaint students with faculty and their research. The purposes of the seminars are:

➢ to provide an interdisciplinary graduate experience
➢ to foster a community of scholars and learners focused on Latin American, Caribbean, and Latino experiences

Students will also take a three (3) hour methodology course that acquaints them with particular research relevant to their major field of study and when possible, Latin America and/or the Caribbean. This includes special approaches to finding documentation from Latin America and the Caribbean; newly-available search tools available on the internet; and an overview of how disciplines utilize different research materials. The methods class has to be approved by the Graduate Director.

Specialization - (12 credit hours)

With the concurrence of the ISLAC advisor, students will elect major and minor fields during their first semester. These fields will draw heavily on participating departments (e.g. Anthropology, History, Government and International Affairs, Art History). At that time the student will constitute a supervisory committee, made up of two professors from the major field and one from the minor field. The committee members will counsel the student and serve as members of the exam or thesis committees.

A large number of courses are available to fulfill the specialization requirements. These are listed separately and change somewhat from year to year. Departments who frequently work with ISLAC are Anthropology, Government and International Affairs, Sociology, Mass Communication, Geography, Social Work, Women’s and Gender Studies, Global Health, Philosophy, Economics, History, World Languages, Humanities and American Studies, Art History, Africana Studies and Education. Students may also request to have courses from other departments count toward major or minor fields.

Electives - (9 credit hours)

Students can take three electives from outside the major field. These might be technical courses, study abroad courses, internships, math and science courses, methodology, or another unrelated field. Elective courses must be approved by the Graduate Director. To count towards this degree, 50% of the course content must focus on Latin America, the Caribbean, or Latinos. Eligible courses include, but are not limited to those listed under specialization.

Specialization and Elective courses include, but are not limited to:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Hours</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFA 6932</td>
<td>3</td>
<td>Topics in Africana Studies</td>
</tr>
<tr>
<td>AFA 6120</td>
<td>3</td>
<td>Social Theory and Social Thought</td>
</tr>
<tr>
<td>AMS 6156</td>
<td>3</td>
<td>Theories and Methods in Cultural Studies</td>
</tr>
<tr>
<td>ANG 6701</td>
<td>3</td>
<td>Contemporary Applied Anthropology</td>
</tr>
<tr>
<td>HIS 6939</td>
<td>3</td>
<td>Seminar in History</td>
</tr>
<tr>
<td>HUM 6801</td>
<td>3</td>
<td>Theories and Methods of Cultural Studies</td>
</tr>
<tr>
<td>INR 6690</td>
<td>3</td>
<td>Research Seminar in Globalization</td>
</tr>
<tr>
<td>PHC 6934</td>
<td>1-6</td>
<td>Selected Topics in Public Health</td>
</tr>
<tr>
<td>POS 6933</td>
<td>3</td>
<td>Selected Topics in Political Science</td>
</tr>
<tr>
<td>SYA 6933</td>
<td>3</td>
<td>Selected Topics - Sociology</td>
</tr>
</tbody>
</table>
SYD 6605  3  City and Community
SYO 6255  3  Seminar in Sociology of Education
WST 6560  3  Advanced Feminist Theory
SPW 5135  3  Colonial Spanish American Literature
SPW 5934
SPW 6806  3  Introduction to Hispanic Graduate Studies
SPW 6775  3  Caribbean Literature
EDF 6883  4  Issues in Multicultural Education
Or other courses approved by the Graduate Director.

To count towards this degree, 50% of the course content must focus on Latin America, the Caribbean, or Latinos.

**Thesis/Non Thesis - (Minimum of 6 credit hours):**

**Thesis:**
LAS 6971  6  Thesis: Master’s

Students must enroll in LAS 6971 Thesis: Master’s for a minimum of 6 credit hours. In their thesis, students must provide new insight into a relevant topic in political science or international studies. As students approach the thesis stage, they need to compose a thesis committee consisting of a major professor, who must be a member of the Department of Government and International Affairs, and two readers. One of the two readers can be from another department, but that person must first be approved by the Graduate Director. The thesis committee must approve proposals before students embark on their projects. Students must prepare a written thesis and defend their work in a formal oral presentation before their committee.

**Non-Thesis:**
Students who choose a non-thesis option will be required to complete an additional 6 hours of course work at the 6000 level.
TBA  3  Elective structured class approved by the Graduate Director
LASA 6913  3  Independent Study – Literature Review of approximately 50 pages

The student is required to demonstrate competency by successfully completing a substantial literature review in his or her field of concentration.

**Comprehensive Examination**
For students in the thesis option, successful completion of the Thesis serves in lieu of the Comprehensive Exam. For students in the non-thesis option, the extensive literature review determines competency and serves as the equivalent of a comprehensive examination.

**Foreign Language Requirement**
At the time of graduation, students must submit proof of proficiency in Spanish, Portuguese, or another language spoken in Latin America or the Caribbean.

**COURSES**
See http://www.ugs.usf.edu/course-inventory/ or http://shell.cas.usf.edu/islac/
LIBERAL ARTS

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15
Spring: October 15
Summer: February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 33
Level: Masters
CIP Code: 24.0101
Dept. Code: HCS
Major/College Codes: MLA AS
Approved: 1984

Concentrations:
Africana Studies (AFT)
American Studies (AME)
Film Studies (FLM)
Humanities (HTS)
Social and Political Thought (SPT)

Also offered as an Accelerated Major:
BA in Humanities and Cultural Studies /
MA in Liberal Arts: Film Studies Concentration

CONTACT INFORMATION

College: Arts and Sciences
Departments: Humanities and Cultural Studies
School of Interdisciplinary Global Studies (SIGS)

Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Master of Arts (M.A.) offers students an opportunity to study from an interdisciplinary perspective the ideas and works that have shaped world culture. Five program concentrations are available: Africana Studies (AFT), American Studies (TBA), Film Studies (FLM), Humanities (HTS), Social and Political Thought (SPT).

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- Upper division undergraduate GPA of 3.00
- Applicants are required to take the GRE as part of the application process and matter of record.
- Contact individual concentration advisors for possible additional requirements (e.g., transcripts, recommendations, preferred GRE Scores, writing samples, etc.)
- Students must select a concentration at the time of application
CURRICULUM REQUIREMENTS

Total Minimum Hours- 33
Core requirements – 3 hours
Concentration – 30 hours

Core Requirements - 3 hours
HUM 6815  3  Research Seminar

Concentration Requirements
Students select from the following concentrations:

Africana Studies Concentration - 30 hours
Offered through the School of Interdisciplinary Global Studies (SIGS)

Concentration Courses - 12 hours
AFA 6120  3  Social Theory and Social Thought
AFA 6207  3  African American Historiography
AFA 6355  3  African American Community Research
AFA 6805  3  African Historiography
*Students must earn a “B” or higher (3.00) in all core courses or they will be required to retake the course.

Electives - 15 hours
Students must complete 15 additional hours in approved graduate electives. These may include additional courses within Africana Studies or outside the department. Students may also choose to complete a graduate certificate as the basis of their elective work.

Approved Electives *
AFA 6108 – Social Construction of Race and Racism
AFA 6387 – Seminar on Genocide and Human Rights
AFA 6905 – Independent Study
AFA 6910 – Directed Research
AFA 6932 – Special Topics

*Additional external electives may be chosen in consultation with the Graduate Director

Thesis or Internship - 3 hours
AFA 6971  3  Thesis OR
AFA 6945  3  Internship
Students must complete a thesis or internship as part of their graduate major. Students will make this choice at the end of their first year of study. Thesis students must register for no less than three thesis hours (AFA 6971). Internship students must register for no less than three hours of internship (AFA 6945).

Comprehensive Exam
Internship students must successfully pass a comprehensive exam. The successful oral defense of the thesis equates to the comprehensive exam for thesis students. *Any student who initially chooses the thesis, but later changes to an Internship (which will only be approved with extenuating circumstances) must complete comprehensive exams.
American Studies Concentration - 30 hours
Concentration Courses - 12 hours
HUM 6814 3 introduction to Graduate Study
AMS 6156 3 Theories and Methods of Cultural Studies
AMS 6254 3 Cultural Era
AMS 6805 3 Enduring Questions in American Culture

Electives - 12 hours
To be selected from 5000 or 6000 level courses in American Studies and/or related departments, such as: English, History, Humanities, Philosophy, Religious Studies, Sociology, and Women's and Gender Studies. No more than 6 hours from any one department may be credited toward the degree without written consent from the Graduate Director.
Work in the following may be included:

AMS 6002 3 American Lives
AMS 6901 1-3 Directed Readings in American Studies
AMS 6915 1-12 Directed Research
AMS 6934 1-3 Selected Topics
AMS 6940 1-3 Internship in American Studies

Comprehensive Exam
The submission and oral defense of the thesis proposal equates to the comprehensive exam.

Thesis - 6 hours
AMS 6971 - 6 Thesis

Upon nearing the completion of coursework, each student will select a thesis topic, constitute a thesis committee, and write and orally defend a thesis proposal. The student will then write and orally defend a 40 to 80-page thesis. During the proposal and thesis writing stage, students are required to enroll for at least 6 hours of Thesis credit.

Film Studies Concentration - 30 hours
Concentration Courses - 12 hours
HUM 6814 3 Introduction to Graduate Study
HUM 6583 3 Global Cinema and New Media to 1960
HUM 6584 3 Global Cinema and New Media since 1960
HUM 6586 3 Film Theory

Electives - 12 hours
Additional coursework selected in consultation with the Graduate Director.

Comprehensive Exam
The submission and oral defense of the thesis proposal equates to the comprehensive exam.

Thesis - 6 hours
HUM 6971 - 6 Thesis
After the completion of coursework, each student will select a thesis topic; constitute a thesis committee; and write and orally defend a thesis proposal. Each student will then write and orally defend a 40-80 page thesis. During the proposal and thesis writing stage, students are required to enroll for 6 thesis hours.
**Humanities Concentration - 30 hours**

**Concentration Courses - 24 hours**
- HUM 6814 3 Introduction to Graduate Study
- HUM 6801 3 Theories and Methods of Cultural Studies
- 9 Additional HUM courses selected in consultation with the Graduate Director
- 9 HUM or Outside electives selected in consultation with the Graduate Director

**Comprehensive Exam**
The submission and oral defense of the thesis proposal equates to the comprehensive exam.

**Thesis**
- HUM 6971 6 Thesis
After the completion of coursework, each student will select a thesis topic; constitute a thesis committee; and write and orally defend a thesis proposal. Each student will then write and orally defend a 40 to 80 page thesis. During the proposal and thesis writing stage, students are required to enroll for 6 thesis credits.

**Social and Political Thought Concentration - 30 hours**

**Concentration Courses - 24 hours**
Courses approved by a committee selected by the student from the department faculty.

**Comprehensive Exam**
The oral defense of the thesis equates to the comprehensive exam.

**Thesis**
- 6 hours
After the completion of coursework, each student will select a thesis topic; constitute a thesis committee; and write and orally defend a thesis proposal. Each student will then write and orally defend a 40 to 80-page thesis. During the proposal and thesis writing stage, students are required to enroll for 6 thesis hours.

**Accelerated Major**

**BA in Humanities and Cultural Studies: Film and Media Studies Concentration / MA in Liberal Arts: Film Studies Concentration**

This program intends for students to complete a Bachelor of Arts in Humanities and Cultural Studies with a concentration in Film and New Media Studies and an M.A. Liberal Arts in Film Studies over the span of five years. Completion of this program allows students to complete 12 graduate credits toward the M.A. in during the junior or senior year of their B.A. degree.

**Target students and expected outcomes**
The accelerated program is an attractive and viable path for students seeking to expedite their entry to the workforce or to Ph.D. studies. Students who complete this program will maximize department resources and opportunities for research.

**Description and Requirements**
For consideration of admission to the major a student must:
1. Have completed 15 credit hours in the B.A. Humanities and Cultural Studies major, Film and New Media Studies concentration upon applying;
2. Have a minimum 3.33 GPA overall;
3. Have a minimum undergraduate 3.5 GPA in the major;
4. Have completed FIL 1002 with a B or higher; and
5. Have met with the Graduate Director and/or Graduate Advisor to discuss a plan of study
Undergraduate Degree Requirements for the B. A. in Humanities and Cultural Studies with a Film and New Media Studies Concentration

All Humanities and Cultural Studies major (Film and New Media Studies concentration) students will complete graduation requirements listed in the undergraduate catalog.

University and College Requirements:
- 120 hours
- 36 hours of general education coursework
- 6 hours upper-level core curriculum (Writing Intensive Capstone and Capstone Experience)
- 48 hour upper-level rule
- USF Residency - Students must complete 30 hours of the last 60 hours in USF coursework.
- FLEX (Foreign Language Exit Requirement)
- Gordon Rule Communication and Computation

Humanities and Cultural Studies Major, Film and New Media Studies Concentration Requirements (36 total credit hours):

Major Core (9 credit hours)
Students must complete the following required courses for the major (9 credit hours):
- HUM 3804 Introduction to Cultural Studies
- HUM 4331 Humanities Pro-Seminar
- HUM 4931 Seminar in Humanities

Students take 27 credit-hours for the concentration in Film and New Media Studies.

Film & New Media Studies Concentration (27 credit hours)
The Film & New Media Studies concentration is designed to teach students how to think actively, critically, and creatively, about the art of the moving image. To this end, it surveys significant examples of moving-image culture, including films from Hollywood and other global industries; experiments in documentary, avant-garde, and art cinema; and works from television, digital video, and the Internet.

Concentration Core (15 credit hours)
Required courses for the concentration:
- FIL 1002 Introduction to Film Studies
- FIL 3052 Foundations of Film & New Media
- FIL 3077 Contemporary Film & New Media
- HUM 4581 Film and Media Theory

Students select one course from the following list:
- AMS 2270 Twentieth-Century American Culture
- HUM 2250 Studies in Culture: The Twentieth Century

Concentration Electives (12 credit hours)
Students take an additional 12 credit hours of upper-level coursework from Humanities and Cultural Studies courses.

Course Grade Requirement
Students must pass HUM 3804 with a B- in order to enroll in HUM 4331. Students must pass HUM 4331 with at least a C- to register for HUM 4931. Students must have completed FIL 1002 with a B or higher to be considered for the accelerated program.

Research Opportunities
The Humanities major offers six credit hours of undergraduate research through the senior-year sequence (HUM 4331 and HUM 4931).
Shared Courses

Both Thesis and Exam Paths:
Students in the accelerated program, may have twelve credit hours of graduate courses count toward both degrees as follows:

<table>
<thead>
<tr>
<th>Undergrad course</th>
<th>satisfied by</th>
<th>Graduate course</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIL 3052</td>
<td>HUM 6583</td>
<td></td>
</tr>
<tr>
<td>FIL 3077</td>
<td>HUM 6584</td>
<td></td>
</tr>
<tr>
<td>HUM 4581</td>
<td>HUM 6586</td>
<td></td>
</tr>
</tbody>
</table>

An additional three (3) graduate credit hours may be earned by taking any course offered by HCS that is at the 6000 level.

Graduate Degree Requirements

MA Liberal Arts: Film Studies Concentration (33 hours)

Core Requirement  
HUM 6815 Research Seminar

Concentration Courses (24 hours)

| HUM 6814 Introduction to Graduate Study |
| HUM 6583 Global Cinema and New Media to 1960 |
| HUM 6584 Global Cinema and New Media since 1960 |
| HUM 6586 Film Theory |

12 credit hours of additional coursework selected in consultation with the graduate director

Thesis (6 hours)-  
HUM 6971 Thesis

After the completion of coursework, each student will select a thesis topic; constitute a thesis committee; and write and orally defend a thesis proposal. Each student will then write and orally defend a 40-80 page thesis. During the proposal and thesis writing stage, students are required to enroll for 6 thesis hours.

Comprehensive Exam

The submission and oral defense of the thesis proposal equates to the comprehensive exam.

Students pursuing the MA in Liberal Arts with a Film Studies concentration through the Accelerated BA/MA program, may choose either a thesis or an exam, with the approval of the Graduate Advisor. Required coursework for the accelerated major is tailored to the choice of the thesis or exam path as noted below.

Thesis Path

In addition to the above, students pursuing the thesis option must take:

- HUM 6814 Introduction to Graduate Study
- HUM 6815 Research Seminar
- HUM 6971 Thesis
- Three electives (nine credit hours), chosen in consultation with the Graduate Advisor

Exam Path (Non-thesis)

In addition to the above requirements for both thesis and exam paths, students pursuing the exam option, must take:

- HUM 6814 Introduction to Graduate Study
- Five electives (15 credit hours), chosen in consultation with the Graduate Advisor
- Three credit hours of Directed Reading in preparation for the MA exam

An exam, administered and graded by a committee, comprising the student’s major professor and two other members of the graduate faculty. If a student fails the exam, she/he may retake it once, not later than one month after the graded exam is returned to the student.

COURSES

See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
LIBRARY AND INFORMATION SCIENCE

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:

<table>
<thead>
<tr>
<th>Term</th>
<th>Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>June 1</td>
</tr>
<tr>
<td>Spring</td>
<td>October 15</td>
</tr>
<tr>
<td>Summer</td>
<td>February 15</td>
</tr>
</tbody>
</table>

Minimum Total Hours: 39
Level: Masters
CIP Code: 25.0101
Dept. Code: LIS
Major/College Codes: LIS AS
Approved: 1988

CONTACT INFORMATION

College: Arts and Sciences
Department: School of Information
Contact Information: www.grad.usf.edu

INTERNATIONAL APPLICANT DEADLINES:
http://www.grad.usf.edu/majors

MAJOR INFORMATION

The mission of the School of Information is to educate students for careers and leadership roles in library and information professions that serve the needs of a culturally diverse, technological society; to contribute to the body of theoretical and applied knowledge in the discipline; and to serve current and emerging needs in the University, the community, and the profession. For Goals, Objectives, and Student Learning Outcomes, refer to the program’s web page.

Accreditation:
For students interested in School Library Media as a profession, completion of the USF/SLIS program results in (1) a Master of Arts degree accredited by the American Library Association, which will allow the recipient to work in all types of libraries, (2) appropriate coursework for passing the state examination for certification as an Educational Media Specialist for Grades K-12 in the state of Florida. For more information, http://si.usf.edu/ma/library-program/

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

GRE is required with preferred minimum scores of 71st percentile (550V), 10th percentile (450) Q. However, the LIS program will waive the GRE requirement if the student meets one of the following criteria:

- A 3.50 or higher GPA in a completed master's degree program from a regionally accredited institution
- A 3.25 or higher GPA in upper division undergraduate work from a regionally accredited institution.
- Doctoral degree (including professional degrees such as the JD and MD) from a regionally accredited institution.

All students not meeting one of the above criteria will be considered for conditional admission based on all of the following criteria:

- A preferred minimum score of 550 on the Verbal section and 450 on the Quantitative section of the General GRE test.
- An academic writing sample
- Three written letters of recommendation
Conditional admission status will be converted to regular status upon completion of the first three LIS courses with a GPA of 3.50 or above. LIS 5020 must be included as one of these courses.

1. A satisfactory score on the TOEFL (79 on the internet-based test and 550 on the paper-based test) may be required for natives of non-English-speaking countries.

2. All students are required to write a statement describing their purpose and goals in the LIS program.

CURRICULUM REQUIREMENTS

Total Minimum Hours - 39 credit hours minimum

Core courses – 18 credit hours
Technology Elective – 3 credit hours
Electives – 18 credit hours
Comp Exam/Portfolio

Students must maintain a 3.00 grade point average of “B” or better and no more than two grades below “B” will be accepted. Transfer credit from other recognized graduate schools is limited to six semester hours taken within the last five years with grades of “B” or better. All transfers must be approved by the candidate’s faculty advisor. Transfer credits must be posted to a student’s permanent record no later than one full term prior to graduation.

Required Core Courses – 18 credit hours
The student must complete the following 39-hours, including six core courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIS 5020</td>
<td>Foundations of Library and Information Science</td>
</tr>
<tr>
<td>LIS 6260</td>
<td>Information Science in Librarianship</td>
</tr>
<tr>
<td>LIS 6271</td>
<td>Research Methods in Library and Information Science</td>
</tr>
<tr>
<td>LIS 6409</td>
<td>Introduction to Library Administration</td>
</tr>
<tr>
<td>LIS 6511</td>
<td>Collection Development and Maintenance</td>
</tr>
<tr>
<td>LIS 6603</td>
<td>Basic Information Sources and Services</td>
</tr>
<tr>
<td>LIS 6711</td>
<td>Organization of Knowledge OR</td>
</tr>
<tr>
<td>LIS 6735</td>
<td>Technical Services in Libraries</td>
</tr>
</tbody>
</table>

Technology Elective - 3 credit hours
LIS 5268  3  IT Concepts for Information Professionals

For students who already have a foundational understanding of information technology, this course may be substituted by another elective. All students are expected to select courses, in coordination with their advisers, which will foster competencies and understanding of theory, application, and use of technology.

Electives - 18 credit hours
These courses must be approved by the student’s advisor. Some options include:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIS 5268</td>
<td>Microcomputer Applications Library and Information Centers</td>
</tr>
<tr>
<td>LIS 5315</td>
<td>Instructional Graphics</td>
</tr>
<tr>
<td>LIS 5333</td>
<td>TV in Schools and Libraries</td>
</tr>
<tr>
<td>LIS 5418</td>
<td>Health Informatics for Medical Librarians</td>
</tr>
<tr>
<td>LIS 5566</td>
<td>Multicultural Literature for Children and Young Adults</td>
</tr>
<tr>
<td>LIS 5937</td>
<td>Selected Topics in Library Studies</td>
</tr>
<tr>
<td>LIS 6110</td>
<td>History of Libraries</td>
</tr>
<tr>
<td>LIS 6111</td>
<td>History of Children’s Literature</td>
</tr>
<tr>
<td>LIS 6206</td>
<td>Adult Services in Libraries</td>
</tr>
<tr>
<td>LIS 6212</td>
<td>Reading Guidance Programs in Libraries and Classrooms</td>
</tr>
<tr>
<td>LIS 6225</td>
<td>Storytelling</td>
</tr>
<tr>
<td>LIS 6303</td>
<td>Preparing Instructional Media</td>
</tr>
<tr>
<td>LIS 6316</td>
<td>Visualization of Knowledge</td>
</tr>
</tbody>
</table>
### Library and Information Science (M.A.)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIS 6402</td>
<td>3</td>
<td>Advanced Library Administration</td>
</tr>
<tr>
<td>LIS 6432</td>
<td>3</td>
<td>Seminar in Academic Libraries</td>
</tr>
<tr>
<td>LIS 6445</td>
<td>3</td>
<td>Seminar in Public Libraries</td>
</tr>
<tr>
<td>LIS 6455</td>
<td>3</td>
<td>Organization and Administration of the School Media Center</td>
</tr>
<tr>
<td>LIS 6463</td>
<td>3</td>
<td>Library Networks and Systems</td>
</tr>
<tr>
<td>LIS 6464</td>
<td>3</td>
<td>Library Systems Analysis and Planning</td>
</tr>
<tr>
<td>LIS 6472</td>
<td>3</td>
<td>Seminar in Special Libraries</td>
</tr>
<tr>
<td>LIS 6473</td>
<td>3</td>
<td>Law Librarianship</td>
</tr>
<tr>
<td>LIS 6475</td>
<td>3</td>
<td>Health Sciences Librarianship</td>
</tr>
<tr>
<td>LIS 6773</td>
<td>3</td>
<td>Digital Curation</td>
</tr>
<tr>
<td>LIS 6482</td>
<td>3</td>
<td>Web Archiving</td>
</tr>
<tr>
<td>LIS 6542</td>
<td>3</td>
<td>The Curriculum and Instructional Technology</td>
</tr>
<tr>
<td>LIS 6565</td>
<td>3</td>
<td>Books and Related Materials for Young Adults</td>
</tr>
<tr>
<td>LIS 6585</td>
<td>3</td>
<td>Materials for Children</td>
</tr>
<tr>
<td>LIS 6609</td>
<td>3</td>
<td>Online Information Sources and Services</td>
</tr>
<tr>
<td>LIS 6610</td>
<td>3</td>
<td>Information Sources and Services in the Humanities</td>
</tr>
<tr>
<td>LIS 6620</td>
<td>3</td>
<td>Information Sources and Services in the Social Sciences</td>
</tr>
<tr>
<td>LIS 6624</td>
<td>3</td>
<td>Information Sources and Services in Business and Law</td>
</tr>
<tr>
<td>LIS 6630</td>
<td>3</td>
<td>Information Sources and Services in Science and Technology</td>
</tr>
<tr>
<td>LIS 6661</td>
<td>3</td>
<td>Government Documents</td>
</tr>
<tr>
<td>LIS 6724</td>
<td>3</td>
<td>Classification and Cataloging of Non-Book Materials</td>
</tr>
<tr>
<td>LIS 6726C</td>
<td>3</td>
<td>Indexing and Abstracting</td>
</tr>
<tr>
<td>LIS 6712</td>
<td>3</td>
<td>Organization of Knowledge II</td>
</tr>
<tr>
<td>LIS 6514</td>
<td>3</td>
<td>Digital Libraries</td>
</tr>
<tr>
<td>LIS 6906</td>
<td>3</td>
<td>Independent Study</td>
</tr>
<tr>
<td>LIS 6946</td>
<td>3</td>
<td>Supervised Fieldwork</td>
</tr>
<tr>
<td>LIS 6949</td>
<td>2-6</td>
<td>Practicum in Archives and Special Collections</td>
</tr>
</tbody>
</table>

### Courses Outside the School

Degree-seeking students are permitted to enroll in courses, usually limited to six semester hours, outside the School of Information when, in the context of the development of a purposeful program, an interdisciplinary approach seems appropriate. Students must obtain the prior approval of their Faculty advisor.

### Culminating Assessment

#### Comprehensive Examination

**Portfolio**

Assessment of Competencies for the Master’s Degree in Library and Information Science - In Lieu of a Comprehensive Examination, students admitted beginning in the Fall 2016 Catalog Year are required to submit a portfolio in accordance with program provided guidelines which exhibit competencies acquired during their master’s program based on standards of the American Library Association.

Portfolio timeline: Students will begin creating and collecting artifacts and other examples of work beginning in their first semester of study. Portfolios must be reviewed by an advisor or other major designee midway through the student’s major and then submitted prior to graduation according to the major guidelines for final approval as part of graduation requirements.
OTHER INFORMATION
ALA-USF, ASIST-USF, and SLA-USF are student chapters of the American Library Association, American Society for Information Science & Technology and Special Libraries Association linked with the School of Information and are open to all members of the University community interested in information science or librarianship. All provide programs and guest speakers of interest to the campus community, maintain several discussion lists, and publish a newsletter for their members. These organizations are the voice of students in the school, and members of the associations are included on committees within the School.

COURSES
See http://www.ugs.usf.edu/course-inventory/ or http://si.usf.edu/
Linguistics (M.A.)

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Closed for new admissions

Minimum Total Hours: 33
Level: Masters
CIP Code: 16.0102
Dept. Code: WLE
Major/College Codes: LIN AS
Approved: 1971

CONTACT INFORMATION

College: Arts and Sciences
Department: World Languages
Contact Information: www.grad.usf.edu

Currently, students are not being admitted to this major.
LINGUISTICS: ENGLISH AS A SECOND LANGUAGE

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
- Fall: February 15
- Spring: October 15

Minimum Total Hours: 36
Level: Masters
CIP Code: 16.0102
Dept. Code: WLE
Major/College Codes: ESL AS
Approved: 1978

Also offered as a Concurrent Degree:
- MA in Linguistics: ESL / MA in French
- MA in Linguistics: ESL / MA in Spanish

CONTACT INFORMATION

College: Arts and Sciences
Department: World Languages
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

Linguistics is primarily an upper-level and graduate discipline with strong interdisciplinary concerns. The Department of World Languages currently offers a Master of Arts in Linguistics: English as a Second Language. At USF, our Linguistics and TESL majors are among the oldest in the Sunshine State. Linguistics dates back to the early 1960s, early in USF history, and the applied linguistics major has prepared ESL/ESOL/EFL educators since the 1970s. Our students are prepared for positions teaching second languages to non-native speakers, and our alumni have taught in public and private institutes, here in the Tampa Bay area and around the world. Other graduates have continued their graduate education and earned doctoral degrees, and many of our alumni hold positions of leadership. In short, our graduates have made a name for the linguistics major at USF.

Major Research Areas:
- Individual differences
- Corpus linguistics
- Second language phonology
- Second language writing
- Second Language Acquisition
- Discourse analysis
- Second language learning and teaching

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- GRE (taken within the last five years) required with minimum scores of 149 (approximately 40th percentile) V and 4 AW (approximately 50th percentile). Five-year limit may be waived for applicants with a master’s degree who have previously taken the GRE.
- Three letters of recommendation
- A two-page statement of purpose, written by the applicant
- Curriculum Vitae (CV)
- Students whose native language is other than English and whose bachelor’s degree was not earned in an English-medium university in an English speaking country must provide a TOEFL score of 600 (250 on the computerized version)

Applicants should note that proficiency in a second language is required by the time of graduation.
CURRICULUM REQUIREMENTS

Total Minimum Hours: 

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Requirements</td>
<td>24</td>
</tr>
<tr>
<td>LIN 5700 Applied Linguistics</td>
<td>3</td>
</tr>
<tr>
<td>LIN 6081 Introduction to Graduate Studies in Linguistics</td>
<td>3</td>
</tr>
<tr>
<td>LIN 6675 Grammatical Structure of American English</td>
<td>3</td>
</tr>
<tr>
<td>LIN 6720 Second Language Acquisition</td>
<td>3</td>
</tr>
<tr>
<td>TSL 5371 Methods of TESL</td>
<td>3</td>
</tr>
<tr>
<td>TSL 5372 ESL Curriculum and Instruction</td>
<td>3</td>
</tr>
<tr>
<td>TSL 5440 Language Testing</td>
<td>3</td>
</tr>
<tr>
<td>TSL 5525 Cross-Cultural Issues in ESL</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>9</td>
</tr>
<tr>
<td>Internship</td>
<td>3</td>
</tr>
<tr>
<td>Non-Thesis</td>
<td></td>
</tr>
<tr>
<td>Applied Linguistics (TESL) is a non-thesis track.</td>
<td></td>
</tr>
<tr>
<td>Comprehensive Exam</td>
<td></td>
</tr>
<tr>
<td>In lieu of a comprehensive exam, per the norm of the field, a three-part Exit Assessment consisting of a Pedagogical Theory (PT) paper, a Classroom Practice &amp; Reflection (CPR) paper, and portfolio of major course assignments and other relevant items is required for the program. Students are required to demonstrate proficiency in a language other than their native language by the end of the major.</td>
<td></td>
</tr>
</tbody>
</table>

COURSES

See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
LINGUISTICS: ENGLISH AS A SECOND LANGUAGE
AND FRENCH

Concurrent Degrees:
Master of Arts (M.A.)/Master of Arts (M.A.) Degrees

DEGREE INFORMATION
Refer to individual Majors for deadlines
International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 36 (ESL), 33 (FRE)
Level: Masters
CIP Codes: 16.0102, 16.0901
Dept. Codes: WLE
Major/College Codes: ESL/AS, FRE/AS

CONTACT INFORMATION
Colleges: Arts and Sciences
Department: World Languages
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

This is a concurrent degree between the MA in Linguistics: ESL and the MA in French. Students will need to meet the admissions requirements for each individual major to qualify for the concurrent degree option. Also, students will need to complete all curriculum requirements for both majors, including both sets of comprehensive/exit exams.

Major Research Areas:
Individual differences, Corpus linguistics, Second language phonology, Second language writing, Second Language Acquisition, Discourse Analysis, and second language learning and teaching. French language, Cultural studies, Film, Literature, and Linguistics

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements specified in the Catalog list for each major.

CURRICULUM REQUIREMENTS

For specific information on the requirements for the major, please refer to the Catalog listing for that major.

M.A. in Linguistics: English as a Second Language (ESL) – total minimum hours: 36
M.A. in French – total minimum hours: 33
Total hours: 69, with 9 shared. Total combined: 60 credit hours

Shared Courses: The following courses are approved to be shared with both majors:
TSL 5371 3 Methods of Teaching English as a Second Language – (required for Linguistics; elective for French)
LIN 5700 3 Applied Linguistics – (required for Linguistics; elective for French)
FRW 5829 3 An Introduction to Modern French Literary Criticism – (required for French; elective for Linguistics)

For all other curriculum requirements, including Thesis/non-Thesis, Internship, Comprehensive Examination, etc., refer to the Catalog listing for that major.
Linguistics: English as a Second Language and Spanish

Concurrent Degrees: Master of Arts (M.A.)/Master of Arts (M.A.) Degrees

DEGREE INFORMATION

Refer to individual Majors for deadlines

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 36 (ESL), 36 (SPA)
Level: Masters
CIP Codes: 16.0102, 16.0905
Dept. Codes: WLE
Major/College Codes: ESL/AS, SPA/AS

CONTACT INFORMATION

Colleges: Arts and Sciences
Department: World Languages
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

This is a concurrent degree between the MA in Linguistics: ESL and the MA in Spanish. Students will need to meet the admissions requirements for each individual major to qualify for the concurrent degree option. Also, students will need to complete all curriculum requirements for both majors, including both sets of comprehensive/exit exams.

Major Research Areas:

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements specified in the Catalog list for each major.

CURRICULUM REQUIREMENTS

For specific information on the requirements for the major, please refer the Catalog listing for that major.

M.A. in Linguistics: English as a Second Language (ESL) – total minimum hours: 36
M.A. in Spanish – total minimum hours: 36
Total hours: 72, with 9 shared. Total combined: 63 credit hours

Shared Courses: The following courses are approved to be shared with both majors:
TSL 5371 3 Methods of Teaching English as a Second Language – (required for Linguistics; elective for Spanish)
LIN 5700 3 Applied Linguistics – (required for Linguistics; elective for Spanish)
SPW 6806 3 Introduction to Hispanic Graduate Studies (required for Spanish; elective for Linguistics)

For all other curriculum requirements, including Thesis/non-Thesis, Internship, Comprehensive Examination, etc., refer to the Catalog listing for that major.
LINGUISTICS AND APPLIED LANGUAGE STUDIES

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: January 15th

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 55 Post-Master’s
Level: Ph.D.
CIP Code: 16.0102
Dept. Code: WLE
Major/College Codes: LAL AS
Approved: Effective 2016

CONTACT INFORMATION

College: Arts and Sciences
Department: World Languages
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

This major in Linguistics and Applied Language Studies is designed to train advanced students in the field in using principled, empirical approaches to address language-related issues in the 21st century. Our faculty are equipped to meet the needs of students with diverse interests in the field. By the end of the major, our students will be able to:

• develop a strong knowledge base in the content areas of this field, including key topics, major lines of inquiry, current trends, and remaining questions;
• develop expertise in critical thinking as well as in oral and written communication for academic and non-academic audiences;
• contribute their expertise to advancing knowledge about the critical role of language(s) in a global society;
• demonstrate mastery of research methods and use these methods to design and conduct independent research on various topics in this field;
• contribute to the advancement of this field through scholarly publications and conference presentations;
• gain experience in teaching undergraduate courses;
• participate in professional activities in this field at national, regional, and local levels.

Major Research Areas:

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

• MA in Applied Linguistics, Linguistics, TESOL, Second Language Studies, Foreign Languages, or a related field
• Experience with an additional language(s)
• GRE scores (taken within the last five years): Verbal reasoning: 153 (500, approximately 60% percentile); Quantitative reasoning: 144 (500, approximately 20% percentile); Analytical writing: 4.0.
• TOEFL scores (for international applicants): 100 ibt (or 7.5 on IELTS – note that IELTS scores cannot be used for the TA language requirement, so TOEFL scores are strongly preferred)
- GPA of 3.5 or higher in the MA degree
- Statement of research interest
- Current curriculum vitae
- A writing sample that shows evidence of research skill. This can be published or unpublished, such as an article, an MA thesis, or an MA course paper.
- 3 academic references
- Interview with program faculty
- Official transcripts (must provide an official translation if transcripts are not available in English from the degree-granting university)

CURRICULUM REQUIREMENTS

Total Minimum Hours: 55 hours Post-Masters

Core courses: all courses in this category must be taken (22 hours minimum).

- LIN 6720 3 Second Language Acquisition – 3 credits
- LIN 7630 3 Seminar on Research and Writing in Applied Linguistics
- LIN 7631 3 Advanced Seminar in Applied Linguistics (LIN 6720 prerequisite)
- LIN 6675 3 The Grammatical Structure of American English, OR a course focusing on the morphology and syntax of another language in WLE department.
- LIN 7635 3 Professional Development
- LIN 7638 3 Qualitative Methods in Applied Linguistics
- LIN 7639 3 Quantitative Methods in Applied Linguistics
- LIN 7910 1-3 Directed research in Applied Linguistics: to be taken the semester of writing the qualifying exam paper

Foundation Course Electives (6 credits required).
Based on student’s prior educational background, recommendations will be made by the admissions committee and implemented by the academic advisor/ pedagogical coordinator. Each student is required to take a minimum of two of the following courses:

- LIN 5700 3 Applied Linguistics
- LIN 6081 3 Introduction to Graduate Studies
- LIN 6675 3 Grammatical Structure of American English (can’t count as a foundation credit if used to satisfy the structure of a language credit)
- TSL 5371 3 Methods of TESL
- TSL 5372 3 ESL Curriculum & Instruction
- TSL 5440 3 Language Testing
- TSL 5525 3 Cross-Cultural Issues in ESL

General Electives (9 credits required).
Each student is required to take a minimum of three general electives. These can be from established course numbers or via the LIN 6932 special topics number and include the following:

- LIN 6601 3 Sociolinguistics
- LIN 6722 3 Writing process in SLA
- LIN 6726 3 Individual Differences in SLA
- LIN 6748 3 Contrastive Analysis

Sample Topics for LIN 6932:
- Discourse Analysis
- English for Academic Purposes/English for Specific Purposes
- Task-Based Language Teaching
- Sound System of English
- Pragmatics for Language Teachers
- Bilingualism/Multilingualism
• Corpus Linguistics
• Language and Technology

Note: In special circumstances, additional courses from the “foundation course electives” group may be taken as electives.

Qualifying Examination
Students will complete a qualifying examination.

Dissertation hours – 18 credits minimum
LIN 7980 Dissertation

Students will complete 18 hours of dissertation research. The student will submit a proposal to the committee members and, once approved, will participate in an oral defense of that proposal. Finally, the student will submit a completed dissertation draft to the committee members and once approved will participate in an oral defense of the dissertation.

COURSES
See http://www.ugs.usf.edu/course-inventory/
MASS COMMUNICATIONS
Master of Arts (M.A) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 39
Level: Masters
CIP Code: 9.0102
Dept. Code: MCM
Major/College Codes: COM AS
Approved: 1978

Concentrations:
Media Studies (MCM)
Strategic Communication Management (PRS)
Multimedia Journalism (MMJ) inactive

CONTACT INFORMATION

College: Arts and Sciences
Department: Zimmerman School of Advertising and Mass Communications

Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The M.A. in Mass Communications is designed for students who are seeking advanced studies in preparation for professional and academic careers in mass communications. The program offers one degree, the Master of Arts in Mass Communications.

The Media Studies Concentration emphasizes the theoretical principles and research methods of mass communications. The Strategic Communication Management Concentration emphasizes public relations management and social science research. The Multimedia Journalist Studies Concentration focuses on storytelling through the integration of different delivery platforms, and on management issues in converged newsrooms.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- a 3.0 upper division GPA
- 153V, 144Q preferred on the GRE
- a resume
- three letters of recommendation (academic recommendations preferred)
- a strong letter of intent
- an appropriate bachelor’s degree from an accredited institution
- Students who lack an appropriate background in the selected concentration may be required to take additional courses to meet concentration minimums.
CURRICULUM REQUIREMENTS

Total Minimum Hours: 39

Core Requirements
- MMC 6920 Introduction to Mass Communication Research 3
- MMC 6401 Mass Communication Theory 3
- MMC 6447 Quantitative Research Methods in Mass Communications 3
- MMC 6448 Qualitative Research Methods in Mass Communications 3

Concentration Requirements
- Students select from the following concentration options:

  Concentration in Media Studies
  This option requires 39 hours of course work, including 6 hours of thesis. At least twenty-four hours are taken in the Zimmerman School of Advertising and Mass Communications. The remaining 9-12 hours may be taken in graduate-level courses offered in other departments of the University.

  Concentration in Multimedia Journalism - INACTIVE
  The graduate concentration in Multimedia Journalism prepares students to take leadership positions in journalism through their knowledge of the field of mass communications, management in the media environment and the ability to combine storytelling skills in the areas of print, broadcast and electronic communication. This option requires a total of 39 hours of which 12 are core requirements, 12 are in the multimedia core, 6 are thesis or applied research project, 6 are electives in the Mass Communications graduate program and 3 are in an outside requirement.

   Requirements 12 hours
   - JOU 6501 Media Management 3
   - JOU 5344 Multimedia Journalism 3
   - JOU 6349 Advanced Multimedia Journalism 3
   - MMC 6612 Law and Mass Media 3
   - Thesis OR MMC 6950 Applied Research Project 6
   - Electives 6
   - 1 Outside Requirement: EME 6936 Web Design and Multimedia 3

  Concentration in Strategic Communication Management
  The Strategic Communication Management Concentration emphasizes the integration of organizational communication functions such as public relations and advertising into a single communication management function. This option requires 39 hours of course work, including six (6) hours of thesis or six (6) hours of an applied research project, twelve (12) hours of the mass communications core, fifteen (15) hours of the strategic communication core, three (3) hours in management or leadership studies, and six (6) hours of electives.

   Core Requirements 15 hours
   - PUR 6603 Strategic Communication Campaigns 3
   - PUR 6607 Strategic Communication Management 3
   - PUR 5505 Introduction to Strategic Communication Theory and Research 3
   - MMC 6415 Strategic Communication Media 3
   - MMC 6418 Strategic Message Design 3

  Outside requirement (3 hours): A course in organizational communication, management or leadership.
  Thesis OR Applied research project (6) hours arranged with project committee chair.
  Mass Communications or other electives (3 hours).

Comprehensive Exam
  Students in these concentrations are required to take a comprehensive written examination after they have completed at least 21 hours of mass communications course work, including the required courses for each concentration of study.

http://www.cas.usf.edu/
Accelerated Major
BS in Advertising / MA in Mass Communications with a Concentration in Strategic Communication Management

This program allows B.S. majors in Advertising (College of Business) to take graduate courses in the MA in Mass Communication with a concentration in Strategic Communication Management (College of Arts and Sciences) during their senior year. These shared credits will be applicable to the MA degree, thus accelerating the time to completion, with successful students able to earn the MA degree in two additional semesters beyond the completion of the BS degree.

This accelerated program shares 12 credits between already existing degrees/concentrations:

BS in Advertising
MA in Mass Communications with a Concentration in Strategic Communication Management

This highly competitive program, which will admit fewer than 40 students each year, is the result of collaboration between the Department of Marketing in the College of Business and the Zimmerman School of Advertising and Mass Communications in the College of Arts and Sciences. The integrated 4-plus-1 B.S./M.A. curriculum is designed to provide eligible students the undergraduate coursework necessary to complete a specialized program of study in strategic communication management at the graduate level. Graduates of this distinctive program will be prepared to take on leading communication management positions in an evolving business and media environment.

Admission Requirements
For admission to the program, a student must:

- Have completed at least 15 hours in the Advertising undergraduate major
- Have a minimum undergraduate 3.33 GPA overall; and
- Have a minimum undergraduate 3.5 GPA in the major.
- To apply for admission, send a letter to the Director of the Zimmerman Advertising Program stating your qualifications and desire to enter the program. Students may also be nominated by faculty in the Department of Marketing or Zimmerman School of Advertising and Mass Communications.

Policy for where a student earns less than a “B” in a graduate Course:
Students must earn a minimum of a “B” (3.00) in all graduate courses. Failure to earn at least a “B” in a graduate course will result in academic review by the graduate program. Failure to maintain a minimum 3.0 GPA will result in academic probation, according to the procedures of the USF Office of Graduate Studies.

Degree Requirements
BA in Advertising – refer to listing in Undergraduate Catalog
MA in Mass Communications – see requirements listed above

Shared Requirements
Twelve (12) hours of graduate credit can be taken in place of 6 hours of undergraduate credit required for the Advertising Major and 6 hours of Required Business electives as follows:

ADV 4600 (Advertising Management), satisfied by PUR 6607 (Strategic Communication Management)
ADV 4800 (Advertising Campaigns), satisfied by PUR 6603 (Strategic Communication Campaigns)
MAR XXXX (Upper-level marketing elective), satisfied by MAR 6936 (Selected Topics in Marketing: return on Marketing Investment)
MAR 4933 (Selected Topics in Marketing: Social Media Applications), satisfied by Mar 6936 (Selected Topics in Marketing: Social Media Applications)

Other Information:
- Academic advising: Students in the Accelerated B.S./M.A. program work closely with a designated advisor to ensure timely completion of academic requirements. Students who have reached graduate status meet with the Zimmerman School of Advertising and Mass Communications Director of Graduate Studies for advising.
- Tracking of students: A designated advisor will track student progress toward degree completion.
- Students will meet regularly with the advisor to ensure student success and timely awarding of degrees.
• Financial aid impact: Students should review their financial aid prior to applying to an accelerated program to determine any additional financial burden they may incur. Students must pay higher tuition rates for graduate courses. In addition, scholarships such as Bright Futures only reward a specific amount per credit hour.
• Degree conferral: The B.S. and M.A. degrees are conferred sequentially. The B.S. in Advertising is conferred upon completion of the designated 120 hours of undergraduate coursework, following the fourth year of study. The M.A. in Mass Communication with a concentration in Strategic Communication Management is conferred upon completion of the remaining 27 hours of graduate coursework during the fourth year summer and fifth year of study. The program will notify the Office of Graduate Studies to officially convert the student to graduate standing after certification of the undergraduate degree.
• Program of study: Undergraduate degree requirements are fulfilled in years 1 through 4. Graduate degree requirements are completed in years 4 and 5.

COURSES
See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
MATHEMATICS

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 1
Spring: August 1

Minimum Total Hours: 30
Level: Masters
CIP Code: 27.0101
Dept. Code: MTH
Major/College Codes: MTH AS
Approved: 1965

Concentration:
Pure and Applied (PAA)

CONTACT INFORMATION

College: Arts and Sciences
Department: Mathematics and Statistics
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Department of Mathematics at the University of South Florida, Tampa Campus, is composed of approximately thirty faculty who do research in a variety of fields, and teach courses ranging from the freshman to the doctoral level.

The Department serves as the editorial base for the international journals: Abstract and Applied Analysis and Journal of Theoretical Probability. The Center for Mathematical Services within the department provides lectures, special programs for secondary students, and in service training programs in mathematics.

Major Research Areas:

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- A Bachelor’s degree or equivalent in mathematical sciences or related area
- At least a 650 quantitative preferred score on the GRE
- At least a 3.0 GPA in undergraduate math courses
- A completed math department application form
- A statement of goals

Students with insufficient preparation in real analysis and/or abstract algebra will be required to take MAA 4211 and/or MAS 4301 before or during their first semester of study.
CURRICULUM REQUIREMENTS

Total Minimum Hours: 30 hours

Credit Hours: A candidate must complete at least 30 credit hours in Mathematics. Some graduate courses are organized into Core and Elective Sequences as follows:

Core Requirements
Sequences:
Algebra:
- MAS 5107 Advanced Linear Algebra 3
- MAS 5311 Algebra I 3
- MAS 5312 Algebra II 3

Analysis:
- MAA 5306 Real Analysis I 3
- MAA 5307 Real Analysis II 3
- MAA 6616 Abstract Integration 3

Topology:
- MTG 5316 Topology I 3
- MTG 5317 Topology II 3

Electives
Applied Mathematics: three courses, one from each group listed below.

(Group A)
- MAP 5407 Methods of Applied Mathematics 3
- MAP 5345 Applied Partial Differential Equations 3

(Group B)
- MAA 5405 Applied Complex Analysis 3
- MAT 5932 (MAD 4401) Selected Topics 1-4

(Group C)
- MAP 6205 Control Theory and Optimization 3
- MAT 6932 Selected Topics 1-4

Combinatorics:
- MAD 6206 Combinatorics I 3
- MAD 6207 Combinatorics II 3

Complex Analysis:
- MAA 6406 Complex Analysis I 3
- MAA 6407 Complex Analysis II 3

Statistical Methods:
- STA 5166 Statistical Methods I 3
- STA 6167 Statistical Methods II 3

Dynamical Systems:
- MAT 5932 Selected Topics 1-4
- MAT 6932 Selected Topics 1-4

Foundations:
- MHF 5306 Mathematical Logic and Foundations I 3
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHF 6307</td>
<td>Mathematical Logic and Foundations II</td>
<td>3</td>
</tr>
<tr>
<td>STA 6208</td>
<td>Linear Statistical Models</td>
<td>3</td>
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<tr>
<td>STA 6356</td>
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<tr>
<td>STA 5326</td>
<td>Mathematical Statistics</td>
<td>3</td>
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<td>STA 6326</td>
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<tr>
<td>MAP 5316</td>
<td>Ordinary Differential Equations I</td>
<td>3</td>
</tr>
<tr>
<td>MAP 5317</td>
<td>Ordinary Differential Equations II</td>
<td>3</td>
</tr>
<tr>
<td>MAP 6336</td>
<td>Theory Ordinary Differential Equations I</td>
<td>3</td>
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<tr>
<td>MAT 5932</td>
<td>Selected Topics</td>
<td>1-4</td>
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<tr>
<td>MAP 5345</td>
<td>Applied Partial Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>MAP 6356</td>
<td>Partial Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>STA 5446</td>
<td>Probability Theory I</td>
<td>3</td>
</tr>
<tr>
<td>STA 6447</td>
<td>Probability Theory I</td>
<td>3</td>
</tr>
<tr>
<td>STA 6206</td>
<td>Stochastic Processes</td>
<td>4</td>
</tr>
<tr>
<td>STA 6876</td>
<td>Time Series Analysis</td>
<td>3</td>
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<tr>
<td>MHF 5306</td>
<td>Mathematical Logic and Foundations I</td>
<td>3</td>
</tr>
<tr>
<td>MAD 6616</td>
<td>Algebraic Automata Theory</td>
<td>3</td>
</tr>
</tbody>
</table>

For degree requirements, each course from the Elective Sequence list above counts towards only one Elective Sequence.

**Qualifying Exam**

A qualifying examination based on a Core Sequence is called a Core Qualifying Examination. The syllabus for each examination is available from the Department. Core Qualifying Examinations are offered in January, May and September. A student who passes a Core Qualifying Examination at Ph.D. level will be considered to have completed the corresponding Core Sequence. Credit hours of MAT 6908 Independent Study, MAT 6939 Graduate Seminar, and MAT 6911 / 7912 Directed Research, earned before passing two Core Qualifying Examinations at Ph.D. level, do not count towards M.A. or Ph.D. degree. These courses, MAT 6908, 6911, 6939 and 7912, however, can be taken by a student before passing two Core Qualifying Examinations at Ph.D. level, with an approval from the Graduate Director, and also from the Seminar Organizer for MAT 6939. The course work for more than one credit hour for MAT 6939 needs an approval from the Graduate Committee.

1. The Mathematics graduate courses of 5000 level or higher, offered regularly for mathematics majors from the Mathematics department, are counted towards the 30-hour requirement.

Graduate Director

2. **Completion of Sequences**: A Candidate must complete two Core or Elective Sequences, at least one of which must be a Core Sequence, and receive at least a 3.0 average in each sequence.
3. **Thesis or Examination Requirement**: Each candidate for the M.A. degree must either be examined on a thesis or pass one of the written Core Qualifying Examinations.

**Comprehensive Exam**
The comprehensive examination takes the form of an oral thesis defense, in which the candidate must demonstrate knowledge of the general subject area of the thesis.

A student who elects the exam option must pass one of the Core Qualifying Examinations at M.A. level. A student may repeat each examination once.

**Thesis**
MAT 6971
A student who elects the thesis option must register for a minimum of six (6) credit hours in MAT 6971, only six (6) hours of which may be applied toward the 30-hour degree requirement.

**COURSES**
See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
MATHEMATICS

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Program Admission Deadlines:
Fall: February 1
Spring: August 1

Minimum Total Hours: 90
Level: Doctoral
CIP Code: 27.0101
Dept. Code: MTH
(Major/College Codes: MTH AS
Approved: 1971

Concentrations:
Pure and Applied (PAA)
Statistics (STT)

CONTACT INFORMATION

College: Arts and Sciences
Department: Mathematics and Statistics
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Department of Mathematics at the University of South Florida, Tampa Campus, is composed of approximately thirty faculty who do research in a variety of fields, and teach courses ranging from the freshman to the doctoral level. The Department serves as the editorial base for the international journals: Abstract and Applied Analysis and Journal of Theoretical Probability. The Center for Mathematical Services within the department provides lectures, special programs for secondary students, and in service training programs in mathematics.

Major Research Areas:

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

• a Bachelor’s degree or equivalent in mathematical sciences or related area
• at least a 650 quantitative preferred score on the GRE
• at least a 3.5 GPA in graduate and/or upper undergraduate math courses
• three letters of recommendation (two of which should be from college level math professors)
• a completed math department application form
• a statement of goals
In addition to the M.A. requirements, entrants to the Ph.D. must have a Master’s degree in Mathematics or a strong enough background as determined by the Graduate Admissions Committee, three letters of recommendation, at least two of which from mathematicians indicating an aptitude for doctoral study. See list below.

**CURRICULUM REQUIREMENTS**

**Total Minimum Hours:** 90 hours

In addition to the University and College requirements, the students must fulfill the following requirements. Some graduate courses are organized into Core and Elective Sequences as follows:

**Core Sequences:**
- Algebra: MAS 5107, 5311, 5312
- Analysis: MAA 5306, 5307, 6616
- Topology: MTG 5316, 5317

**Elective Sequences:**
- Applied Mathematics: three courses, one from each group listed below.
  - (Group A) MAP 5407, 5345
  - (Group B) MAA 5405, MAT 5932 (MAD 4401)
  - (Group C) MAP 6205, MAT 6932 (Dynamical Sys II)
- Combinatorics: MAD 6206, 6207
- Complex Analysis: MAA 6406, 6407
- Statistical Methods: STA 5166, 6167
- Dynamical Systems: MAT 5932, 6932
- Foundations: MHF 5306, 6307
- Linear Models and Multivariate Analysis: STA 6208, 6356
- Mathematical Statistics: STA 5326, 6326
- Nonlinear Analysis: MAP 5316, 5317
- Ordinary Differential Equations: MAP 6336, MAT 5932 (Dynamical Systems I)
- Partial Differential Equations: MAP 5345, 6356
- Probability: STA 5446, 6447
- Stochastical Processes and Time Series Analysis: STA 6206, 6876
- Theory of Computing: MHF 5306, MAD 6616

For degree requirements, each course from the Elective Sequence list above counts towards only one Elective Sequence.

**Qualifying Exam**
A qualifying examination based on a Core Sequence is called a Core Qualifying Examination. The syllabus for each examination is available from the Department. Core Qualifying Examinations are offered in January, May and September. A student who passes a Core Qualifying Examination at Ph.D. level will be considered to have completed the corresponding Core Sequence. Credit hours of MAT 6908 Independent Study, MAT 6939 Graduate Seminar, and MAT 6911 / 7912 Directed Research, earned before passing two Core Qualifying Examinations at Ph.D. level, do not count towards M.A. or Ph.D. degree. These courses, MAT 6908, 6911, 6939 and 7912, however, can be taken by a student before passing two Core Qualifying Examinations at Ph.D. level, with an approval from the Graduate Director, and also from the Seminar Organizer for MAT 6939. The course work for more than one credit hour for MAT 6939 needs an approval from the Graduate Committee.

1. **Core Qualifying Examinations:** The student is required to pass two of the Core Qualifying Examinations at Ph.D. Level. A student is expected to complete both within 13 months after entering the Ph.D. unless an extension is granted by the Mathematics Graduate committee. A student may repeat each examination once.

2. **Elective Qualifying Examination:** After passing two Core Qualifying Examinations, the student will select a Dissertation Advisor and a Doctoral Committee will be appointed by the Department Chairperson. The Committee will determine a course of study leading to the written Elective Qualifying Examination, which may be based on one of the Elective Sequences above, possibly supplemented by other material. The syllabus for this examination, and the names of two
examiners from the Faculty, must be approved by the Mathematics Graduate Director at least one semester before
the examination is to take place. A student is expected to complete all three examinations within 25 months after
entering the Ph.D. unless an extension is granted by the Mathematics Graduate Committee. A student may repeat
each examination once. The student will be admitted to candidacy after completion of the above two requirements.

3. Completion of Four Sequences: The student must complete four sequences from among Core and Elective Sequences
with at least a 3.0 average in each sequence.

4. Additional Course Requirement: The student must complete at least one course from each of the following groups:

   Group 1 – Algebra: MAS 5311, 5312
   Group 2 – Real Analysis: MAA 5307, 6616
   Group 3 – Complex Analysis: MAA 6406, 6407
   Group 4: Topology: MTG 5316, 5317

5. Progress Evaluation: Each Spring semester after admission to doctoral candidacy, the candidate shall give an oral
presentation to the Doctoral Committee of the problem[s] under investigation. The presentation may also include a
discussion of partial results. The Dissertation Advisor shall submit to the Department Chairperson a written report of
the presentation.

6. Dissertation: Students admitted to doctoral candidacy are required to take at least 16 hours in MAT 7980 Doctoral
Dissertation, with a minimum of 6 credits of dissertation hours accumulated during each previous 12-month period
(previous 3 terms, e.g. Fall, Spring, Summer) until the degree is granted. The dissertation is expected to contain new
mathematical results which are worthy of publication. Research towards the dissertation typically forms the major part
of the work required for the Ph.D. in Mathematics.

7. The Final Oral Examination: The Final Oral Examination is also called the Dissertation Defense. The department defers
to the university requirements.

COURSES
See http://www.ugs.usf.edu/course-inventory/
MICROBIOLOGY

Master of Science (M.S.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: January 1
Spring: August 1

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 30
Level: Masters
CIP Code: 26.0503
Dept. Code: BIO
Major/College Codes: MIC AS
Approved: 1973

CONTACT INFORMATION

College: Arts and Sciences
Department: Cell Biology, Microbiology and Molecular Biology (CMMB)

Contact Information: www.grad.usf.edu

Also offered as an Accelerated Program (BS/MS) in Microbiology

MAJOR INFORMATION

The M.S. in Microbiology is administered by the Department of Cell Biology, Molecular Biology and Microbiology (CMMB). Most research in the CMMB Department is done by faculty housed in the Bio-Science Facility building (BSF). Due to the interdisciplinary aspect of most Research projects, faculty and graduate students often work together on broad ranging research projects that bring together many of the traditionally separate areas of biology. Many of the faculty within CMMB are involved in cooperative research with their colleagues in Chemistry, Integrative Biology, Public Health, Nursing, Medicine, Geology, Psychology, Geography, Marine Science, and Environmental Science. Often CMMB graduate students have faculty members from these other areas of USF as members of their graduate committees.

Because of the many undergraduate courses that require hands-on experimental laboratories, CMMB support many graduate students as Teaching Assistants. CMMB values high quality teaching at all levels of support. Research Assistant positions may also be available to support research with specific faculty members depending on an individual faculty members funding. Numerous scholarship opportunities are also offered on a competitive basis through the USF Office of Graduate Studies.

Applying to the Department of Cell Biology, Microbiology and Molecular Biology

Students interested in attending graduate studies within the CMMB Department should visit the CMMB website that can be accessed from the main USF site and review the current CMMB faculty. It is recommended that potential students consider at least 2-3 CMMB faculty that they would be interested in working with and communicate this information in their letter of application. It is also recommended that potential students contact the CMMB Graduate Director as well as the individual faculty members they are interested in working with via email. Such communication will facilitate the assignment of the laboratory rotations that CMMB students will participate in during their first semester of residency and also allow the applicant to determine whether the desired faculty member has positions available in the laboratory.

All students admitted to the Masters in Microbiology must establish a supervisory committee. The supervisory committee shall constitute the major professor and at least two additional credentialed faculty. At least one of the committee members must be a faculty member at USF. Supervisory committee must be formed within two semesters after matriculation. The CMMB Graduate Director and CMMB Chair must approve the Supervisory Committee. Once a major professor has been assigned and/or a student occupies or utilizes significant space or facilities for research or analogous

http://www.cas.usf.edu/
scholarly activity directly pertinent to the generation of a thesis, the student shall enroll for a minimum of two (2) hours of research credit each semester (other than summer semester), until eligible to enroll in thesis credits.

**Major Research Areas:** Applied Microbiology, Pathogenic Microbiology, Cellular Microbiology, Molecular Microbiology, Ecological Microbiology

**ADMISSION INFORMATION**

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- Prospective students must apply to the Microbiology major via the online application process through the USF Office of Graduate Admissions.
- Must have 3.00 GLA last 60 hours of B.S. degree
- Preferred minimum scores of 153V (500V on the old test), and 148Q (600Q on the old test), 4.5 AW on GRE
- All international students are required to submit the TOEFL test. Non-native English speaking graduate students must score at least 570 on the TOEFL and at least 50 on the TSE to be eligible for a teaching assistantship.
- It is expected that candidates for the M.S. degrees will have completed courses equivalent to those required for the B.S. in Microbiology at U.S.F.

**Materials necessary for a complete application are listed below:**

The following items should be submitted in the envelope provided to:

CMMB Graduate Office  
Attention: CMMB Graduate Director  
University of South Florida  
4202 E. Fowler Ave – ISA 2015  
Tampa, FL 33620-5150

1) Two official transcripts in a sealed envelope from each post-secondary institution. Transcripts of work completed at USF will be secured by the Office of Admissions. Thus, applicants only need to secure transcripts from other institutions for the application packet.

2) Three letters of recommendation from faculty in sealed envelopes (on their university letterhead) with the envelope seal signed by the recommender. Students shall complete a Student Recommendation Form that can be found on the CMMB website and submit it to the recommenders.

3) A brief essay stating your intended field of research and professional goals. Please indicate your specific research interests, in order that we may refer your application to appropriate CMMB faculty members. In the essay please list 2-3 CMMB faculty members that you would like to have review your file.

4) Applicants must complete the Application for Teaching Assistantship (TA) Form that can be found on the CMMB or IB website if they wish to be considered for a TA position. Applicants who do not return this form will not be considered for a teaching position. Applicants should attach a resume to the Application for Teaching Assistantship (TA) Form that highlights any previous teaching experience.

5) OFFICIAL test scores must be sent to USF directly from the testing agency. The University of South Florida’s 4-Digit Institution Code is: 5828 Official GRE scores. This exam must have been taken within the last five years.
CURRICULUM REQUIREMENTS

Total Minimum Hours 30 hours

The thesis based M.S. degree requires successful completion of the following:

1. structured coursework
2. an oral qualifying exam
3. research thesis
4. comprehensive final examination

The Master’s Degree Requirements should be completed in two to three years. The CMMB Department requires that all graduate work applied toward the completion of degree requirements be completed within a five year period after matriculation. Thesis research should be publishable and students are encouraged to publish their findings. The specific requirements for the Master of Science (M.S.) in Microbiology are provided below

1. Credit hour requirement: 30 semester hour credits beyond the Baccalaureate Degree are required. (including: BSC6910, BSC 6971, BSC 6935 and other structured and unstructured courses approved by CMMB or IB)
2. Students admitted to the CMMB Department must complete three laboratory rotations during their first semester of residency.
3. Successful completion of the comprehensive qualifying examination. The exam should be taken at the end of the first year, or early in the second year of study. The examination is administered and evaluated by the student’s graduate committee.
4. Submission of a thesis proposal and approval by the major professor, graduate committee and graduate director.
5. A minimum of eight (8) thesis research credit hours (BSC 6971).
6. Seminar requirement: one presentation, excluding the thesis seminar and defense. Students should present posters or oral presentations based on their thesis research at national/regional professional meetings. The student’s graduate committee must approve the presentation.
7. Submission of an acceptable thesis.
8. Presentation of the thesis seminar (BSC 6935) and successful defense of the thesis.

M.S. in Microbiology Course Requirements

Required coursework

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSC 6930</td>
<td>Lectures in Contemporary Biology</td>
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</tr>
<tr>
<td>BSC 6932</td>
<td>Advances in Scientific Review</td>
<td>2</td>
</tr>
<tr>
<td>PCB 6956</td>
<td>Scientific Grant Writing</td>
<td>3</td>
</tr>
<tr>
<td>PCB 6930</td>
<td>Advances in Cell and Molecular Biology</td>
<td>1</td>
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Microbiology Electives*

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>MCB 5206</td>
<td>Public Health and Pathogenic Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>MCB 5655</td>
<td>Applied and Environmental Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>PCB 5335</td>
<td>Principles of Immunology</td>
<td>3</td>
</tr>
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<td>PCB 6236</td>
<td>Advanced Immunology</td>
<td>4</td>
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<tr>
<td>MCB 5815</td>
<td>Medical Mycology</td>
<td>3</td>
</tr>
<tr>
<td>BSC 5931</td>
<td>Molecular Microbial Ecology</td>
<td>3</td>
</tr>
<tr>
<td>BSC 5931</td>
<td>Prokaryotic Molecular Genetics</td>
<td>3</td>
</tr>
<tr>
<td>MCB 5410</td>
<td>Cellular Microbiology</td>
<td>3</td>
</tr>
</tbody>
</table>
Microbiology (M.S.)

PCB 5616 Molecular Phylogenetics 3
PCB 6525 Molecular Genetics 3
BSC 5420 Genetic Engineering and Recombinant DNA Technology 3
*The supervisory committee may approve additional courses not listed here

Comprehensive Oral Qualifying Examination.
A final comprehensive oral examination is required for all master’s students. This examination is open to all departmental faculty. Students must take their comprehensive exam within two years of matriculation and the exam is normally taken after the completion of all formal course work. Thesis students must take the examination at least one semester before the thesis is presented. Any graduate work counted toward the requirement for the M.S. degree must be completed within five (5) years after matriculation.

All thesis-based Master’s Degree students must present a seminar to the Department of CMBB and must be enrolled in BSC 6935, during the final semester. The seminar should be a concise summary of the research completed to satisfy the requirements for the M.S. Degree. The seminar is open to the general public and must be announced two weeks prior to the presentation. Upon completion of the seminar, the general public will be invited to ask questions. At the discretion of the student’s graduate committee, members of the committee may continue to question the graduate student after the general public has departed the seminar room. Each student is expected to defend his/her research to the unanimous satisfaction of the graduate committee.

M.S. in Microbiology Non-Thesis Option
Non-Thesis - For students enrolled in the non-thesis option, a 30-hour minimum is required at the 5000-6000 level; 26 hours must be in formally structured courses; 16 hours must be at the 6000 level; 15 structured hours must be offered by CMMB. A review paper of a topic approved by the supervisory committee is required as well as successful completion of the comprehensive qualifying exam after all course work has been completed. For non-thesis master’s students, this exam will occur at the end of the program of study.

Comprehensive Exam
The comprehensive qualifying exam after all course work has been completed. For non-thesis master’s students, this exam will occur at the end of the program of study.
Accelerated non-thesis BS/MS program in Microbiology

This program allows B.S. majors in Microbiology to take graduate courses for the elective part of the Microbiology degree and apply them to a non-thesis M.S. degree in Microbiology. Successful students will be able to earn the M.S. degree in two additional semesters beyond the completion of the B.S. degree.

This accelerated program shares 12 credits between already existing degrees/concentrations:
- B.S. in Microbiology
- M.S. in Microbiology (NT)

Target students and expected outcomes

This program will appeal to the more competitive Microbiology majors who would benefit professionally from having the M.S. when they enter the job market but do not want to commit to the longer time a thesis M.S. or a Ph.D. program takes to complete. Professions that do not require bench laboratory experience but desire the broadened knowledge base are targeted. Graduates from this program would be ideally suited for health professions, technology based industry, education and government. We also expect that some students will be interested in doctoral education in the biological or biomedical areas.

Description and Requirements

Microbiology majors who have completed the following courses may apply to this program:
- PCB 3023 Cell Biology
- PCB 3063 Genetics
- MCB 3410 Cell Metabolism
- MCB 3032 Microbiology
- MCB 4115C Determinative Bacteriology

Graduate Degree Requirements

Students admitted into the M.S. portion of the program must complete all the requirements for the M.S. degree (non-thesis) within three semesters of admission. The requirement is 30 hours of graduate work with at least 16 of these hours completed at the 6000 level; 26 hours must be formally structured courses; and at least 15 hours must be in CMMB courses. Students will be required to take 3 core courses from the list below as part of these 26 hours. Of the required 26 hours, 9 hours will be derived from the core-CMMB graduate courses listed below (see associated curriculum). These requirements can be partially met by up to 12 hours of graduate courses taken as undergraduates. Any graduate class taken outside of CMMB must be approved by the CMMB Graduate Director. Students should be aware that a B grade or better is required for every graduate class applied to the MS portion of their degree. In addition, students will be required to pass an oral qualifying exam based on a review paper submitted in their final semester. Students must form a committee as part of their action plan to complete their graduate work. This committee will be comprised of at least 3 CMMB faculty, and will serve as the examination committee for the review paper required as part of the MS portion of their degree. Upon approval of that paper, students must successfully complete a comprehensive oral exam by their committee.

Timeline and benchmarks:
1. Completion of prerequisite upper division courses and application to the accelerated program. Typically, students will be in their junior year.
2. Acceptance into the program and an action plan within a semester of application.
3. Students will take up to 12 credits of graduate credit in CMMB courses following acceptance into the program. Typically, these courses will be taken in the latter half of the junior year and in the senior year. BioAdvise will monitor the progress of the students and ensure they follow their action plan. Students who do not complete at least 9 hours of graduate work by graduation will be dropped from the accelerated M.S. program.
4. GRE exams will be taken in a timely manner so scores will be available for admission to the M.S. portion of the program. Students who do not complete the GRE in time will not be admitted to the accelerated M.S. major.
5. Students must apply for admission to the M.S. portion of the program in a timely manner (Fall admission deadline is February 15, Spring deadline is August 1).
6. Students admitted to the accelerated program must form a committee prior to the beginning of their first semester in the M.S. portion of the program and must continue to follow the action plan which will be monitored by BioAdvise.
7. Students admitted to the accelerated M.S. program must complete the requirements within three semesters or will be dismissed from the program.
## Model Curriculum for Accelerated Non-thesis MS/BS

### Year 1
BSC 2010, BSC 2011 with labs 8

### Year 2
- MCB 3410-Cell Metabolism 3
- PCB 3063-Genetics and lab 4
- PCB 3023-Cell Biology and lab 4
- MCB 3032-General Microbiology 4

### Year 3
- MCB 4115 Determinative Bacteriology 5
- 3 hour graduate elective structured course (5000) 3

### Year 4
- MCB 4320 Molecular Microbiology 3
- 9 hours of graduate elective courses (5000 or 6000) 9

### Year 5
- 18 hours of graduate courses
- 9 hours of which must be derived from the list below
  - BSC 6932 Virology
  - PCB 5525 Molecular Genetics
  - BSC 5420 Genetic Engineering
  - PCB 6236 Advanced Immunology 4
  - BSC 6932 Prokaryotic Molecular Genetics
  - MCB 5206 Public Health & Pathogenic Microbiology
  - MCB 5655 Applied & Environmental Microbiology
  - MCB 5818 Medical Mycology
  - BSC 6932 Immunology
- 4 hour non-structured (seminar, independent study, laboratory research)
- Oral exam and review paper done at the end of year 5

### COURSES
See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
PHILOSOPHY

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: January 2
Spring: October 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 30
Level: Masters
CIP Code: 38.0101
Dept. Code: PHI
Major/College Codes: PHI AS
Approved: 1971

CONTACT INFORMATION

College: Arts and Sciences
Department: Philosophy
Contact Information: www.grad.usf.edu
http://philosophy.usf.edu/

MAJOR INFORMATION

Contact department for information or visit http://philosophy.usf.edu/

Major Research Areas:
Aesthetics
Analytic Philosophy
Ancient Greek Philosophy
Continental Philosophy
Epistemology
Ethics & Contemporary Moral Philosophy
Feminist Philosophy
Medieval Philosophy
Modern Philosophy
Philosophy of Mind
Philosophy and Religion
Philosophy of Science
Social & Political Philosophy
19th and 20th Century Philosophy
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- three (3) letters of recommendation
- A ten (10) page philosophy writing sample
- Brief statement of the Applicant’s Philosophical Interests
- GRE scores

CURRICULUM REQUIREMENTS

Total Minimum hours: 30 hours

Core requirements: 6 hours

- Proseminar I
- Proseminar II

Students complete the remaining coursework either or through general course requirements by completing the Concentration:

Course Requirements: 24 hours

Students should take PHI 5135 Symbolic Logic or an approved substitute, OR pass an examination administered by the Department of Philosophy

Students must complete at least 24 hours of regularly scheduled coursework, with at least one course or graduate seminar in each of the following areas:

- Ancient and Medieval Philosophy
- Modern Philosophy
- 19th and 20th Century Philosophy
- Problems of Knowledge
- Problems of Value Theory
- Problems of Metaphysics

Courses are selected from the following list, or other course as approved by the Graduate Director:

PHH 6105 Seminar in Ancient Philosophy 3
PHH 6265 Continental Philosophy I: Phenomenology to Hermeneutics 3
PHH 6266 Continental Philosophy II: Political Theory and Continental Social Theory 3
PHH 6267 Continental Philosophy III: From Structuralism to Deconstructionism 3
PHH 6420 18th Century Philosophy 4
PHH 6435 17th Century Philosophy 4
PHH 6640 Contemporary Continental Philosophy 4
PHH 6938 Seminar in the History of Philosophy 3
PHI 5135 Symbolic Logic 3
PHI 5225 Philosophy of Language 3
PHI 5934 Selected Topics 1-3
PHI 6305 Seminar in Epistemology 3
PHI 6405 Seminar in the Philosophy of Natural Science 3
PHI 6425 Seminar in the Philosophy of Social Science 3
PHI 6506 Seminar in Metaphysics 3
PHI 6605 Seminar in Ethics 3
PHI 6634 Seminar in Biomedical Ethics 3
PHI 6665 Metaethics 3
### Philosophy (M.A.)

- **PHI 6706** Seminar in the Philosophy of Religion  
  - 3
- **PHI 6808** Seminar in Aesthetics  
  - 3
- **PHM 5125** Topics in Feminist Philosophy  
  - 3
- **PHM 5126** Social Issues in Biomedical Ethics  
  - 3
- **PHM 6105** Seminar in Social Philosophy  
  - 3
- **PHM 6305** Seminar in Political Philosophy  
  - 3
- **PHM 6406** Seminar in the Philosophy of Law  
  - 3
- **PHM 6506** Seminar in the Philosophy of History  
  - 3
- **PHM 6646** Seminar in Development Ethics  
  - 3
- **PHP 6005** Plato  
  - 3
- **PHP 6015** Aristotle  
  - 3
- **PHP 6400** Seminar on Descartes’ Philosophy  
  - 4
- **PHP 6415** Kant  
  - 3
- **PHP 6420** Seminar on Leibniz’s Philosophy  
  - 4
- **PHP 6500** Seminar on Hegel’s Philosophy  
  - 4
- **PHP 6520** Nietzsche and the Nietzscheans  
  - 4
- **PHP 6530** Seminar in German Idealism  
  - 4
- **PHP 6624** Adorno  
  - 4
- **PHP 6640** Foucault  
  - 4

### Concentration in Philosophy and Religion

Three core courses as follows:

- Pro-Seminar I and Pro-Seminar II
- **PHI 6706** Seminar in the Philosophy of Religion  
  - 3
- **RLG 6035** Theory and Methods in Religious Studies  
  - 4

### Course requirements

One (1) course from each of the following three areas:

#### Philosophy and Religion in Antiquity

- **PHH 6105** Seminar in Ancient Philosophy  
- **PHP 6005** Plato  
- **PHP 6015** Aristotle  
- **RLG 6327** Seminar: Ancient Religions and Literature  
  - 3
- **RLG 6938** Formative Christianity  
- **RLG 6938** Early Jewish Literature  
- **RLG 6285** Studies in Biblical Archaeology  
  - 3

#### Philosophy and Religion in the Medieval and Modern Periods

- **RLG 6938** Augustine’s Confessions  
- **RLG 6938** Medieval Christian Natural Theology  
- **PHH 6938** Seminar in History of Philosophy  
  - 3
- **PHP 6205** Seminar in Medieval Philosophy  
  - 4
- **PHP 6500** Seminar on Descartes’ Philosophy  
  - 4
- **PHH 6435** 17th Century Philosophy  
  - 4
- **PHH 6420** 18th Century Philosophy  
  - 4
- **PHP 6415** Seminar on Kant  
  - 3
- **RLG 6938** Modern Jewish Thought  
- **RLG 6938** Hermeneutics and Epistemology in Modern Religious Thought  

#### Philosophy, and Religion: Ethics, Politics, and Culture

- **PHI 6605** Seminar in Ethics  
  - 3
- **PHI 6634** Seminar in Biomedical Ethics  
  - 3
- **PHI 6665** Seminar in Metaethics  
  - 3
- **PHI 6605** Seminar in Ethics: Environmental Ethics  
- **RLG 6189** Comparative Religious Ethics  
  - 3
RLG 6938  Buddhist Ethics
PHH 6265  Continental Phil I: Phenomenology to Hermeneutics 3
PHH 6266  Continental Phil II: Political Theory and Continental Social Theory 3
PHH 6267  Continental Phil III: From Structuralism to Postmodernity 3
PHI 6425  Seminar in the Philosophy of Social Science 3
PHI 6808  Seminar in Aesthetics 3
PHM 5125  Topics in Feminist Philosophy 3
PHM 6105  Seminar in Social Philosophy 3
PHM 6305  Seminar in Political Philosophy 3
RLG 6126  Religion in America 3
RLG 6143  Religion, Culture, and Society 3
RLG 6196  Religion and Modernization 3
RLG 6938  Buddhism and Postmodernity 3
RLG 6938  Religious Issues in the Caribbean World 3

World Religions and Non-Western Philosophy
REL xxxx  Buddhism 3
REL xxxx  Comparative Philosophy of Religion 3
REL xxxx  Buddhism and Postmodernism 3
REL xxxx  Seminar in Confucianism 3
REL xxxx  Medical Philosophy: Chinese, Greek, Indian 3
REL xxxx  Comparative Mysticism 3
PHM 5125  Topics in Feminist Philosophy 3
PHI 6934  Selected Topics: Latin American Thought 3
RLG 6189  Comparative Religious Ethics 3
RLG 6938  Buddhist Ethics 3
RLG 6938  Religious Issues in the Caribbean World 3

Language Competency
Students writing about a text or texts written in a language other than English should demonstrate an elementary reading knowledge of that language. Students writing about a text or texts written in English should demonstrate an elementary reading knowledge of at least one other language in which one finds research or scholarship devoted to the text(s) being studied.

Comprehensive Examination
Students complete either PHI 6971 Thesis (3 credit hours) OR a comprehensive examination on a required list of readings constructed by the candidate and a committee of examiners

COURSES
See http://www.ugs.usf.edu/course-inventory/
PHILOSOPHY

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: January 2
Spring: October 15

Minimum Total Hours: 90
Level: Doctoral
CIP Code: 38.0101
Dept. Code: PHI
Major/College Codes: PHI AS
Approved: 1990

Concentration:
Philosophy and Religion

CONTACT INFORMATION

College: Arts and Sciences
Department: Philosophy
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

Contact department for information or visit http://www.cas.usf.edu/philosophy/index.html

Major Research Areas:
Aesthetics
Analytic Philosophy
Ancient Greek Philosophy
Continental Philosophy
Epistemology
Ethics and Contemporary Moral Philosophy
Feminist Philosophy
Medieval Philosophy
Modern Philosophy
Philosophy of Mind
Philosophy and Religion
Philosophy of Science
Social & Political Philosophy
19th and 20th Century Philosophy
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- three (3) letters of recommendation
- a ten (10) page philosophy writing sample
- GRE Scores
- A brief statement of the applicant’s philosophical interests

CURRICULUM REQUIREMENTS

Total Minimum hours: 90 hours

Once admitted, students must successfully complete at least 90 credit hours in accordance with the requirements below.

Requirements

Proseminar I and Proseminar II
Students should take PHI 5135 Symbolic Logic or an approved substitute, OR pass an examination administered by the Department of Philosophy

Coursework

Students must complete at least 44 hours of regularly scheduled coursework, with at least one course or graduate seminar in each of the following areas:

- Ancient and Medieval Philosophy
- Modern Philosophy
- 19th and 20th Century Philosophy
- Problems of Knowledge
- Problems of Value Theory
- Problems of Metaphysics

Courses are selected from the following list, or other course as approved by the Graduate Director:

PHH 6100 Seminar in Ancient Philosophy 3
PHH 6265 Continental Philosophy I: Phenomenology to Hermeneutics 3
PHH 6266 Continental Philosophy II: Political Theory and Continental Social Theory 3
PHH 6267 Continental Philosophy III: From Structuralism to Deconstructionism 3
PHH 6420 18th Century Philosophy 4
PHH 6435 17th Century Philosophy 4
PHH 6640 Contemporary Continental Philosophy 4
PHH 6938 Seminar in the History of Philosophy 3
PHI 5135 Symbolic Logic 3
PHI 5225 Philosophy of Language 3
PHI 5934 Selected Topics 1-3
PHI 6305 Seminar in Epistemology 3
PHI 6405 Seminar in the Philosophy of Natural Science 3
PHI 6425 Seminar in the Philosophy of Social Science 3
PHI 6506 Seminar in Metaphysics 3
PHI 6605 Seminar in Ethics 3
PHI 6634 Seminar in Biomedical Ethics 3
PHI 6665 Metaethics 3
PHI 6706 Seminar in the Philosophy of Religion 3
PHI 6808 Seminar in Aesthetics 3
PHM 5125 Topics in Feminist Philosophy 3
PHM 5126 Social Issues in Biomedical Ethics 3
PHM 6105  Seminar in Social Philosophy  3
PHM 6305  Seminar in Political Philosophy  3
PHM 6406  Seminar in the Philosophy of Law  3
PHM 6506  Seminar in the Philosophy of History  3
PHM 6646  Seminar in Development Ethics  3
PHP 6005  Plato  3
PHP 6015  Aristotle  3
PHP 6400  Seminar on Descartes Philosophy  4
PHP 6415  Kant  3
PHP 6420  Seminar on Leibniz’s Philosophy  4
PHP 6500  Seminar on Hegals’ Philosophy  4
PHP 6520  Nietzsche and the Nietzscheans  4
PHP 6530  Seminar in German Idealism  4
PHP 6624  Adorno  4
PHP 6640  Foucault  4

Language
Students writing about a text or texts written in a language other than English should demonstrate a reading knowledge of that language. Students writing about a text or texts written in English should demonstrate an elementary reading knowledge of at least two other languages in which one finds research or scholarship devoted to the text(s) being studied.

Doctoral Research
12 credit hours in area(s) of doctoral research

Comprehensive Exam
A comprehensive examination on a required list of readings constructed by the candidate and a committee of examiners

Dissertation
PHI 7980 Dissertation
A written prospectus for the dissertation and an oral defense of this prospectus.

Concentration in Philosophy and Religion

Once admitted, students must successfully complete at least 90 credit hours including the following requirements:

Three (3) Core Courses:
Pro-seminar I and Proseminar II
PHI 6706  Pro-Seminar in the Philosophy of Religion
REL 6035  Theory and Methods in Religious Studies

At least three courses from each of the following five areas:

A. Philosophy and Religion in Antiquity
   PHH 6100  Seminar in Ancient Philosophy
   REL 6327  Seminar in Ancient Literature
   REL xxxx  Formative Christianity
   REL xxxx  Early Jewish Literature
   REL 6285  Studies in Biblical Archaeology

B. Philosophy and Religion in the Medieval and Modern Periods
   REL xxxx  Augustine’s Confessions
   REL xxxx  Medieval Christian Natural Theology
   PHH 6205  Seminar in Medieval Philosophy
### Philosophy (Ph.D.)

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<tr>
<td>PHP 6400</td>
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<td>PHH 6435</td>
<td>Seminar in Seventeenth Century Philosophy</td>
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<td>REL xxxx</td>
<td>Modern Jewish Thought</td>
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<tr>
<td>REL xxxx</td>
<td>Hermeneutics and Epistemology in Modern Religious Thought</td>
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#### C. Philosophy and Religion: Ethics, Politics, and Culture

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<td>REL xxxx</td>
<td>Buddhist Ethics</td>
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<td>REL xxxx</td>
<td>Comparative Philosophy of Religion</td>
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<td>PHH 6265</td>
<td>Continental Phil I: Phenomenology to Hermeneutics</td>
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<td>PHH 6266</td>
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<td>PHH 6267</td>
<td>Continental Phil III: From Structuralism to Postmodernism</td>
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<td>Seminar in the Philosophy of Social Science</td>
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<td>Topics in Feminist Philosophy</td>
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<td>Religion, Culture, and Society</td>
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<td>Religion and Modernization</td>
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<td>Religious Issues in the Caribbean World</td>
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<td>African Philosophy</td>
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<td>Buddhism</td>
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<td>Medical Philosophy: Chinese, Greek, Indian</td>
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</tr>
<tr>
<td>REL 6178</td>
<td>Comparative Religious Ethics</td>
</tr>
<tr>
<td>REL xxxx</td>
<td>Buddhist Ethics</td>
</tr>
<tr>
<td>REL xxxx</td>
<td>Religious Issues in the Caribbean World</td>
</tr>
</tbody>
</table>

#### Language

Students writing about a text or texts written in a language other than English should demonstrate a reading knowledge of that language. Students writing about a text or texts written in English should demonstrate an elementary reading knowledge of at least two other languages in which one finds research or scholarship devoted to the text(s) being studied.

#### Doctoral Research

12 credit hours in area(s) of doctoral research.

#### Comprehensive Exam

A comprehensive examination on a required list of readings constructed by the candidate and a committee of examiners.
Dissertation
- A written prospectus for the dissertation and an oral defense of the prospectus.
- A written dissertation and an oral defense of this dissertation.

The dissertation committee will be composed of

a. Either a Major Professor appointed in both Philosophy and Religious Studies, or co-Major Professors, one of whom is appointed in Philosophy and the other of whom is appointed in Religious Studies; and

b. At least one other member from Philosophy and one from Religious Studies.

COURSES
See http://www.ugs.usf.edu/course-inventory/
PHYSICS

Master of Science (M.S.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 1
Spring: September 1
Summer: no admit

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 30
Level: Masters
CIP Code: 40.0801
Dept. Code: PHY
Major/College Codes: PHY AS
Approved: 1965

Concentrations:
Applied Physics (APM)
Atomic and Molecular Physics (AMZ)
Laser Physics (LPZ)
Materials Physics (MPZ)
Optical Physics (OPZ)
Semiconductor Physics (SCZ)
Solid State Physics (SSZ)

CONTACT INFORMATION

College: Arts and Sciences
Department: Physics
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

Contact department for information.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- three letters of recommendation
- a statement of purpose
- GRE General Test scores required, GRE Physics Subject Test scores recommended.
CURRICULUM REQUIREMENTS

Students admitted to the graduate major in Physics, will consult with the Physics Director of Graduate Studies, who will be the student’s course advisor and monitor the student’s progress. After a decision has been made concerning the student’s academic goals, the duties of graduate advising will be assumed by the major professor and the supervisory committee appointed by the department chairperson. In keeping with the student’s academic goals, the supervisory committee will determine the appropriate course of study and examinations required for graduation for both the thesis and non-thesis options.

A minimum of 30 hours is required for the master’s degree, at least 16 hours of which must be at the 6000 level. At least 20 hours must be in formal, regularly scheduled coursework, ten of which must be at the 6000 level.

Total Minimum Hours: 30 credit hours

Core Requirements 9 credit hours
Core courses: (All three are required)
   a) PHZ 5115 Mathematical Methods I 3
   b) PHY 6346 Electricity and Magnetism I 3
   c) PHY 6645 Quantum Mechanics I 3

Comprehensive Exam

Thesis option 15 credit hours
   At least four graduate-level elective classes (twelve credit hours), of which at least two must be within physics, plus nine credit hours of Master’s-Thesis as per the Graduate Catalog. Directed Research hours may satisfy up to 50% of the thesis hour requirement. Contact the program for a current list of approved electives.

Non-thesis option 21 credit hours
   At least five graduate-level elective classes (fifteen credit hours), of which at least three (9 credit hours) must be in physics. The remaining six credit hours may be earned through a combination of approved graduate level electives, approved graduate seminars, or directed research. Contact the program for a current list of approved electives.

Laboratory or Computing Experience
   The student, as part of their elective work or thesis, or through previous course work, should demonstrate either laboratory or computational experience.

COURSES
   See http://www.ugs.usf.edu/course-inventory/
PHYSICS (APPLIED PHYSICS) PROGRAM

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
- Fall: February 1
- Spring: September 1

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 57
Level: Doctoral
CIP Code: 40.0801
Dept. Code: PHY
Major/College Codes: APD AS
Approved: 1999

CONTACT INFORMATION

College: Arts and Sciences
Department: Physics
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

This major emphasizes the practical, engineering applications of theoretical and fundamental physical concepts. The major encompasses the areas of laser physics, materials physics, computational physics, environmental physics and sensors, biomedical physics and imaging science.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- three letters of recommendation
- a statement of purpose
- GRE General Test scores required, GRE Physics Subject Test scores recommended.

Students Entering with Prior Master’s Degrees from Other Institutions
Some prior coursework toward the class requirements outlined below may be counted. However, at least six classes approved by the Director of Graduate Studies must be completed at USF in a discipline related to the Ph.D. Degree.

CURRICULUM REQUIREMENTS

Total Minimum Hours: 57 credit hours

Requirements
- Core courses in theoretical and applied areas: 15 hours
- Lab or computer training: 3 hours
- Electives: 12 hours
- Industrial Practicum: 3 hours
- Dissertation Research (PHY 7980): 24 hours
Core courses – 15 hours

- PHZ 5115  3  Mathematical Methods I
- PHY 6346  3  Electricity and Magnetism I
- PHY 6645  3  Quantum Mechanics I
- PHY 6646  3  Quantum Mechanics II
- PHY 6536  3  Statistical Mechanics

Laboratory or Computer Experience – 3 hours

**Laboratory experience: 0–1 classes:**
This may be met, for example, by submitting an experimental thesis or dissertation, by: an approved graduate-level elective; submitting an experimental thesis or dissertation; or through sufficiently rigorous relevant experience (e.g., prior courses, industrial employment, etc.). Contact the department for a current list of approved courses.

**Computational experience: 0–1 classes**
This may be met, for example, by the following: an approved graduate-level elective; submitting a computational thesis or dissertation; or through sufficiently rigorous relevant experience (e.g., prior graduate or undergraduate courses, industrial employment, etc.). Contact the department for a current list of approved courses.

Electives – 12 hours
At least an additional 4 graduate-level classes, of which at least 2 are in Physics
Any graduate-level classes (excluding research and seminars) not used to fulfill other requirements. Contact the department for a current list of approved courses.

Industrial Practicum – 3 hours

- PHZ 7940  3  Industrial Practicum
Contact department for details

Doctoral Qualifying Examination:
The Doctoral Qualifying Examination consists of two parts: The Credentials Certification and the Dissertation Proposal. Following successful completion of these two parts, the student may submit the paperwork for doctoral candidacy. The student’s presentation of the Dissertation Proposal may occur at any time after successful completion of the Credentials Certification.

- **Credentials Certification**
The Student, in consultation with his/her research advisor, will assemble a supervisory committee consistent with the rules of the Office of Graduate Studies. It is the responsibility of the supervisory committee to evaluate the student’s academic and research accomplishments and potential according to departmental standards, and if these are met, to certify that the student may proceed to the next step. Contact the Department for details.

- **Dissertation Proposal** –
  To become a Ph.D. Candidate, the student must present a written dissertation proposal and successfully defend that proposal to the supervisory committee. Contact the Department for details.

Dissertation – 24 credit hours

- PHY 7980  (2-9)  Dissertation
The candidate will conduct original and significant research, describe that research and the results in a doctoral dissertation and defend that dissertation in an oral presentation to the supervisory committee. The defense is open to the public and must be scheduled according to the regulations of the Office of Graduate Studies.

COURSES
See [http://www.ups.usf.edu/course-inventory/](http://www.ups.usf.edu/course-inventory/)
POLITICAL SCIENCE

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: June 1
Spring: October 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 36
Level: Masters
CIP Code: 45.1001
Dept. Code: IGS
Major/College Codes: POL AS
Approved: 1969

Concentrations:
Africana Studies

CONTACT INFORMATION

College: Arts and Sciences
Department: School of Interdisciplinary Global Studies (SIGS)
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The graduate major leading to the M.A. in Political Science is designed to offer advanced general instruction in Political Science. It prepares its graduates for positions of responsibility in the public and private sectors, as well as in research, teaching, and study at the doctoral level.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- Undergraduate degree from a regionally accredited institution
- GRE required
- Three (3) letters of recommendation, preferably from an academic source
- A 500-word statement of academic interest
- Official transcripts
- Minimum GPA of 3.00
- Must have an undergraduate background in political science.

CURRICULUM REQUIREMENTS

Total Minimum Hours: 36 credit hours

Common Core – 12 credit hours
Major Field or Concentration 9 credit hours
Electives – 9 credit hours minimum
Thesis/Non-Thesis – 6 credit hours
For instructional purposes, the graduate curriculum in Political Science has been divided into four fields:

Field 1 Comparative Politics (courses with a CPO prefix)
Field 2 International Relations (courses with an INR prefix)
Field 3 American Government (Courses with a PUP, POS, or URP prefix)
Field 4 Political Theory (courses with a POT prefix)

Common Core Courses - 12 credit hours
POS 6735 Foundations of Political Inquiry (3)

Disciplinary Seminar Requirements
Select two:
- POS 6045 Seminar in American Government (3)
- POT 6007 Seminar in Political Theory (3)
- INR 6007 Seminar in International Relations (3)
- CPO 6091 Seminar in Comparative Politics (3)

Required Research Methods Sequence
Select one:
- POS 6746 Quantitative Analysis I (3)
- POS 6707 Qualitative Analysis (3)

Students may either choose a Major Field of study, or the concentration in Africana Studies

Major field - 9 credit hours
In addition to the core course in major area, three additional courses in the core area are chosen from American Government, Political Theory, International Relations, or Comparative Politics.

Concentration in Africana Studies - 9 credit hours
AFA 6932: Topics in Africana Studies (3)
AFA 6120: Social Theory and Social Thought (3)
AFA 6108: Social Construction of Race and Racism (3)

Electives - 9 credit hours minimum:
Electives include, but are not limited to:
- AFA 6207: African American Historiography
- AFA 6805: African Historiography
- AFA 6355: African American Community Research
- AFA 6387: Seminar on Genocide and Human Rights
- AFA 6932: Special Topics
- AFA 6905: Independent Study
- AFA 6910: Directed Research
- CPO 5934: Selected Topics in Comparative Politics (3)
- POS 6933: Selected Topics in Political Science (3)

Electives have to be approved by the Graduate Director. Other graduate courses may also be taken as electives, with approval by the Graduate Director.

Thesis/Non Thesis - 6 hours minimum

Thesis:
POS 6971 6 Thesis: Master’s
AFA 6971 6 Thesis: Master’s

Students must enroll in either POS 6971 or AFA 6971 (Africana Studies Concentration students) Thesis: Master’s for a minimum of 6 credit hours. In their thesis, students must provide new insight into a relevant topic in political science or
international studies. As students approach the thesis stage, they need to compose a thesis committee consisting of a major professor, who must be a member of the Department of Government and International Affairs, and two readers. One of the two readers can be from another department, but that person must first be approved by the Graduate Director. The thesis committee must approve proposals before students embark on their projects. Students must prepare a written thesis and defend their work in a formal oral presentation before their committee.

**Non-Thesis:**
Elective 3 Structured course approved by the Graduate Director

And one of the following:
- POS 6909 3 Independent Study (for students in a major field)
- AFA 6905 3 Independent Study (for students in the Africana Studies Concentration)

Students who choose a non-thesis option will be required to complete an additional 6 hours of course work at the 6000 level. The student is required to demonstrate competency by successfully completing a substantial literature review of approximately 50 pages in his or her major field, or in the Africana Studies Concentration.

**Comprehensive Examination**
For students in the thesis option, successful completion of the Thesis serves in lieu of the Comprehensive Exam. For students in the non-thesis option, the extensive literature review determines competency and serves as the equivalent of a comprehensive examination.

**Course Listings**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPO 5934</td>
<td>Selected Topics in Comparative Politics</td>
<td>3</td>
</tr>
<tr>
<td>CPO 6091</td>
<td>Seminar in Comparative Politics</td>
<td>3</td>
</tr>
<tr>
<td>CPO 6077</td>
<td>Social Movements</td>
<td>3</td>
</tr>
<tr>
<td>INR 5012</td>
<td>Globalization</td>
<td>3</td>
</tr>
<tr>
<td>INR 5086</td>
<td>Issues in International Relations</td>
<td>3</td>
</tr>
<tr>
<td>INR 6007</td>
<td>Seminar in International Relations</td>
<td>3</td>
</tr>
<tr>
<td>INR 6036</td>
<td>Seminar in International Political Economy</td>
<td>3</td>
</tr>
<tr>
<td>INR 6107</td>
<td>American Foreign Policy</td>
<td>3</td>
</tr>
<tr>
<td>LAS 6933</td>
<td>Seminar in Latin American Studies</td>
<td>3</td>
</tr>
<tr>
<td>POS 5159</td>
<td>Urban Policy Analysis</td>
<td>3</td>
</tr>
<tr>
<td>POS 6045</td>
<td>Seminar in American Government and Politics</td>
<td>3</td>
</tr>
<tr>
<td>POS 6127</td>
<td>Issues in State Government and Politics</td>
<td>3</td>
</tr>
<tr>
<td>POS 6455</td>
<td>Political Parties and Interest Groups</td>
<td>3</td>
</tr>
<tr>
<td>POS 6707</td>
<td>Qualitative Analysis</td>
<td>3</td>
</tr>
<tr>
<td>POS 6746</td>
<td>Quantitative Analysis I</td>
<td>3</td>
</tr>
<tr>
<td>POS 6735</td>
<td>Foundations of Political Inquiry</td>
<td>3</td>
</tr>
<tr>
<td>POS 6909</td>
<td>Independent Study</td>
<td>1-3</td>
</tr>
<tr>
<td>POS 6919</td>
<td>Directed Research</td>
<td>1-19</td>
</tr>
<tr>
<td>POT 6007</td>
<td>Seminar in Political Theory</td>
<td>3</td>
</tr>
<tr>
<td>POS 6971</td>
<td>Thesis: Master’s</td>
<td>2-19</td>
</tr>
</tbody>
</table>

Students may take a maximum of 3 credit hours of Independent Study (POS 6909) and 3 credit hours of Directed Research (POS 6919)

**COURSES**
See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
PSYCHOLOGY

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Students are not admitted to a terminal M.A. degree in Psychology. See deadlines for Ph.D. in Psychology

Minimum Total Hours: 30
Level: Masters
CIP Code: 42.0101
Dept. Code: PSY
Major/College: PSY AS
Approved: 1966

Concentrations:
Clinical Psychology (PSC)
Cognition, Neuroscience, and Social Psychology (PCN)
Industrial-Organizational Psychology (PSI)

CONTACT INFORMATION

College: Arts and Sciences
Department: Psychology
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The graduate faculty of the Psychology Department is divided into three broad concentrations: Clinical, Cognition, Neuroscience, & Social Psychology, and Industrial-Organizational. Each of these areas offers Ph.D. level training in the following areas of special expertise.


Cognition, Neuroscience, & Social Psychology – Behavioral Neuroscience, Cognition, Judgment and Decision Making, Development, Memory, Perception, Social. In addition, with faculty in Communication Sciences and Disorders, the Cognitive and Neural Sciences faculty offer a specialization in Speech/Language/Hearing Sciences.


Accreditation:
Clinical Program accredited by the American Psychological Association, Psychological Clinical Sciences Accreditation System, and member of the Academy of Psychological Clinical Science.

ADMISSION INFORMATION

Not a terminal MA. - Admission only through Ph.D.; see Ph.D. Requirements.
CURRICULUM REQUIREMENTS

The Department of Psychology does not admit students seeking a terminal M.A. degree in Psychology. Additional information is available in the Graduate Student Handbook: http://psychology.usf.edu/policies/students.aspx

Total Minimum Hours: 30 (B- or better for each required course)

Core requirements:
PSY 6971 Master’s Thesis 6
PSY 6217 Regression and Analysis of Variance 4

Two of the following:
EXP 6608 Cognitive Psychology 3
SOP 6266 Social Psychology 3
PSB 6056 Physiological Psychology 3

The remainder of the required hours is fulfilled by satisfying concentration requirements described below.

Concentration Requirements:

Clinical Psychology

Graduate Breadth Requirements: Students must take one course in each of the three Breadth areas: Biological Aspects of Behavior, Social Aspects of Behavior, and Cognitive/Affective Aspects of Behavior.

Biological aspects of behavior
PSB 6056 Physiological Psychology 3
CLP 6937 Human Neuropsychology 3
CLP 7379 Health Psychology 3
EXP 7099 Psychopharmacology 3
EDF 6938 Pediatric Psychopharmacology 3
EXP 7099 Graduate Seminar: Psychophysiology 3
EXP 7099 Graduate Seminar: Survey of Neuroscience 3

Social aspects of behavior
SOP 6266 Social 3
PSY 6266 Psychology of Gender 3
EXP 7099 Stress and Coping 3
INP 6935 Organizational Psychology 3
EXP 7099 Graduate Seminar: Social and Personality Development 3
EXP 7099 Graduate Seminar: Social Psychology of Interpersonal Relationships 3

Cognitive and affective aspects of behavior
EXP 6608 Cognitive 3
EXP 7099 Memory 3
EXP 7099 Forgetting 3
CLP 7379 Emotion and its Disorders 3
CLP 7379 Mood Disorders 3
EXP 7099 Graduate Seminar: Image and Mind 3
EXP 7099 Graduate Seminar: Cognitive Neuroscience of Perception 3

Graduate Research Methods Requirements
All clinical students are required to take a total of four graduate research methods courses.

PSY 6217 ANOVA/Regression plus lab 4
SOP 7265 Multivariate Statistics (or equivalent outside of department)
PSY 6217/SOP 6266 Clinical Psychometrics (or equivalent outside of department)
Plus ONE additional research methods course (3 credits). Students may choose from the list of approved courses below. Students wishing to fulfill this methods requirement with any course not listed below must submit a request to the clinical faculty.

SOP 6266 Factor Analysis 3
SOP 6266 Structural Equation Modeling 3
SOP 6266 Meta-Analysis 3
EXP 7099 Developmental Research Methods 3
CLP 6937 Grant Writing 3
SOP 6266 Item Response Theory 3
SOP 6266 Hierarchical Linear Modeling 3

Clinical Core Requirements
Clinical Didactic Courses: Students need to take at least one “fundamental” course in each of the three areas assessment, interventions, and psychopathology.
CLP 6438 Clinical Assessment
CLP 7188 Clinical Interventions
CLP 6166 Psychopathology and its Development

Specialized Topic Course Requirements:
Students must also complete four courses in specialization topics related to psychological assessment, intervention, and psychopathology/dysfunction. The following courses would fulfill this requirement:

CLP 6937 Neuropsychological Assessment 3
CLP 6937 Prevention science 3
CLP 7379 Emotion and its disorders 3
CLP 7379 Mood disorders 3
CLP 7379 Eating disorders 3
CLP 7379 Addictions 3
CLP 7379 Health Psychology 3
CLP 7379 New Paradigms in Psychology 3
CLP 7379 Cultural Diversity 3
CLP 7379 Advanced Psychological Intervention Seminar/Specialized Treatments 3
PSY 6946 Advanced Psychological Assessment Seminar 3
CLP 7379 Clinical Science Seminar 3

Clinical Practicum
PSY 6946 (1 hour per semester beginning the second year of graduate training)

Other course requirements:
PSY 6946 Skills for Psychological Intervention 2
CLP 6937 Introduction to Clinical Psychology/Cultural Diversity Pro-Seminar 3
PSY 7931 Ethics and Professional Problems 2

Research Requirements:
PSY 6971 Thesis 6
Concentration Requirements:

**Cognition, Neurosciences, & Social Psychology**

**Prior to the Comprehensive Exam**
Total Minimum Hours: 30

**Core Requirements (16 hours)**
At least a B- in a minimum of two of the following:
Cognitive Psychology (3), Physiological Psychology (3), or Social Psychology (3).
Students may be allowed to substitute an advanced three-hour course for one or both of these courses with the written permission of the CNS Area Director. (6 total hours)

Two basic methods courses with grades of at least B-: Analysis of Variance (4) and Regression (4). (8 total hours)
Introduction to CNS (2 semesters, 1 hour each)

**Concentration Requirements (6 hours)**
* A minimum of two seminars or advanced courses in cognition, neuroscience, or social psychology from CNS faculty or, with written permission of the Area Director, related disciplines with grades of at least B-.

**Total Thesis Hours Required (6 hours)**
Master’s thesis research (minimum 6 PSY6971 Thesis: Master’s or PSY6917 Directed Research credits – it is recommended that students take thesis credits in order to retain the option of applying for a master’s degree).

Concentration Requirements:

**Industrial-Organizational Psychology**

**I/O Concentration Requirements (30 hours)**

- EXP 6608 Cognitive Psychology 3
- SOP 6669 Personality 3
- SOP 6058 Social Psychology 3
- INP 6935 Personnel Psychology 3
- INP 6935 Organizational Psychology 3
- PSY 7931 Ethics and Professional Problems 3
- INP 7097 Research in I/O Psychology 1 (2 times)
- SOP 6669 Psychometrics 3
- PSY 6217 ANOVA - Multiple Regression 4
- SOP 6669 Organizational Research Methods 3
- PSY6971 Thesis: Master’s 6

**COURSES**
See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
PSYCHOLOGY

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: December 1

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 90
Level: Doctoral
CIP Code: 42.0101
Dept. Code: PSY
Major/College Codes: PSY AS
Approved: 1971

Concentrations:
Clinical Psychology (PSC)
Cognition, Neuroscience, & Social Psychology (PCN)
Industrial-Organizational Psychology (PSI)

CONTACT INFORMATION

College: Arts and Sciences
Department: Psychology
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Psychology Department graduate major is divided into three broad concentrations: Clinical, Cognition, Neuroscience, & Social Psychology, and Industrial-Organizational. Each of these areas offers Ph.D. level training in the following areas of special expertise:

Clinical

Cognition, Neuroscience, & Social Psychology
Behavioral Neuroscience, Cognition, Judgment and Decision Making, Development, Memory, Perception, Social. In addition, with faculty in Communication Sciences and Disorders, the CNS faculty offers a specialization in Speech/Language/Hearing Sciences.

Industrial-Organizational

Accreditation:
Clinical Program is accredited by American Psychological Association, Psychological Clinical Sciences Accreditation System, and member of the Academy of Psychological Clinical Science.
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- a personal goals statement
- three letters of recommendation
- strong preference for GRE V and Q scores each at the 50th percentile or better
- an upper division undergraduate GPA 3.4 or better.

CURRICULUM REQUIREMENTS

After completion of all M.A. requirements in Psychology or its equivalent with a minimum GPA of 3.00, the following requirements must be met:

Total Minimum Hours: 12

- Successful completion of the Ph.D. Comprehensive Qualifying Exam (CL, CNS, IO) or major area paper (CL, CNS).
- PSY 7980 Doctoral Dissertation (12)
- Successful Defense of the Doctoral Dissertation

Additional information is available in the Graduate Student Handbook: [http://psychology.usf.edu/policies/students.aspx](http://psychology.usf.edu/policies/students.aspx)

Concentration Requirements:

**Clinical Psychology**

Graduate Breadth Requirements:
Students must take one course in each of the three Breadth areas: Biological Aspects of Behavior, Social Aspects of Behavior, and Cognitive/Affective Aspects of Behavior.

**Biological aspects of behavior**
PSB 6056 Physiological Psychology 3
CLP 6937 Human Neuropsychology 3
CLP 7379 Health Psychology 3
EXP 7099 Psychopharmacology 3
EDF 6938 Pediatric Psychopharmacology 3
EXP 7099 Psychophysiology 3
EXP 7099 Survey of Neuroscience 3

**Social aspects of behavior**
SOP 6266 Social 3
PSY 6266 Psychology of Gender 3
EXP 7099 Stress and Coping 3
INP 6935 Organizational Psychology 3
EXP 7099 Social and Personality Development 3
EXP 7099 Social Psychology of Interpersonal Relationships 3

**Cognitive and affective aspects of behavior**
EXP 6608 Cognitive 3
EXP 7099 Memory 3
EXP 7099 Forgetting 3
CLP 7379 Emotion and its Disorders 3
CLP 7379 Mood Disorders 3
EXP 7099 Image and Mind 3
EXP 7099  Cognitive Neuroscience of Perception  3

**Graduate Research Methods Requirements**
All clinical students are required to take a total of four graduate research methods courses.

PSY 6217 ANOVA/Regression plus lab  4
SOP 7265 Multivariate Statistics (or equivalent outside of department)  -
PSY 6217/SOP 6266 Clinical Psychometrics (or equivalent outside of department)  -

Plus ONE additional research methods course (3 credits). Students may choose from the list of approved courses below. Students wishing to fulfill this methods requirement with any course not listed below must submit a request to the clinical faculty:

SOP 6266  Factor Analysis  3
SOP 6266  Structural Equation Modeling  3
SOP 6266  Meta-Analysis  3
EXP 7099  Developmental Research Methods  3
CLP 6937  Grant Writing  3
SOP 6266  Item Response Theory  3
SOP 6266  Hierarchical Linear Modeling  3

**Clinical Core Requirements**
Clinical Didactic Courses: Students need to take at least one “fundamental” course in each of the three areas (assessment, interventions, and psychopathology).

CLP 6438  Clinical Assessment  -
CLP 7188  Clinical Interventions  4
CLP 6166  Psychopathology and Its Development  3

**Specialized Topic Course Requirements:**
Students must also complete four courses in specialization topics related to psychological assessment, intervention, and psychopathology/dysfunction. The following courses would fulfill this requirement:

CLP 6937  Neuropsychological Assessment  3
CLP 6937  Prevention science  3
CLP 7379  Graduate Seminar: Emotion and its disorders  3
CLP 7379  Graduate Seminar: Mood disorders  3
CLP 7379  Graduate Seminar: Eating disorders  3
CLP 7379  Graduate Seminar: Addictions  3
CLP 7379  Graduate Seminar: Health Psychology  3
CLP 7379  Graduate Seminar: New Paradigms in Psychology  3
CLP 7379  Graduate Seminar: Cultural Diversity  3
CLP 7379  Graduate Seminar: Advanced Psychological Intervention Seminar/Specialized Treatments  3
PSY 6946  Advanced Psychological Assessment Seminar  3
CLP 7379  Graduate Seminar: Clinical Science Seminar  3

**Research Requirements:**
PSY 6971  Thesis  6
PSY 7980  Dissertation  12

**Internship Requirements:**
Each student in the Clinical Concentration is required to complete a one-year, full-time, APA-approved (or CPA approved) internship in a training facility approved by the Department.

**Comprehensive Exams/Major Area Paper Requirements**
Cognition, Neurosciences, and Social Psychology

Prior to the Comprehensive Exam

Total Minimum Hours: 30

Core Requirements (16 hours)
At least a B- in a minimum of two of the following:
Cognitive Psychology (3), Physiological Psychology (3), or Social Psychology (3).

Students may be allowed to substitute an advanced three-hour course for one or both of these courses with the written permission of the CNS Area Director. (6 total hours)

Two basic methods courses with grades of at least B-: Analysis of Variance (4) and Regression (4). (8 total hours)

Introduction to CNS (2 semesters, 1 hour each)

Concentration Requirements (6 hours)
A minimum of two seminars or advanced courses in cognition, neuroscience, or social psychology from CNS faculty or, with written permission of the Area Director, related disciplines with grades of at least B-.

Total Thesis Hours Required (6 hours)
Master’s thesis research (minimum 6 PSY6971 Thesis: Master’s or PSY6917 Directed Research credits –it is recommended that students take thesis credits in order to retain the option of applying for a master’s degree).

Doctoral Requirements (in addition to the requirements for the M.A. degree) (33 more hours)

Elective requirements (21 hours)
Completion of at least four additional seminars or advanced courses that are relevant to the student’s area of research specialization. Of the six courses that are the required minimum for the doctorate (2 before admission to doctoral candidacy), at least three must be offered in the Psychology Department. Students may substitute the third core course (Cognitive, Physiological, or Social) for one of the six with the written permission of the Area Director. At least two of the courses must be outside the student’s concentration and will serve as the minor. These fulfill the minor requirement and must be approved by the Graduate Committee.

* Completion of at least three additional advanced methods courses. These fulfill the tools of research requirement, which must be approved by the Graduate Committee. Methods courses are those that deal primarily with research design, data collection techniques, quantitative or qualitative analytic methods, or instrumentation.

Comprehensive/Qualifying Exam Requirements
Students must pass a comprehensive examination or major area paper.

* Admission to doctoral candidacy.
* PSY 7980 Dissertation (minimum of 12 dissertation credits).

Industrial-Organizational Psychology

EXP 6608 Cognitive Psychology  3
SOP 6709 Topics in Social Psychology: Personality  3
SOP 6068 Personality and Social Psychology  3
INP 6935 Personnel Psychology  3
INP 6935 Organizational Psychology  3
PSY 7931 Ethics and Professional Problems  3
INP 7097 Research in I/O Psychology  1 (2 times)
SOP 6709 Topics in Social Psychology: Psychometrics  3
PSY 6217 ANOVA - Multiple Regression  4
SOP 6709 Topics in Social Psychology: Organizational Research Methods  3

http://www.cas.usf.edu/
PSY 6971--Thesis: Master’s 6

In addition to the requirements for the M.A. degree:
2 additional elective graduate methods courses (3 hours each)
7 additional elective graduate courses (3 hours each)
2 graduate course minor (3 hours each) – work done outside of students concentration
6 month part-time, 3 month full-time internship
Submission of M.A. thesis or equivalent to conference or journal
Comprehensive/qualifying examination

PSY 7980 Dissertation: Doctoral 12

COURSES
See http://www.ugs.usf.edu/course-inventory/
PUBLIC ADMINISTRATION

Master of Public Administration (M.P.A.) Degree

DEGREE INFORMATION

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<td>Summer:</td>
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International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 36
Level: Masters
CIP Code: 44.0401
Dept. Code: SPF
Major/College Codes: PAD AS
Approved: 1977

Also offered as:
A Doctoral Minor in Public Administration

CONTACT INFORMATION

College: Arts and Sciences
Department: School of Public Affairs
Contact Information: www.grad.usf.edu

Other Resources:
www.spa.usf.edu Traditional Program
http://onlinempa.usf.edu/ Exec. MPA Concentration

MAJOR INFORMATION

The Public Administration Major offers a multi-disciplinary course of study leading to the Master of Public Administration (M.P.A.). The M.P.A. degree is designed primarily to prepare students for successful leadership roles and management careers in the public (i.e., governmental and quasi-governmental organizations) and non-profit sectors. Students enrolled in the M.P.A. pursue careers in local, state, or federal agencies of government, non-profit organizations, and special service districts. Additionally, the M.P.A. degree prepares individuals for further academic study leading to a doctorate in Public Administration, a Ph.D. in Public Policy and Administration, as well as a variety of other disciplines. Those employed in public management positions may wish to pursue the M.P.A. in order to broaden educational backgrounds to prepare for increased job responsibilities, or to change career paths. Such in-service students currently make up the majority of the M.P.A. student body.

The Public Administration Major also offers courses of study leading to a Graduate Certificate in Public Management (G.C.P.M.), and Graduate Certificate in Nonprofit Management (G.C.N.M.). These options are designed for individuals who wish to acquire knowledge of public and nonprofit management theory and practices, but who do not find it necessary or feasible to pursue the M.P.A. degree. The M.P.A. Major also serves pre-service students who have recently completed a bachelor’s degree, who wish to gain entry to a professional career track. Students admitted to the M.P.A. are not eligible for the Graduate Certificate in Public Management.

Accreditation:
Accredited by the the National Association of Schools of Public Affairs and Administration (NASPAA).
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

Admission decisions to the M.P.A. Major are based on an overall assessment of the applicant’s potential for successfully completing the M.P.A. degree. General admission criteria include scores obtained on the Graduate Record Examination (GRE), performance as an undergraduate.

Specific criteria are:

- Two letters of recommendation, one from a faculty member familiar with the applicant's academic performance and potential. Should the applicant be unable to provide the letter from a former professor, with the director’s approval, letters from other sources will be accepted.

- The submission of a one-page career statement detailing the applicant's career goals and aspirations, including ways in which the applicant believes the M.P.A. degree can help to facilitate the stated goals.

- The submission of a Resume showing work experience.

- Approval by the M.P.A. Admissions Committee and, if deemed necessary, an admissions interview.

- GRE is recommended with preferred scores of 60% V, 25% Quantitative and 4.0 AW. This provision applies to all applicants, including those who have already completed courses in the MPA curriculum. Regardless of GPA, those who score below 20 percentile on either the verbal or quantitative sections on the GRE are required to retake the exam. However, at the discretion of the MPA faculty, it may be waived under certain conditions. Examples where GRE requirements may be waived include:
  - Applicant already possesses a graduate degree from a regionally accredited university
  - Applicant has a 3.25, or higher, undergraduate GPA
  - Five years or more of practical, professional experience at a senior level (to be determined upon review of documentation by the admissions committee)
  - Documentation of past experience through letters of recommendation from senior management, and
  - Completion of the Graduate Certificate in Public Management, or Graduate Certificate in Non-profit Management with a grade point average of 3.5/4.0 or better in the Certificate and no certificate course grade less than a B-.

CURRICULUM REQUIREMENTS

Total Minimum Hours: 42 hours

Traditional MPA - 42 hours minimum
Core – 21 hours
Course requirement – 3 hours
Electives – 15 hours
Capstone – 3 hours
Internship (if required) – 3 hours
Core Requirements - 21 hours
PAD 6060 3 Public Administration Theory and Practice
PAD 6041 3 Ethics and Public Service
PAD 6227 3 Public Budgeting
PAD 6307 3 Policy Analysis, Implementation, and Program Evaluation
PAD 6703 3 Quantitative Aids for Public Managers
PAD 6710 3 Public Information Management
PAD 6275 3 Political Economy for Public Managers

Traditional M.P.A. Requirements
In addition to the 21 hours of Core requirements, students in the traditional path are required to complete:

Course requirements - 3 hours
PAD 6417 3 Human Resources Management

Electives - 15 credit hours
Each student must take 15 elective credit hours depending on the exit option chosen. Students should refer to the MPA website http://www.cas.usf.edu/pad/index.html http://www.spa.usf.edu for courses approved by the Department. Students wishing to take courses from outside this list must obtain approval before registering. Students must maintain an overall GPA of 3.00 or better in all of their coursework during the major.

Internship – 3 credit hours minimum
PAD 6946 Internship in Public Administration
Pre-service students are required to complete a supervised internship in a governmental or non-profit organization. Internships provide students the opportunity to gain valuable experience in the public sector, thereby enhancing the academic course of study. Internship credits must be earned while the student is in residence and before the student has completed regular course work requirements. Exceptions to this rule can only be made by the M.P.A. Director and must be made in advance. In-service students, who have appropriate managerial/work experience commensurate with their career goals, may not be required to complete an internship. After consultation with the student, the M.P.A. Director may choose to waive the internship requirement.

Comprehensive Exam

Exit Requirements

Capstone Course (3 credit hours)
PAD6056, The Practice of Public Management, is a final step before graduation. The course is designed to provide students with the opportunity to apply their knowledge, leadership, communication, and decision-making skills acquired during the MPAMajor. This course is designed to challenge students to demonstrate their capability in synthesizing and integrating conceptual frameworks, and relate these skills to managerial or administrative situations. To be eligible for the Capstone course, students must be in their last semester or have completed a minimum of 13 courses and must have completed PAD 6060. A minimum grade of “B-” must be earned in the Capstone Course. Students who transfer before completing all of the requirements for the MPA at USF will need to enroll into a capstone class at another NASPAA accredited institution with prior approval provided by the Director of Public Administration. An Independent Research class cannot be substituted for PAD 6056 The Practice of Public Administration.

Doctoral Minor in Public Administration
Students enrolled in doctoral level courses of study in other majors (e.g., Anthropology, Psychology, Education) can, with their department’s approval, complete a doctoral minor in Public Administration. Students should complete a minimum of four graduate public administration courses to be determined with the advice and consent of an M.P.A. faculty member or M.P.A. Director.

COURSES
See http://www.ups.usf.edu/course-inventory/
RELIGIOUS STUDIES

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15
Spring: October 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Dept. Code: REL
Level: Masters
CIP Code: 38.0201
Minimum Total Hours: 30
Major/College Codes REL AS
Approved: 1980

CONTACT INFORMATION

College: Arts and Sciences
Department: Religious Studies
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The M.A. degree in Religious Studies provides opportunities for students with backgrounds in the scholarly study of religion to expand their knowledge of the social, cultural, intellectual, and historical contexts of religion, to develop a greater in-depth knowledge of particular religious traditions, and to acquire proficiency with a variety of pertinent methodologies and theoretical perspectives. The degree serves the needs of students who pursue careers in health professions in education, journalism, law, business, politics, and social work. It will be of special value to those interested in pursuing a doctorate in religious studies.


ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below:

- Three (3) letters of recommendation, and
- A writing sample
- A personal statement (1-3 pages, double-space)
- GRE required, but no minimum specified

CURRICULUM REQUIREMENTS

Students select a major professor and develop a plan for completing a minimum of 30 credit hours. The thesis track requires six (6) of these credits be devoted to a thesis project. The non-thesis track requires that all 30 credits come from graduate seminars. The plan of study is subject to approval of the Graduate Committee. A majority of these courses will be in religious studies, although the plan may include approved courses in other departments. There is no uniform language requirement; however, language skills may be required for particular areas of study. All students are required to satisfactorily complete a written, comprehensive examination wherein they demonstrate competence in:
1) pertinent theoretical issues and research methodologies;  
2) the analysis and interpretation of related texts, artifacts, and activities; and  
3) social and historical contexts of the religions studied.

The Department of Religious Studies “Graduate Student Handbook” should be consulted for additional information about basic requirements and specific procedures.

**Total Minimum hours - 30 hours**

**Core Requirements - 15 hours**
- RLG 6035 Theory and Methods in Religious Studies 3
- Six (6) hours of courses in Western Religions (Christianity, Judaism, or Islam) 6
- Six (6) hours of courses in Eastern Religions (Hinduism, Buddhism, Daoism, or Confucianism) 6

**Electives - 15 minimum**
No more than six (6) hours may come from independent study/directed reading. 
No more than six (6) hours may come from departments other than Religious Studies.

**Comprehensive Exam**

**Thesis/Non-Thesis**

**Thesis – 6 hours**
- REL 6971 6 Thesis
  
  The student wishing to receive an M.A. degree with a thesis is required to take a minimum of 30 credits. They will complete the core requirements and at least fifteen (15) hours of elective credits. They will also complete a minimum of six (6) credits of REL 6971. The student will pass a comprehensive exam prior to defending the master’s thesis. They will research, write, and successfully defend the master’s thesis before a committee of three professors.

**Non-Thesis**
- The student wishing to receive an M.A. degree without a thesis is required to take a minimum of 30 credits. The student will complete the core requirements and at least nine (9) hours of elective credits. The student will also pass a comprehensive exam.

**COURSES**

See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
RELIGIOUS STUDIES / EDUCATION

Concurrent Degrees:
Master of Arts (M.A.)/ Master of Arts (M.A.)

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<td>Priority Admission Application Deadlines:</td>
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<td>Program (Major/College): REL AS</td>
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Currently, no students are being admitted to this major.
SOCIOLoGY

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 36
Level: Masters
CIP Code: 45.1101
Dept. Code: SOC
Major/College Codes: SOC AS
Approved: 1967

CONTACT INFORMATION

College: Arts and Sciences
Department: Sociology
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Sociology M.A. provides a foundation in a broad range of sociological theories and research methods and an opportunity for pursuing specialized interests in elective Sociology courses, courses in other departments, and thesis research. Many of our M.A. recipients continue in a sociology Ph.D.. Others teach in secondary schools and junior colleges, are employed in mental health services and research, in human resources management, and government organizations, or work as research consultants and market analysts.

Major Research Areas:
Community and Identity Studies, Cultural Sociology, Social Psychology, Emotions, Family, Sex and Gender, Race/Ethnic/Minority Relations, Religion, Deviant Behavior/Social Disorganization, Science and Technology, Qualitative Methodology

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- three letters of recommendation
- personal statement
- a writing sample that demonstrates strong scholarly research
- GRE required – preferred scores of 153V (500V), 144Q (500Q)
- Official Transcripts
- TOEFL. Applicants whose first language is not English must also submit a score of at least 600 on the Tests of English as a Foreign Language (TOEFL).
CURRICULUM REQUIREMENTS

Total Minimum Hours: 36

The Sociology Department requires a thesis for the capstone course. Six of the required 36 hours are taken as thesis hours.

Core Requirements (9 hours)
SYA 6126  Contemporary Sociological Theory  3
SYA 6305  Methods of Research  3
SYA 6405  Sociological Statistics  3

Electives (21 hours)
The 21 hours of electives must include at least 12 hours in scheduled graduate courses in Sociology). With approval of the Graduate Director, a student may transfer up to six (6) hours of credit from another university or up to 12 hours of credit taken as a non-degree seeking student at USF. With Graduate Director’s approval, up to nine (9) hours of elective credit may be taken in a department other than Sociology.

Comprehensive Exam

Thesis (6 hours)
SYA 6971  6 credit hours

COURSES
See http://www.ugs.usf.edu/course-inventory/
SOCIOLOGY

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: January 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 60 (post masters)
Level: Doctoral
CIP Code: 45.1101
Dept. Code: SOC
Major/College Codes: SOC AS
Approved: 2009

CONTACT INFORMATION

College: Arts and Sciences
Department: Sociology

Contact Information: www.grad.usf.edu

MAJOR INFORMATION

Contact department for information.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below. Note: meeting these minimum requirements does not guarantee admission into the major. Applicants must have:

- Three letters of reference
- Personal Statement
- Example of Written Work
- GRE Required – preferred scores 160V (600V), 144Q (500Q)

CURRICULUM REQUIREMENTS

Total Minimum Hours: 60 credit hours post-Masters

Pre-Requisites/M.A. Requirement
- Research Methods
- Statistics
- Sociological Theory
- Elective Courses (21 hours)
- Thesis (6 hours)
  36 hours

Interdisciplinary Core
- Interdisciplinary Professional Seminar (required as a first course for all students)
- Capstone Interdisciplinary Seminar (Required as a final course for all students)
  6 hours

Disciplinary Requirements
- SYA 7515 Advanced Research Methods and Study Design 3
- SYA 7019 Advanced Sociological Theory 3
  6 hours*
Specialty Research Methods course
A research methods course in any discipline chosen in consultation with advisor

Electives within Sociology
Sociology graduate courses chosen in consultation with advisor

Interdisciplinary Electives
Courses in at least two departments outside Sociology chosen in consultation with faculty advisor.

Dissertation Proposal Preparation
SYA 7988 Dissertation Proposal

Dissertation
SYA 7980 Dissertation

Total Credit Hours (beyond the M.A.)

Other Requirements

Comprehensive Exam
*Note: Students also are required to complete a comprehensive exam upon completion of the 9-credit core requirements. The exam will measure theoretical and methodological knowledge, preparation for further coursework, and ability to successfully defend a dissertation proposal. Dissertation proposal defense will occur after the remaining elective requirements and dissertation proposal preparation requirements have been completed.

Graduate Requirements
A minimum cumulative graduate GPA at USF of 3.00 and successful completion and defense of a Ph.D. comprehensive exam, dissertation proposal, and dissertation.

COURSES
See http://www.ugs.usf.edu/course-inventory/
SPANISH

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15
Spring: October 15
Summer: February 15

Minimum Total Hours: 36
Level: Masters
CIP Code: 16.0905
Dept. Code: WLE
Major/College Codes: SPA AS
Approved: 1967

CONTACT INFORMATION

College: Arts and Sciences
Department: World Languages
Contact Information: www.grad.usf.edu
Other Resources: www.cas.usf.edu/languages/

MAJOR INFORMATION

The Spanish Section of the Department of World Languages supports a broad, intellectually-driven approach to teaching language, culture, and literature in higher education. Languages and cultures are complex, multifunctional phenomena that link an individual to other individuals, to communities and to national cultures. The graduate major in Spanish offers students academic and practical training in the languages, literatures and cultures of the Spanish-speaking communities of Spain, Latin America, and the United States. Students who receive a Masters of Arts in Spanish from the Department of World Language Education at USF become well-educated communicators with deep translingual and transcultural competence. Thus, they are exceptionally prepared to either continue studies leading to the Ph.D., or find careers in related fields such as the teaching profession, translation, government, civil service agencies, legal and paralegal services, or foreign and domestic business enterprises.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- An undergraduate 3.00 GPA
- 2-3 letters of recommendation
- A two-page statement of purpose in Spanish
- An oral interview in Spanish (can be done by phone, video, Skype, etc.)
- If degree is from abroad student must pass TOEFL with a score of at least 213 (computer-based test), 79 (internet-based test), or 550 (paper-based test).
- Approval from the Graduate Director in case of degree from another discipline

International applicant deadlines:
http://www.grad.usf.edu/majors
CURRICULUM REQUIREMENTS

Total Minimum Hours 36

Core Requirements – 3 hours
SPW 6806 Introduction to Hispanic Graduate Studies 3

Courses - 33 hours
Select courses from
- SPW 5135 Colonial Spanish American Literature 3
- SPW 5339 Golden Age Drama 3
- SPW 5375 Latin American Short Story 3
- SPW 5387 Spanish American Prose 3
- SPW 5405 Medieval Literature 3
- SPW 5465 19th Century Literature 3
- SPN 5525 Modern Spanish American Civilization 3
- SPW 5597 Latin American Culture in Fantastic Literature & Film 3
- SPW 5605 Cervantes 3
- SPW 5725 Generation of 1898 3
- SPW 5934 Selected Topics 3
- SPW 6427 Golden Age Novel 3
- SPW 6485 Post Civil War Literature 3
- SPN 6845 History of the Spanish Language 3
- SPN 6846 Spanish Paleography & Textual Criticism 3
- SPW 6775 Caribbean Literature 3
- SPW 6910 Directed Research 1-19

Students may substitute up to 6 semester hours with courses in another related area, as approved in advance by the Graduate Director.

Thesis (6 hours)
SPW 6971

Students who choose to undertake MA thesis work will complete 6 semester hours of SPW 6971 Thesis: Masters under the direction of a faculty member. These 6 credits count towards the 33 credits of coursework listed above and are taken in lieu of two of the courses in the list.

Comprehensive Exam
Successful completion of a comprehensive exam (typically taken in the second semester of the second year).

OTHER INFORMATION

To obtain a copy of the Masters of Arts in Spanish handbook, please visit the Department of World Languages in CPR 419.

COURSES
See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
SPANISH
AND LINGUISTICS: ENGLISH AS A SECOND LANGUAGE

Concurrent Degrees:
Master of Arts (M.A.)/Master of Arts (M.A.) Degrees

DEGREE INFORMATION

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MAJOR INFORMATION

This is a concurrent degree between the MA in Linguistics: ESL and the MA in Spanish. Students will need to meet the admissions requirements for each individual major to qualify for the concurrent degree option. Also, students will need to complete all curriculum requirements for both majors, including both sets of comprehensive/exit exams.

Major Research Areas:

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements specified in the Catalog list for each major.

CURRICULUM REQUIREMENTS

For specific information on the requirements for the major, please refer the Catalog listing for that major.

M.A. in Linguistics: English as a Second Language (ESL) – total minimum hours: 36
M.A. in Spanish – total minimum hours: 36
Total hours: 72, with 9 shared. Total combined: 63 credit hours

Shared Courses: The following courses are approved to be shared with both majors:
TSL 5371 3 Methods of Teaching English as a Second Language – (required for Linguistics; elective for Spanish)
LIN 5700 3 Applied Linguistics – (required for Linguistics; elective for Spanish)
SPW 6806 3 Introduction to Hispanic Graduate Studies (required for Spanish; elective for Linguistics)

For all other curriculum requirements, including Thesis/non-Thesis, Internship, Comprehensive Examination, etc., refer to the Catalog listing for that major.
Statistics (M.A.)

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
- Fall: February 1
- Spring: August 1

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 30
Level: Masters
CIP Code: 27.0501
Dept. Code: MTH
Major/College Codes: STC AS
Approved: 2006

CONTACT INFORMATION

College: Arts and Sciences
Department: Mathematics and Statistics
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

Contact the department for information.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- Students should have at least 3.50 GPA average in courses taken during the last two years of their undergraduate or graduate studies.
- Students must have a BA or BS in one of the following areas: Statistics, Mathematics, Physical Sciences, Engineering, or Business.
- Students who expect to specialize in graduate work in statistics are advised to study as much mathematics as possible during their undergraduate years. Some interdisciplinary experience in natural sciences, engineering, economics, or psychology is also highly desirable. Students who do not have at least three semesters of successful course work in calculus will be required to complete additional courses in mathematics before being admitted. Prior course work in advanced calculus and in statistics is preferable, but not mandatory.
- GRE is required with a quantitative score of at least 650 required for admission. Students whose native language is not English must score at least 550 (paper based) or at least 79 (internet based) on the Test of English as a Foreign Language (TOEFL) exam. However, for students who have a BA or higher degree from an accredited U.S. institution that requirement is waived.
- International students whose native language is not English must submit satisfactory scores on the Test of Spoken English (TSE) or the SPEAK test to be eligible for teaching assignments. Students who score 50 or above on the Speak Test are allowed to teach in the classroom. Those who score 45 to 50 may be allowed to teach on the condition that they enroll concurrently in ENS 4502, with approval. (See the Graduate Catalog for more details.)

The University of South Florida and the Department of Mathematics and Statistics encourage applications from qualified individuals with disabilities and qualified individuals from all cultural, racial, religious, ethnic, and gender groups, and sexual orientations in accordance with all university regulations.
OTHER INFORMATION

The most recent supplementary documents for Statistics graduate students, “THE HANDBOOKS FOR BOTH M.A. AND Ph.D. GRADUATE STUDENTS IN STATISTICS/PROBABILITY PROGRAMS,” at the Department of Mathematics and Statistics, University of South Florida, Tampa, Florida, USA, dated October 2007 (revised October 2009) are available at the following websites:

http://math.usf.edu/grad/stats/ma/
http://math.usf.edu.grad.stats.Ph.D/

Prospective graduate students in Statistics are welcome to read the information in the Handbooks. In addition, a HARD COPY OF THESE HANDBOOKS will be provided to graduate students at the time of their FIRST time academic advisement process.

CURRICULUM REQUIREMENTS

Total Minimum Hours 30 hours

Core Requirements

Sequences:
STA 5166 – Statistical Methods 3
STA 6167 – Statistical Methods II 3
STA 5326 – Mathematical Statistics I 3
MAT 6932 – Mathematical Statistics II 3
STA 6208 – Linear Statistical Models 3

Electives:
STA 5446 – Probability Theory I 3
STA 6447 – Probability Theory II 3
STA 5526 – Nonparametric Statistics 3
STA 6746 – Multivariate Analysis 3
STA 6876 – Time Series Analysis 3
MAT 6932 – Survival Analysis 3
MAT 6932 – Stochastic Processes 3
MAT 6932 – Stochastic Dynamic Modeling 3
STA 6877 – Time Series Analysis II 3
MAT 6932 – Nonlinear Time Series Analysis 3
MAT 6908 – Independent Study (as indicated by professor) 3
Mat 6932 – Special Topics Courses 3

A candidate must complete at least 30 credit hours for a MA. At least twenty hours must be in formal regularly scheduled course work, ten of which must be at the 6000 level. Up to 6 credit hours at the 4000 level or graduate courses from other departments at USF can be counted upon approval. A student who elects the thesis option must register for a minimum of 6 credit hours in MAT 6971, only 6 hours of which may be applied toward the 30-hour degree requirement. The student must maintain a 3.00 average to remain a candidate for a degree. Failure to do this will result in being placed on probation. A letter from the major professor is required to remove a student from probation after he/she regains a 3.00 average.

Department may waive some of the course requirements for those students who have taken equivalent course work at another institution.
Comprehensive Examination
Graduation from the Master’s major also requires the completion of both written and oral examinations. For the non-thesis option, there is no language or thesis requirement for the M.A. degree.

Written Comprehensive Examination The written exam is designed to cover material presented during the first year of graduate work. The purpose of the exam is to make sure the students have reviewed their first year’s work before starting the second year and to point out weaknesses which should be overcome during their second year in order to graduate. Students are expected to pass this exam in at most two attempts. More specifically, the material for the above examination will be taken primarily from the following sequences of courses Semester 1: STA 5166 Statistical Methods I and STA 5326 Mathematical Statistics I; Semester 2: STA 6167 Statistical Methods II and MAT 6326 Mathematical Statistics II, and STA 6208 Linear Statistical Models.

A. Non-thesis Option

At least 30 hours of Statistics and Mathematics graduate courses. Specifically:

(A) The Statistics and Mathematics graduate courses of 5000 level or higher, offered regularly for statistics and mathematics majors from our department are counted towards the 30 hours requirement.

(B) Completing at least 3 hours of Research Project work which is counted towards the 30 credit-hours requirement.
   - Taking the course MAT 5912 – Research Project (Non-Thesis Option) and presenting a paper exemplifying the creative component of the major. This may be, but is not restricted to, a literature review, a report of independent research, design and (or) analysis of a sample survey or experiment, a report on consulting with research workers outside the department, or a report on the construction of a computer program requiring statistical numerical analysis.
   - Taking the sequences Statistical Methods and Mathematical Statistics with at least a “B” average for each sequence.
   - Passing one Qualifying Exam on Statistical Methods or Math Statistics at master’s level.

Under this degree option, the student is required to present a paper representing the creative component of the major. This may be, but is not restricted to, a literature review, a report of independent research, the design and (or) analysis of a sample survey or experiment, a report on consulting with research workers outside the department, or a report on the construction of a computer program requiring statistical numerical analysis.

B. Thesis Option

Student’s Graduate Committee
Students working toward a thesis degree will have the benefit of a committee of members of the graduate faculty, appointed by the graduate director/departmental chairperson and approved by the Dean of Graduate Studies. The Committee will approve the course of study for the student and plan for research, supervise the research and any comprehensive qualifying exams, and read and approve the thesis for content and format.

   - At least 30 hours of stat and math graduate courses (see above for details).
   - Taking the sequences Statistics Methods and Mathematical Statistics with at least a “B” average for each sequence.
   - At least 6 hours in MAT 6971, Master’s Thesis, only 6 hours of which are counted in the 30 hours requirement.
   - Oral Defense of the Thesis
   - Final Submission of Approved Thesis.

Under this degree option, six (6) research credits may be applied to the total of 30 required on the student’s program of study. These reductions are made to allow the student sufficient time to complete a formal master’s thesis.
master’s thesis is a scholarly composition that demonstrates the ability of the author to do independent and creative work. It explores in some depth a problem or issue related to the major field of study. Although considerable variations in format and style are acceptable, precise expression, logical construction, and meticulous attention to detail are essential. A thesis in statistics should deal with some aspect of statistical methodology or theory, or the development of statistical models for a class of problems related to a scientific question. While most theses will include a case study or example that involves scientific data, the analysis of a particular data set does not, alone, constitute the level of scholarly accomplishment required for a thesis.

COURSES
See http://www.ugs.usf.edu/course-inventory/
URBAN AND REGIONAL PLANNING

Master of Urban and Regional Planning (M.U.R.P.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: March 1
Spring: October 15

Minimum Total Hours: 48
Level: Masters
CIP Code: 04.0301
Dept. Code: SPF
Major/College Codes: URP AS
Approved: 2008

CONTACT INFORMATION

College: Arts and Sciences
Department: School of Public Affairs
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The goal of the major is to train students to become planning practitioners capable of working in a variety of public, nonprofit, and private sector environments in a number of different fields. Graduates of this major will go on to play a vital role addressing the planning and public policy challenges in our region and beyond.

The major recognizes the need for effective planners to possess diverse skills in the planning and management of human settlements. Accordingly, the MURP core coursework includes thematically-related courses in land use planning, research methods, quantitative analysis, planning theory and history, planning politics and policies, community and economic development, and geographic information systems (GIS). Students have the option of enrolling in electives that focus on housing & community development, land use planning, local economic development, GIS, international development, coastal zone management, housing & community development, environmental and natural resources planning, and transportation planning. These areas of specialization build on the strengths of existing faculty in our sister-major in Public Administration, as well as with colleagues and facilities across the university. The major is thus distinct in its flexibility. Graduates of the major will be able to:

1. Engage in policy-related research relevant to urban and regional issues
2. Assume positions of leadership public, private and nonprofit organizations engaged in planning, land use, and public policy
3. Further public discourse on the problems confronting cities and regions
4. Utilize communications and technical skills to become successful at all levels of the planning profession.
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

- BA/BS in any field with a GPA of 3.00 or higher on a 4-point scale (overall or on last 60 hours of undergraduate work);
- Two letters of recommendation (one from a faculty member if BS/BA, in last 5 years);
- A “letter of intent” explaining your background and interest in Urban and Regional Planning
- GRE is required with preferred minimum scores of 153 Verbal (59th percentile) and 144 Quantitative (18th percentile.) However, the MURP major will waive the GRE requirement if the student meets at least one of the following criteria:
  - A completed master’s degree from a regionally accredited institution
  - A 3.25 or higher GPA in upper division undergraduate work from a regionally accredited institution
  - A doctorate (including professional degrees such as the JD and MD) from a regionally accredited institution.

- All Students not meeting one of the above criteria will be considered for conditional admission based on the following criteria:
  - A preferred minimum score of 153 Verbal and 144 Quantitative) on the GRE
  - An academic writing sample
  - Three written letters of recommendation, with at least one from a faculty member familiar with the applicant’s academic performance and potential. Should the applicant be unable to provide the letter from a former professor, with the Director’s approval, letters from other sources will be accepted.

Conditional admission status will be converted to regular status upon completion of three courses from the MURP core requirements with a GPA of 3.50 or above.

1. A satisfactory score on the TOEFL (79 on the Internet-based test and 550 on the paper-based test) may be required for the natives of non-English speaking countries.

2. All applicants are required to write a statement describing their purpose and goals in the MURP statements.

CURRICULUM REQUIREMENTS

Total Minimum Hours: 48 hours

Core Requirement – 27 hours

Foundational Core Courses
- URP 6058 3 Community Development Planning
- URP 6100 3 Planning, Theory, and History
- URP 6115 3 Planning, Policy, and Politics
- URP 6316 3 Land Use Planning
- URP 6549 3 Urban and Metropolitan Economic Development

Analytical Methods Core Courses
- URP 6232 3 Research Methods for Urban and Regional Planning
- PAD 6703 3 Quantitative Aids for Public Managers

Planning Practice & Techniques Core Courses
- GIS 5049 3 GIS for non-majors
- URP 6940 3* Urban Planning Internship

*required for students without 5 or more years of relevant planning experience

Electives - 15-21 hours minimum
(21 hours required for non-thesis option; 15 hours for thesis option)

The rest of the required coursework allows the URP student an opportunity to explore one or more fields of urban & regional planning through approved electives within and outside the School of Public Affairs. Depending on personal interest, students may choose course work in the following areas:

- Housing & Community Development;
- Environmental & Natural Resource Policy;
- Geographic Information Sciences;
- Globalization & International Development Planning;
- Transportation Planning.

Comprehensive Exam
This is the default option for the MURP major. All MURP Students are required to take this examination at the end of, or during, the last semester of the major coursework. The examination is waived for students who elect, with the approval of the Graduate Director, to pursue the thesis option. (See below for more on the thesis option)

Non-thesis
Non-thesis students must complete all of the 27 hour core, 21 elective credits.

Thesis - 6 hours minimum
URP 6971 6 Thesis
Students approved to pursue this option must complete all of the 27 core credits, 15 elective credits, and a minimum of 6 credit hours of thesis. The thesis must be completed and approved for the credit to be received.

Internship - 3 hours
URP 6940 3 Internship in Urban and Regional Planning
All MURP students are required to complete at least 180 hours of work in a planning agency to earn the 3 credit hours stipulated as part of the core requirements above. This requirement is waived for students with at least 5 years of relevant planning experience.

COURSES
See http://www.ugs.usf.edu/course-inventory/
WOMEN’S AND GENDER STUDIES

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
- Fall: February 15
- Spring: October 15
- Summer: February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 36
Level: Masters
CIP Code: 05.0207
Dept. Code: WGS
Major/College: WST AS
Approved: 1997

CONTACT INFORMATION

College: Arts and Sciences
Department: Women’s and Gender Studies
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The M.A. in Women’s and Gender Studies requires the completion of 36 credit hours. The major has three tracks: 1) a research option that requires a thesis, 2) an applied option that requires an internship and subsequent analytic report on the internship experience, and 3) a non-thesis option. This format is designed to serve the needs of a variety of different categories of students desiring a graduate degree in Women’s and Gender Studies. The thesis option is recommended for students who intend eventually to pursue a doctoral degree. Either the non-thesis option or the internship option is recommended for students who seek the M.A. as a terminal degree.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below. Applicants without training in Women’s and Gender Studies are admitted on a conditional basis. In addition, applicants must submit the following requirements:

- GRE scores are required
- A personal narrative statement of purpose
- A writing sample (appropriate examples include a term paper or research paper)
- Three letters of recommendation
CURRICULUM REQUIREMENTS

The M.A. in Women’s and Gender Studies requires the completion of thirty-six credit hours. These hours are divided as follows:

Minimum Hours: 36 credit hours

<table>
<thead>
<tr>
<th>Core Requirements</th>
<th>12 credit hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>WST 6001 Feminist Research and Methodology</td>
<td>3</td>
</tr>
<tr>
<td>WST 6560 Advanced Feminist Theory</td>
<td>3</td>
</tr>
<tr>
<td>WST 6003 Feminist Scholarship and Pedagogy</td>
<td>3</td>
</tr>
<tr>
<td>WST 6936 Selected Topics in Women’s Studies</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives: 18 credit hours
To be selected from
- Graduate courses on women and issues surrounding the intersection of gender/class/race/sexuality offered by other departments;
- No more than one other graduate-level course approved by the graduate director.

Comprehensive Examinations
Each student must pass a written comprehensive examination. It is expected that a student will successfully complete the comprehensive examination prior to beginning thesis or internship work. Students electing the Non-Thesis option should successfully complete the comprehensive exam in their last semester of coursework.

Track Requirements: 6 credit hours
Students should choose their M.A. track at the end of 18 hours of coursework.
Six credit hours are required on each track. Track Options include:

**Thesis Track (6 credit hours)**
WST 6971 Thesis: Master’s
Students must enroll in six credit hours of WST 6971 Thesis: Master’s. Taken over two semesters, the student will develop a thesis proposal approved by the student’s thesis committee and complete a Master’s thesis on the approved topic. The completed Thesis must be defended at an oral defense.

**Internship Track (6 credit hours)**
WST 5825 Internship in Women’s Studies
Students must enroll in six credit hours of WST 5825 Internship in Women’s Studies. The internship experience, typically over two semesters, should take place in a human service agency or other organization which focuses on women, sexualities, or gender issues. The internship will be approved by the student’s internship committee. The student will be required to write a narrative report describing the internship in detail and analyzing the experience in terms of appropriate theoretical frameworks. The completed narrative must be defended as an oral defense.

**Non-Thesis Track Option (6 credit hours)**
In lieu of thesis or internship hours, students must take two additional electives to complete the total 36 hours for the M.A. degree.

Comprehensive Exam Requirements
Each student must pass a written comprehensive examination. It is expected that a student will successfully complete the comprehensive examination prior to beginning thesis or internship work.

COURSES
See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
SECTION 13

COLLEGE OF BEHAVIORAL AND COMMUNITY SCIENCES

LOUIS DE LA PARTE
FLORIDA MENTAL HEALTH INSTITUTE
## Changes to Note

Graduate Council approved the changes on the date noted.

### New Majors

<table>
<thead>
<tr>
<th>Major</th>
<th>Degree</th>
<th>Description</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cybercrime</td>
<td>MS</td>
<td>New Major under existing CIP (45.0401)</td>
<td>5/8/17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Curr code: CBRC eff fall 2017</td>
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</tbody>
</table>

### Majors

<table>
<thead>
<tr>
<th>Major</th>
<th>Degree</th>
<th>Description</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aging Studies</td>
<td>Ph.D.</td>
<td>Change Deadlines from Jan 15 to Dec 11</td>
<td>4/3/17</td>
</tr>
<tr>
<td>Behavioral and Community Sciences</td>
<td>Ph.D.</td>
<td>Change deadlines; admissions, courses</td>
<td>5/8/17</td>
</tr>
<tr>
<td>Behavioral and Community Sciences</td>
<td>Ph.D.</td>
<td>Change fall Deadlines from Feb 15 to Dec 15</td>
<td>4/3/17</td>
</tr>
<tr>
<td>Rehab. &amp; Mental Health Counseling (Post-Bacc) M.A.</td>
<td>M.A.</td>
<td>Remove Spring Deadline; delete 5 year program</td>
<td>2/6/17</td>
</tr>
<tr>
<td>Social Work</td>
<td>M.S.W.</td>
<td>Online Program delivery Adv Standing /MSW</td>
<td>9/26/16</td>
</tr>
<tr>
<td>Social Work</td>
<td>M.S.W.</td>
<td>Change description regarding online availability</td>
<td>5/1/17</td>
</tr>
</tbody>
</table>

### Certificates

<table>
<thead>
<tr>
<th>Certificate</th>
<th>Description</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Aging Sciences</td>
<td>New Certificate</td>
<td>5/8/17</td>
</tr>
<tr>
<td>Leadership in Child and Adolescent Behavioral Health</td>
<td>New Certificate</td>
<td>9/12/16</td>
</tr>
</tbody>
</table>
University of South Florida
College of Behavioral and Community Sciences
4202 E Fowler Ave MHC 1110
Tampa, FL 33620

Web address: http://www.bcs.usf.edu
Email: See departmental listings
Phone: 813-974-2365
Fax: 813-974-4699

College Dean: Julianne Serovich, Ph.D.
Associate Dean: Catherine Batsche, Ph.D.
Associate Dean of Research: Howard Goldstein

Mission Statement:
The College of Behavioral and Community Sciences prepares students, scholars, human service providers, policy makers, and other professionals to improve the quality of life, health, and safety of diverse populations and to promote positive change in individuals, groups, communities, organizations and systems. Through multidisciplinary teaching and research, service, and engagement with community partners, the College focuses on the rigorous development, dissemination/implementation, and analysis of innovative solutions to the complex challenges that affect the behavior and well-being of individuals, families, populations, and the communities in which we live.

The College offers eight majors at the master’s level and seven majors at the doctoral level. Master’s majors are available in Applied Behavior Analysis, Child and Adolescent Behavioral Health, Criminal Justice Administration, Criminology, Cybercrime, Gerontology, Rehabilitation & Mental Health Counseling, Social Work, and Speech-Language Pathology. Doctoral majors are offered in Aging Studies, Audiology, Behavioral and Community Sciences, Communication Sciences & Disorders, Criminology, and Social Work. Concurrent degrees are offered in Social Work/Public Health at the master’s level and Audiology/Communication Sciences and Disorders at the doctoral level.

The College is also home to the Louis de la Parte Florida Mental Health Institute whose mission is to improve the lives of individuals with mental, addictive, and developmental disorders. Graduate studies in Behavioral Health are offered in collaboration with the College of Public Health at both the master’s and doctoral levels and in collaboration with the College of Education at the doctoral level. The Institute houses a Research Library, a Behavioral Health Research Data Center, and a Survey Research Unit that can support the research theses and dissertations of graduate students.
The following are majors offered across programs and/or colleges.

**Degrees, Majors, and Concentrations:**

**Master of Arts (M.A.)**
Applied Behavior Analysis (ABY - changed to ABB eff 201805)
Criminal Justice Administration (CJA)
Criminology (CCJ)
Gerontology (GEY)
Rehabilitation and Mental Health Counseling (REH)

- Addictions and Substance Abuse Counseling (ASA)
- Marriage and Family Therapy (MFL)

**Master of Science - M.S.**
Applied Behavior Analysis (APP - changed to APB effective 201805)
Audiology (Post-Bacc) (AUD) **being terminated**
Aural (Re)Habilitation (Post Bac) (ARH) **being terminated**
Child and Adolescent Behavioral Health (CAB)
Developmental Disabilities (ABDD)
Leadership in Child and Adolescent Behavioral Health (ABLC)
Translational Research and Evaluation (ABTR)
Youth & Behavioral Health (ABYB)
Cybercrime (CBRC)
Speech-Language Pathology (Post-Bacc) (SPP)

**Master of Social Work - M.S.W.**
Social Work – (SOK)

**Doctor of Audiology - Au.D.**
Audiology (AYD)

**Doctor of Philosophy - Ph.D.**
Applied Behavior Analysis (APB)
Aging Studies (AGE)
Behavioral and Community Sciences (BVC)
Communication Sciences and Disorders (CSD)
- Hearing Sciences and Audiology (HAS)
- Neurocommunicative Sciences (NSC)
- Speech-Language Sciences (SLS)
Criminology (CCJ)
Social Work (SOK) - **SUSPENDED**

**Concurrent Degree Programs:**
**Master of Social Work - M.S.W.**
Social Work/Public Health MSW/MPH (Maternal and Child Health)(Behavioral Health)

**Doctor of Audiology - Au.D.**
Audiology/Communication Sciences and Disorders – (AUD/CSD)

**Doctor of Philosophy - Ph.D.**
Audiology/Communication Sciences and Disorders (AUD/CSD)
Graduate Certificates:
See Graduate Certificates Section

Interdisciplinary Opportunities
The College of Behavioral and Community Sciences (BCS) works with other colleges in interdisciplinary efforts, such as the jointly offered specialty concentration in Behavioral Health as part of the master’s and doctoral programs in the Department of Community and Family Health (DCFH) in the College of Public Health (COPH). For information about this, and other opportunities, contact either BCS or COPH for information.

COLLEGE REQUIREMENTS

Thesis Enrollment
Upon successful completion of all M.A./M.S. degree requirements except for thesis, Behavioral & Community Sciences graduate students must enroll in a minimum of two (2) credit hours of Thesis each semester (except Summers) until the completion of the master’s degree.

Dissertation Enrollment
Doctoral students who have been admitted to candidacy, are required to accumulate a minimum of six (6) credit hours of Dissertation during each previous 12-month period (previous three 3 terms, e.g., Fall, Spring, Summer) until the degree is granted.
AGING STUDIES

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: December 11
Fall admissions only

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 90
Level: Doctoral
CIP Code: 30.1101
Dept Code: GEY
Major/College Codes: AGE BC
Approved: 1994

CONTACT INFORMATION

College: Behavioral & Community Sciences
Department: School of Aging Studies (GEY)
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Interdisciplinary Ph.D. in Aging Studies is the first of its kind in the United States, and to the best of our knowledge, the world. What makes this major unique is the combined emphasis on providing a broad based foundation in the interdisciplinary aspects of aging with a focus on developing in-depth expertise in a research area. The major draws on the expertise of faculty from multiple colleges, departments, and centers at the University of South Florida to provide students with exposure to other disciplines and their different approaches to scientific and scholarly inquiry.

The Ph.D. in Aging Studies is hosted by the School of Aging Studies, which is the organizational focal point for interdisciplinary research, educational, clinical and community service activities in aging for faculty and students. An interdisciplinary committee of faculty governs the major, allowing students to develop research programs that focus on their particular interests and capitalize on the breadth of opportunities throughout the university.

The Ph.D. in Aging Studies is a research-oriented program designed to train future leaders in the field of aging. The major admits students who show exceptional promise to become strong academic, public sector, and corporate researchers. Students should expect to enroll in the program full time (9 credits in fall, 9 credits in spring, and 6 credits in summer). First year students are generally supported with an $18,000 fellowship, tuition waiver, and health insurance. Fellowship or assistantship support and tuition waivers are generally available during subsequent years of doctoral training. Students who wish to apply as part-time students must contact Dr. McEvoy before applying.

Faculty Organization
The interdisciplinary nature of the program is exemplified by the number of core faculty who teach and serve on dissertation committees in the program and the range of academic departments they represent. Over forty faculty from multiple colleges and research centers have been identified as the core faculty in the program.
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- A Bachelor’s Degree
- GPA of 3.25 and
- a current GRE; to be competitive, 160V (above the 50th percentile), 149Q (above the 30th percentile), 4.5 (above the 50th percentile) A.W.
- Applicants where English is not the language of instruction must also submit a TOEFL iBT score of at least 79 which corresponds to a score of 600 on the old TOEFL Test.
- In addition, students must submit their best example of a single authored writing sample
- and a summary of their career goals and past preparation for a research career plus
- three letters of recommendation from individuals familiar with the student’s work and/or research.

CURRICULUM REQUIREMENTS

Minimum Hours - 90 credit hours beyond the baccalaureate
Core Requirements – 34 credit hours
Dir. Research/Dissertation- 56 credit hours

CORE REQUIREMENTS – 34 credit hours

Courses -12 hours
GEY 7610 3 Psychological Aging: Interdisciplinary Perspectives
GEY 7604 3 Biomedical Aging
GEY 7649 3 Population Aging
GET 7623 3 Social and Health Aspects of Aging

Each core course is taught from an interdisciplinary perspective with faculty from different fields addressing issues from their disciplinary perspectives.

Methods Courses - 6 hours minimum
GEY 6402 3 Statistical & Qualitative Methods in Aging Research
GEY 6403 3 Multivariate Statistical Analysis for Aging Research

Students must also enroll in a sequence of at least two methods/statistics courses and are encouraged to obtain additional training in methods relevant to their dissertation.

Proseminar and Content Seminar - 16 credits minimum
GEY 7936 4 Aging Studies Pro-seminar
GEY 7602 3 Ph.D. Seminar in Health and Aging
GEY 7611 3 Ph.D. Seminar in Mental Health
GEY 7622 3 Ph.D. Seminar in Policy and Elderly
GEY 7651 3 Ph.D. Seminar in Cognition

Students are required to enroll in the GEY 7936 Aging Studies Pro-seminar (2 credits) each fall of their first 2 years in the program. They must also enroll for at least four Content Seminars (GEY 7602, GEY 7611, GEY 7622, GEY7651) (3 credits). The Pro-seminars investigate different research topics, allow students to practice presenting their research, and provide students with exposure to distinguished lecturers from throughout the U.S. The content seminars cover different topics relevant to aging each spring semester.

Elective Requirement
There are no requirements, other than the total minimum credit hours mentioned above. Each Ph.D. student, in consultation with his/her major advisor, designs an appropriate curriculum to obtain content and skills that match their research interests.
Project – 1 credit hour
GEY 7911 1 Directed Research in Aging Studies
All students complete a First Year Research Project, designed to be presented at a national conference in the fall of their second year. Students develop individualized courses of study, allowing specialization in a wide variety of content areas and research methods. Supervised research experience is available from a number of faculty with diverse research expertise. Students enroll for GEY 7911 (Directed Research in Aging Studies) for 1 credit hour for a grade of S/U.

Comprehensive/Qualifying exam
The qualifying examination is usually taken during the end of the second year of course work, or the following Fall semester.

Dissertation - 56 hours minimum
At least two (2) credits of Dissertation every semester after admission to candidacy; if more than minimum of required course credit is taken, then fewer credits of Directed Research are required.

GEY 7911 1-19 Directed Research
GEY 7980 2-12 Dissertation

COURSES
See http://www.ugs.usf.edu/course-inventory/
### Applied Behavior Analysis (M.A.)

**Master of Arts (M.A.) Degree (Non-Thesis, Online Major)**

#### Degree Information

- **Priority Admission Application Deadlines:**
  - **Fall:** February 15
  - **Spring:** October 15

- **International applicant deadlines:** [http://www.grad.usf.edu/majors](http://www.grad.usf.edu/majors)

- **Minimum Total Hours:** 41
- **Level:** Masters
- **CIP Code:** 42.2814 changed from 42.9999 effective summer 2018
- **Dept Code:** CFS
- **Major/College Codes:** ABY BC (Changed to ABB BC effective 201805)
- **Approved:** 2000

#### Contact Information

- **College:** Behavioral & Community Sciences
- **Department:** Child and Family Studies (CFS)
- **Contact Information:** [www.grad.usf.edu](http://www.grad.usf.edu)

#### Major Information

The online master's degree in Applied Behavior Analysis (ABA) is designed to meet growing needs in Florida and nationally for practitioners who can work effectively in the fields of developmental disabilities, autism, education, child protective services, child behavior disorders, rehabilitation, mental health, and business and technology. ABA provides an approach for developing, implementing, and evaluating practical strategies to produce changes in socially significant behaviors of individuals in the context of community settings. Three important features characterize the scientific basis upon which ABA is built: 

1. It focuses upon objectively measurable behavior of individuals; 
2. It studies environmental influences upon the targeted behaviors; and 
3. It places a premium upon single-subject research designs to analyze the effects of different environmental variables.

The 41-credit-hour master's degree in ABA is in the department of Child and Family Studies in the College of Behavioral and Community Sciences is fully online. Students demonstrate knowledge of behavioral principles and procedures in courses that constitute a core curriculum, demonstrate applied behavior analysis skills through supervised practicum experiences, and complete a data based case-study. The major is designed to prepare students to meet the standards to be Board Certified Behavior Analysts (BCBAs). It will prepare them for employment in a variety of fields where there are growing demands for competent professionals with expertise in applied behavior analysis.

**Philosophy**

The systematic analysis and application of behavioral principles is an extensive repertoire of professional behaviors. In the USF ABA major, these skills are acquired as students move through the sequenced curriculum of coursework and practicum experiences. The curriculum requires application of behavior analytic principles, with direct supervision by faculty and BCBA supervisors. Students participate in practicum training in community agencies under the supervision of BCBA supervisors. In addition to the 10-25 hours of behavior analysis practice they complete in their practicum sites each week, students also participate in practicum seminars each semester. In these seminars, the instructor discusses important practice issues and facilitates student discussion of their applied work. The supervision of the students' case study research rests in the hands of the on-site supervisor and designated core faculty member. On-site supervisors and ABA faculty serve as mentors for the students by closely supervising their case study research and their progress through the major. Therefore, as students are mentored by their on-site supervisor and USF professors during the major, a meaningful supervisor-student relationship is essential.
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- Three letters of reference from professors and/or employers who know the applicant well
- Current resume or curriculum vitae
- One-page narrative describing the applicant’s experiences, training, and interest in Applied Behavior Analysis and in the Applied Behavior Analysis Major at USF.
- GRE Scores on the general subtests

Specific Procedures
The primary assumption underlying admission to the major is that every student accepted is capable (a) of successfully completing his or her respective program and (b) of performing competently in the field as an Applied Behavior Analyst. Applicants are selected based on their potential to benefit from the major and their potential to contribute both to the Major and the field of Applied Behavior Analysis.

Within the admissions process, a culturally diverse student body is actively recruited, and applicants of academic and professional promise are not systematically excluded on the basis of race, ethnic origin, gender, age, religion, lifestyle, sexual orientation, or physical handicap. The admissions process is selective, but flexible—all pertinent data submitted for consideration will be evaluated as an entire package. The evaluation process, however, does involve both academic and interpersonal considerations. The profession of Applied Behavior Analysis requires that the practitioner possess personal characteristics as well as academic and technical competencies, and the admissions process attempts to evaluate both these areas.

Admission to the major is based on
- past academic work;
- coursework in ABA,
- a CV outlining relevant work,
- volunteer, and extracurricular experience in applied behavior analysis;
- letters of recommendation; and
- a statement of ABA interests, and professional goals.

Students may apply, after conferral or anticipated conferral of their Bachelor’s degree. Applications should be submitted by the posted deadline to be considered for application in the following fall term. Late applications will be considered if space in the major is available.

For admission to the major, the student must secure a practicum site and a practicum supervisor approved by the Graduate Director. The practicum supervisor must sign a Memorandum of Agreement agreeing to supervise the student in accordance with the expectations of the Major.

A decision about each applicant’s candidacy is made by the Graduate Director based on the strength of the applicant’s record and his/her:

- Academic record and experiences as an undergraduate
- Career goals and their compatibility with those of the Major
- Potential for successful completion of the Major
- Sensitivity to the needs of potential client populations
- Interpersonal skills
- Communication skills, both oral and written

NOTE: The Graduate Director reserves the right to contact all references identified by the candidate.
CURRICULUM REQUIREMENTS

Total Minimum Hours - 41 hours

This is a cohort model with students completing the Major online. All courses must be earned with a grade of “B-” or better.

Core requirement – 21 hours

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>EDF 6215</td>
<td>3</td>
<td>ABA Basic Principles</td>
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<tr>
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</tr>
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<td>EDG 6931</td>
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<td>Observational Methods and Functional Assessment</td>
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<td>EDG 6931</td>
<td>3</td>
<td>Ethics in ABA</td>
</tr>
<tr>
<td>MHS 6100</td>
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</tr>
<tr>
<td>PSY 6217</td>
<td>3</td>
<td>Single-Subject Design</td>
</tr>
<tr>
<td>MHS 6xxx</td>
<td>3</td>
<td>Behavior Analysis and Developmental Disabilities</td>
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Comprehensive Exam

A comprehensive literature review in a selected area of research will serve as the comprehensive exam.

Practicum Seminar (15 hours)

<table>
<thead>
<tr>
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<tr>
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Directed Research (5 hours)

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<tr>
<td>MHS 6915</td>
<td>1-3</td>
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Course Sequence

Below is the program of study for the Applied Behavior Analysis major.

Fall semester—year 1

1st 8 weeks

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
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<tr>
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2nd 8 weeks

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<tr>
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Spring semester—year 1

1st 8 weeks

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<td>Single-Subject Design</td>
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<td>ABA Practicum</td>
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<td>MHS 6915</td>
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2nd 8 weeks

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Summer—year 1

1st 8 weeks

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<td>MHS 6940</td>
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<td>MHS 6915</td>
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2nd 8 weeks

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COURSES

See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
APPLIED BEHAVIOR ANALYSIS

Master of Science (M.S.) Degree (Thesis)

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15
Spring: n/a

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 44
Level: Masters
CIP Code: 42.2814 changed from 42.9999 effective summer 2018
Dept Code: CFS
Major/College Codes: APP BC - Changed to APB BC effective 201805
Approved: 2000

CONTACT INFORMATION

College: Behavioral & Community Sciences
Department: Child and Family Studies (CFS)
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The master’s degree in applied behavior analysis (ABA) is designed to meet growing needs in Florida and nationally for practitioners who can work effectively in the fields of developmental disabilities, autism, education, child protective services, child behavior disorders, rehabilitation, mental health, and business and technology. ABA provides an approach for developing, implementing, and evaluating practical strategies to produce changes in socially significant behaviors of individuals in the context of community settings. Three important features characterize the scientific basis upon which ABA is built: a) it focuses upon objectively measurable behavior of individuals; b) it studies environmental influences upon the targeted behaviors; and c) it places a premium upon single-subject research designs to analyze the effects of different environmental variables.

The 44-credit-hour master’s degree in ABA is in the department of Child and Family Studies in the College of Behavioral and Community Sciences. Students demonstrate knowledge of behavioral principles and procedures in courses that constitute a core curriculum, demonstrate applied behavior analysis skills through supervised practicum experiences, and complete a data based thesis. The major is designed to prepare students to meet the standards to be Board Certified Behavior Analysts (BCBAs). It will prepare them for employment in a variety of fields where there are growing demands for competent professionals with expertise in applied behavior analysis.

Philosophy
The systematic analysis and application of behavioral principles is an extensive repertoire of professional behaviors. In the USF ABA major, these skills are acquired as students move through the sequenced curriculum of coursework and practicum experiences. The curriculum requires application of behavior analytic principles, with direct supervision by faculty and BCBA supervisors. Students participate in practicum training in community agencies under the supervision of BCBAs. In addition to the 10-25 hours of behavior analysis practice they complete in their practicum sites each week, students also participate in practicum seminars each semester. In these seminars, the Practicum Coordinator discusses important practice issues and facilitates student discussion of their applied work. The supervision of the students’ research theses rests in the hands of designated core faculty members (i.e., “major professors”). Major Professors serve as mentors for the students by closely supervising their research and their progress through the major. Therefore, as students are mentored by their major professors during the major, a meaningful major professor-student relationship is essential.
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- Three letters of reference from professors and/or employers who know the applicant well
- Current resume or curriculum vitae
- One-page narrative describing the applicant’s experiences, training, and interest in Applied Behavior Analysis and in the Master’s in Applied Behavior Analysis at USF.
- GRE Scores on the general subtests

Specific Procedures
The primary assumption underlying admission to the major is that every student accepted is capable (a) of successfully completing his or her respective program and (b) of performing competently in the field as an Applied Behavior Analyst. Applicants are selected based on their potential to benefit from the major and their potential to contribute both to the Major and the field of Applied Behavior Analysis.

Within the admissions process, a culturally diverse student body is actively recruited, and applicants of academic and professional promise are not systematically excluded on the basis of race, ethnic origin, gender, age, religion, lifestyle, sexual orientation, or physical handicap. The admissions process is selective, but flexible—all pertinent data submitted for consideration will be evaluated as an entire package. The evaluation process, however, does involve both academic and interpersonal considerations. The profession of Applied Behavior Analysis requires that the practitioner possess personal characteristics as well as academic and technical competencies, and the admissions process attempts to evaluate both these areas.

Admission to the major is based on
- past academic work;
- coursework in ABA,
- a CV outlining relevant work, volunteer, and extracurricular experience in applied behavior analysis;
- letters of recommendation; and
- a statement of ABA interests, and professional goals.

Students may apply, after conferral or anticipated conferral of their Bachelor’s degree. Applications should be submitted by the posted deadline to be considered for application in the following fall term. Late applications will be considered if space in the major is available.

For further Admissions Information, please visit Graduate Admissions.

A decision about each applicant’s candidacy is made by the Graduate Director based on the strength of the applicant’s record and his/her:

- Academic record and experiences as an undergraduate
- Career goals and their compatibility with those of the Major
- Potential for successful completion of the Major
- Sensitivity to the needs of potential client populations
- Interpersonal skills
- Communication skills, both oral and written

NOTE: The Graduate Director reserves the right to contact all references identified by the candidate.
CURRICULUM REQUIREMENTS

Total Minimum Hours - 44 hours

This is a cohort model with students completing Major in a face-to-face format on-campus...
All courses must be earned with a grade of “B-“ or better.

Core requirement – 24 hours
EDF 6215  3  ABA Basic Principles
EDF 6217  3  Behavior Theory
EDG 6931  3  Observational Methods and Functional Assessment
EDG 6931  3  Ethics in ABA
MHS 6100  3  ABA in Complex Community Environments
PSY 6217  3  Single-Subject Design
MHS 6xxx  3  Exp. Analysis of Behavior
MHS 6xxx  3  Behavior Analysis and Developmental Disabilities

Comprehensive Exam
The student’s thesis proposal will constitute the comprehensive exam.

Thesis and Practicum – 20 hours (Offered face-to-face)
Practicum Seminar (10 hours)
MHS 6940  2-4  Practicum in Behavior Analysis in Community Settings

Thesis (10 hours)
MHS 6971  2-6  Thesis in Applied Behavior Analysis

Course Sequence
Below is the program of study for the Applied Behavior Analysis major.

Fall semester—year 1
EDF 6215  3  ABA Basic Principles
EDG 6931  3  Observational Methods and Functional Assessment
PSY 6217  3  Single-Subject Design
MHS 6940  2  ABA Practicum

Spring semester—year 1
EDF 6217  3  Behavior Theory
EDG 6931  3  Ethics in ABA
MHS 6100  3  ABA in Complex Community Environments
MHS 6940  2  ABA Practicum

Summer—year 1
MHS 6940  2  ABA Practicum
MHS 6971  2  Thesis

Fall semester—year 2
MHS 6xxx  3  Exp. Analysis of Behavior
MHS 6xxx  3  Behavior Analysis and Developmental Disabilities
MHS 6940  2  ABA Practicum
MHS 6971  4  Thesis

Spring semester—year 2
MHS 6940  2  ABA Practicum
MHS 6971  4  Thesis

COURSES
See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
APPLIED BEHAVIOR ANALYSIS

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: December 5

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 54 post masters
Level: Doctoral
CIP Code: 42.2814
Dept Code: CFS
Major/College Codes: APB BC
Approved: 2014

CONTACT INFORMATION

College: Behavioral & Community Sciences
Department: Child and Family Studies (CFS)
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

Applied Behavior Analysis (ABA) is widely regarded as the most research-based intervention for individuals with autism. ABA is an applied science and a profession that provides services to meet the diverse needs of individuals. The emphasis of the ABA doctoral major is on the development of behavior analysts who are scientist-practitioners. Students graduating from the major will receive training through coursework and research and practice activities with community partners.

Major Research Areas:
ABA, Applied Behavior Analysis, autism, behavior, behavior analysis, behavior management, behavioral intervention, children, developmental disabilities, experimental analysis of behavior, functional assessment, and positive behavior support.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- Master’s degree in behavior analysis or related field with strong behavior analysis content
- Minimum 3.50 GPA in a master’s major
- GRE required, preferred scores of:
  - Verbal – 40% or above
  - Quantitative – 40% or above
  - Analytical – 40% or above
- Research experiences and expertise
- Three strong letters of recommendation
- Campus visit and interview with ABA faculty members
- Personal statement describing experience and accomplishments in ABA, future goals, and reasons for applying
- CV

Students entering the doctoral major with their master’s degree are expected to have completed:

- 18 credit hours of didactic coursework in behavior analysis in the following areas: Basic behavioral principles (3 credits), research methods (3 credits), conceptual foundations (3 credits), applied behavior analysis (6 credits), and ethics (3 credits)
Applied Behavior Analysis (Ph.D.)

- An accepted master’s thesis, and
- 10 hours of practicum seminar.

Students lacking in any of these prerequisites will be required to take classes in the doctoral major to cover the missing prerequisites.

CURRICULUM REQUIREMENTS

Total Minimum Hours - 54 (Post-Master’s)

Core requirements - 15 credit hours

- Experimental Analysis of Behavior I 3
- Experimental Analysis of Behavior II 3
- Research Methods II 3
- College Teaching Seminar 3
- Conceptual Foundations – chose from:
  - 6xxx Behavior Theory 3
  - 7xxx Verbal Behavior
  - 7xxx Seminar on Skinner’s Writings
  - 7xxx Relational Frame Theory

Electives - 6 credit hours

Elective courses in two areas of applied behavior analysis or other areas that complement the student’s interests.
- 7xxx Applied Behavior Analysis
- Unrestricted content

Independent Research - 15 credit hours

15 credit hours of independent research are required.

Qualifying Exam

- Successful completion of two literature review papers (approved by the student’s advisor and the graduate director)
- Passing score on the Behavior Analyst Certification Board Certification Exam (Students who do not pass the exam may take the exam a second time)

Dissertation - 18 credit hours

MHS 7980 18

The dissertation will consist of original research designed and conducted by the student under the supervision of a faculty adviser. The student will assemble a dissertation committee consisting of the adviser and three other faculty members (see Office of Graduate Studies policy on Doctoral Committees for more details).

- Completion of a dissertation proposal accepted by the dissertation committee
- Successful defense of the dissertation proposal before the committee
- Successful completion of the research
- Successful completion of a dissertation manuscript accepted by the dissertation committee
- Successful defense of the dissertation research before the committee

COURSES

See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
AUDIOLOGY (POST-BACC)

Master of Science (M.S.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Closed for new admissions

Minimum Total Hours: 36
Level: Masters
CIP Code: 51.0204
Dept Code: CSD
Major/College: AUD BC
Approved: 1970

CONTACT INFORMATION

College: Behavioral & Community Sciences
Department: Communication Science and Disorders (CSD)
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

This major is being terminated.
AUDIOLOGY
Doctor of Audiology (Au.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: January 15
Fall Admission Only

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 120
Level: Doctoral/Professional
CIP Code: 51.0202
Dept Code: CSD
Major/College Codes: AYD BC
Approved 1999

CONTACT INFORMATION

College: Behavioral & Community Sciences
Department: Communication Science and Disorders (CSD)
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Au.D. is a four-year post-baccalaureate professional degree. The primary objective is to produce audiologists who are competent to perform the wide array of diagnostic, remedial, and other services associated with the practice of Audiology and who meet the standards mandated by the Council on Academic Accreditation of the American Speech-Language-Hearing Association.

Accreditation:

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

In addition to the USF Admission Application, applicants to the Au.D. Major are required to complete a CSDCAS application.

- Three 3 letters of recommendation
- A 1-2 page letter of intent
- GRE scores with preferred scores at or above the 33rd percentile on both Verbal and Quantitative sections.
- GRE writing with a preferred score of 4.0 or better
- GPA greater than or equal to 3.0 for last 60 credit hours of baccalaureate degree
- Demonstration of competency in communication skills as determined by the chairperson or delegate.
CURRICULUM REQUIREMENTS

General University requirements for graduate work must be fulfilled and a minimum of 120 hours of regularly scheduled academic course work and clinical practica at the graduate level designed to meet competencies set by the American Speech-Language-Hearing Association. Also required for graduation are the attainment of a “B-” or better in each graduate Audiology course, the attainment of clinical competence determined by a GPA of 3.0 in all clinical practica and academic coursework, satisfactory passage of annual comprehensive didactic and clinical oral examinations, and successful completion of an audiology doctoral project. A student with a bachelor’s degree in any field may enter the four-year post-baccalaureate program. However, students who lack undergraduate coursework in Communication Sciences and Disorders may be required to add several courses to their graduate major. A student with a master’s degree and State License in Audiology or the Certificate of Clinical Competence in Audiology (CCC-A) may be admitted into an individualized program of study.

CORE REQUIREMENTS

Total Minimum Hours: 120

Audiology Science Core - 17
SPA 6392  2  Profession of Audiology
SPA 5303  3  Auditory Anatomy & Physiology
SPA 5120  3  Psychoacoustics
SPA 5132  3  Audiology Instrumentation
SPA 5153  3  Quantitative Problem Solving
SPA 6805  3  Research Procedures

Audiology Practice Core - 48
SPA 5328  3  Rehabilitative Audiology for Adults
SPA 6311  3  Medical Audiology
SPA 6340  3  Principles of Amplification I
SPA 6341  3  Principles of Amplification II
SPA 6307  3  Speech Perception & Hearing Loss
SPA 6305  3  Pediatric Audiology
SPA 6314  3  Electrophysiology
SPA 6316  3  Vestibular Eval & Treatment
SPA 6393  3  Audiology Practice Mgmt
SPA 6354  3  Hearing Conservation
SPA 7346  3  Cochlear Implants
SPA 7150  3  Advanced Sensory Aids
SPA 7332  3  Advanced Electrophysiology
SPA 6324  3  Aural Rehabilitation: Children
SPA 7330  3  Advanced Vestibular
SPA 7331  3  Advanced Medical Audiology

Practical Experience - 49
SPA 6535L  3  Audiology Clinical Lab I
SPA 6536L  3  Audiology Clinical Lab II
SPA 6505  4  Clinic I
SPA 6505  6  Clinic II
SPA 6505  6  Clinic III
SPA 6508  3  Clerkship I
SPA 6508  3  Clerkship II
SPA 6508  3  Clerkship III
SPA 6508  6  Externship I
SPA 6508  6  Externship II
SPA 6508  6  Externship III
Doctoral Project - 6 minimum
SPA 6910  3  Directed Research
SPA 7834  3  Audiology Doctoral Project Seminar

Annual Examination
Students in Audiology will be evaluated at the end of each year of coursework. The purpose of these examinations is twofold: 1) Determine eligibility for continuation in academic coursework and practical experiences; and 2) Determine areas of weakness that will require remediation. Individualized remediation programs will be designed, if needed, by the student under the supervision of the Audiology faculty and may include the completion of additional written papers, projects, and/or additional course work.

Audiology Doctoral Project
The goal of the Audiology Doctoral Project (ADP) is to provide an experience in basic or applied research or evidence-based practice. Upon completion of the ADP, students are expected to continue to be critical consumers of research and be able to apply current research findings to their practice of audiology. It is expected that all students will complete the ADP experience before the end of the third year of study. The ADP must be completed and defended prior to graduation.

COURSES
See http://www.ugs.usf.edu/course-inventory/
AUDIOLOGY / COMMUNICATION SCIENCES AND DISORDERS
CONCURRENT DEGREES

Doctor of Audiology (Au.D.) Degree
Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Refer to individual Majors for deadlines

Minimum Total Hours: 120+
Level: Doctoral
CIP Code: 51.0202
Dept Code: CSD
Major/College: AYD BC / CSD BC

CONTACT INFORMATION

College: Behavioral & Community Sciences
Department: Communication Science and Disorders (CSD)
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The concurrent Au.D. /Ph.D. degrees option is designed to offer a path for those interested in Clinical Research to earn both doctoral degrees within approximately six years. The primary objective is to produce research audiologists competent to perform the wide array of diagnostic, remedial and other services associated with the practice of audiology as well as conduct independent research in the area of hearing and balance disorders.

Accreditation:
The Au.D. is also accredited by the Council on Academic Accreditation of the American Speech-language-Hearing Association.

Major Research areas:
Audiology, Hearing and Vestibular Science, Audiological Rehabilitation, Cochlear Implants, Auditory Processing, and Speech Perception

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- Admission to the Au.D. Major
- One (1) letter of recommendation from a member of the USF Audiology research faculty.
- Demonstration of competency in communication skills as determined by the chairperson or delegate.
CURRICULUM REQUIREMENTS

Requirements for the Au.D. /Ph.D. are the same as the requirements for the individual majors with the following exceptions:

1. The Audiology Doctoral Project (ADP) and associated coursework (SPA 6910 Directed Research credit hours and SPA 7834 ADP Seminar sequence) may, upon Ph.D. faculty approval, satisfy the requirements of one Research Rotation in the Ph.D. program. Upon completion, the student should submit the ADP document to the Ph.D. Program Director for review. If the topic, scope and level of independence demonstrated in the project are sufficient, one of the two research rotation requirements is waived (typically, the research rotation for “depth;” 9 credits, SPA 6910 Directed Research)

2. The Au.D. Course focused on business aspects of managing a private practice (SPA 6393 Audiology Business and Practice Management) is not required for Au.D. /Ph.D. students.

3. Of the four Core Content courses (12 credits) in the Ph.D. only three (9 credits) are required:
   - SPA 7812 (3) Research Foundations in Hearing Science
   - Student selects two of the remaining three courses – 6 credit hours:
     - SPA 7811 (3) Research Foundations in Speech Science
     - SPA 7826 (3) Research Foundations in Neurocommunicative Science
     - SPA 7841 (3) Research Foundations in Language Science

4. These three courses (9 credits) are shared by the two majors and are accepted in place of three advanced Au.D. Seminars (SPA 7330 Advanced Vestibular, SPA 7331 Advanced Med. Aud., and SPA 7332 Advanced Electrophys).

5. The Concentration/Advanced Study (9 credits) of the Ph.D. are waived, since the student will have met this requirement through coursework included in the Au.D.

Course Requirements
See course listings for the Doctor of Audiology (Au.D.) and Doctor of Philosophy (Ph.D.) offered by the Department of Communication Sciences and Disorders. The credits required for the Au.D./Ph.D. program will constitute no less than 120 hours beyond the Bachelor’s Degree irrespective of waived courses or course substitutions.

COURSES
See http://www.ugs.usf.edu/course-inventory/
## AURAL (RE)HABILITATION

**Master of Science (M.S.) Degree**

### DEGREE INFORMATION

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### MAJOR INFORMATION

This major is being terminated
BEHAVIORAL AND COMMUNITY SCIENCES

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:

Fall: December 15
Spring: October 15
Summer: February 15

Minimum Total Hours: 90 post-bachelor’s
Level: Doctoral
CIP Code: 51.2212
Dept Code: BVC BC
Approved: Effective 2017

CONTACT INFORMATION

College: Behavioral & Community Sciences
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Ph.D. in Behavioral & Community Sciences is an interdisciplinary major focusing on research and policy in the area of behavioral health and community sciences. Behavioral and Community Sciences refers to the development and evaluation of services and interventions that promote resiliency and social well-being for at-risk populations and addresses these issues within the context of community settings.

Major Research Areas: Substance Abuse & Co-Occurring Disorders; Community Based Behavioral Health Systems & Services; Child & Adolescent Behavioral Health; Behavioral Health, Law, and the Justice System; Disability & Rehabilitation Studies; Behavioral Health Disparities; and Positive Behavior Intervention & Support.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

Applications for the major will be reviewed on a rolling basis and students may be accepted for any semester. However, in order to be given full consideration for financial assistance, students should apply by December 15 for admission for the Fall semester.

- A bachelor’s GPA of 3.50 or higher in the last 60 hours of undergraduate coursework based on a 4.00 grading scale. The completed degree must be in a field related to behavioral and community sciences, e.g., behavioral healthcare, human services, human development, psychology, sociology, anthropology, economics, public health, social work, counseling education, education.

- GRE taken within five years of application with a preferred minimum of 150 (50th percentile), 147 (30th percentile), and 4.0 (50th percentile) on the verbal quantitative, and analytical writing subtests respectively. Students who have completed a master’s degree are not required to submit GRE scores. However, all students are encouraged to submit GRE scores because they are often considered in applications for fellowship, scholarship, and assistantship opportunities.
• Students who do not meet the minimum criteria may be admitted based on strong records reflected by other aspects of their applications (GPA, Letters of Recommendation, Writing Samples, and prior research experiences).

• Evidence of written/analytical skills which will take two-forms:
  o A writing sample, such as a major paper, thesis, or research paper of which the student is the sole author, and
  o A personal goal statement of 2-3 pages that describes why you want to obtain the Ph.D. in Behavioral & Community Sciences; how the degree will help you in achieving your professional goals; unique qualities, life experiences, and knowledge related to the field; obstacles overcome to achieve your educational goals thus far; obstacles that may challenge you in pursuing a graduate degree; your research and teaching goals; and the USF professor you would like to work with and why.

• Two formal letters of recommendation from faculty members or other professional personnel who have knowledge of the applicant’s academic background, potential for success in graduate school, and/or commitment to a research career.

• Applicants with a master’s degree: Transcripts from the master’s degree will be evaluated to determine coursework that will be applicable toward the 90 hours of credit required for the doctoral major.

Prior to applying for the major, applicants are encouraged to contact faculty with whom they would like to study and discuss the fit between the student’s area of research interest and the faculty member’s research focus.

CURRICULUM REQUIREMENTS

Total Minimum Hours - 90 (Post-Bachelor’s)

Core requirements - 15 credit hours
Research/statistics foundation courses – 6 credit hours
Advanced research courses – 12 credit hours
Didactic courses in behavioral & community sciences – 18 credit hours
Specialization courses – 9 credit hours
Directed research – 18 credit hours
Dissertation – 12 credit hours

Core requirements - 15 credit hours
MHS 6742 3 Community Based Research & Evaluation in Behavioral Sciences
MHS 6409 3 Evidence-Based Practice in Behavioral & Community Sciences
EDF 6213 3 Biological Bases for Learning Behavior
OR
PSB 6056 3 Physiological Psychology or comparable course
MHS 7707 3 Interdisciplinary Approaches to Behavioral Health Policy & Systems
MHS 7720 3 Professional Seminar in Behavioral & Community Sciences

Research/statistics foundation courses – 6 credit hours
Such as:
MHS 5745 3 Applied Qualitative Research Methods
MHS 5746 3 Applied Quantitative Research Methods
GEY 6402 3 Statistics Methods in Aging Research

Advanced research courses – 12 credit hours
Students will select four courses from at least two of the following areas. Courses such as those listed across multiple departments will be considered to best fit the student’s individualized plan of study.
### Behavioral and Community Sciences (Ph.D.)

#### Advanced Statistics
- **MHS 7748** 3 Statistical Applications in Translational Research & Evaluation
- **GEY 6403** 3 Multivariate Statistical Analysis for Aging Research
- **PHC 7054** 3 Advanced Biostatistical Methods
- **PHC 7056** 3 Longitudinal Data Analysis
- **EDF 7412** 3 Application of Structural Equation Modeling in Education
- **EDF 7474** 3 Applied Multilevel Modeling in Education

#### Research Design
- **EDF 6481** 3 Foundations of Educational Research
- **PSY 6217** 3 Research Methods & Measurement

#### Program Evaluation
- **MHS 7740** 3 Survey Course in Planning, Evaluation, and Accountability
- **PHC 6708** 3 Evaluation Methods in Community Health

#### Qualitative Methods
- **PHC 6193** 3 Qualitative Methods in Community Health Research
- **PHC 6725** 3 Focus Group Research Strategies

#### Measurement
- **MHS 7747** 3 Measurement Issues in Behavioral Health Services Research
- **EDF 6432** 3 Foundations of Measurement
- **EDF 7436** 3 Rasch Measurement Models*
- **EDF 7439** 3 Foundations of Item Response Theory*

*Pre requisite course EDF 6432 or equivalent

#### Didactic courses in behavioral & community sciences – 18 credit hours
- **MHS 7749** 3 Applications in Dissemination and Implementation Science
- **MHS 6065** 3 Issues and Trends in Developmental Disabilities
- **MHS 6066** 3 Systems, Services, and Supports for Children and Adolescents in Development Disabilities
- **MHS 6067** 3 Evidence-Based Practices in Developmental Disabilities
- **MHS 6068** 3 Community-Based Behavior Health Interventions for Culturally Diverse Youth
- **MHS 6069** 3 Child & Adolescent Behavioral Health
- **MHS 6072** 3 Epidemiology and Prevention in Children’s Mental Health
- **MHS 6075** 3 Cultural Competency in Behavioral Health
- **MHS 6095** 3 Family-Centered Interdisciplinary Systems of Care
- **MHS 6410** 3 Intensive Individualized Positive Behavior Support
- **MHS 6437** 3 Family Perspectives on Behavioral Health Disparities
- **MHS 6494** 3 Women’s Mental Health
- **MHS 6508** 3 Wraparound Interventions and the System of Care
- **MHS 6605** 3 Addressing Behavior Challenges in Young Children
- **MHS 6607** 3 Behavioral Consultation and Collaborative Systems Change
- **MHS 6608** 3 School-wide Positive Behavior Support
- **MHS 6654** 3 Mental Health Informatics
- **MHS 6706** 3 Child & Adolescent Behavioral Health Policy
- **PHC 6542** 3 Epidemiology of Mental Disorders
- **MHS 6900** 3 Selected Topics: Substance Abuse, Crime and the Justice System
- **PHC 6035** 3 Co-Morbidity and Physical Disorders
- **MHS 6938** 3 Selected Topics: Grant Writing Seminar
- **RCS 5080** 3 Medical Aspects of Disability
- **RCS 5480** 3 Selected Topics: Human Growth & Development
- **RCS 5780** 3 Legal, Ethical, Professional Standards
- **RCS 5450** 3 Fundamentals of Substance Abuse
- **RCS 6440** 3 Social and Cultural Foundations of Counseling
- **RCS 6930** 3 Obesity and Eating Disorders
- **PHC 6401** 3 Homelessness: Implications for Behavioral Healthcare
Behavioral and Community Sciences (Ph.D.)

PHC 6539  3  Foundations in Adolescent Behavioral Health
PUP 5607  3  Public Policy and Health Care

Specialization courses – 9 credit hours
Students will complete a minimum of nine hours in a specialty area. The specialty area will be developed on an individual basis with each student and the student’s faculty advisor. Examples of possible specialties include:

- Child & Adolescent Behavioral Health
- Positive Behavior Intervention & Support
- Substance Abuse & Co-Occurring Disorders
- Community Based Behavioral Health Systems & Services
- Behavioral Health, Law, and the Justice System
- Recovery Oriented Behavioral Health
- Disability & Rehabilitation Studies
- Behavioral Health Disparities

Directed research – 18 credit hours
MHS 6915  Directed Research in Behavioral & Social Sciences

Students will complete 18 hours of Directed Research. Following the completion of the first six-hours of directed research, students will complete a research “product” such as a conference presentation, poster session, publication, portions of a grant proposal, literature review or other comparable product to demonstrate their progress in developing research proficiency. Ideally, this product will be associated with their dissertation topic. The remaining 12 hours of Directed Research will be conducted during the second and third year of study and will be conducted with the guidance of the student’s major professor with research outcomes specified in the student’s plan of study related to their eventual dissertation proposal.

Qualifying Exam/Doctoral Candidacy
Students will be admitted to doctoral candidacy upon completion of a qualifying exam. The qualifying exam will require completion of a grant proposal suitable for supporting dissertation or early career research (e.g., F31 or R03) and an oral examination.

Dissertation – 12 credit hours minimum
MHS 7980  Dissertation

The dissertation will consist of original research designed and supervised by a faculty advisor. The student will select the faculty member who will serve as the major advisor within the first year of study. Each student will have a dissertation committee consisting of the major advisor and three other faculty members from different disciplines to reflect the interdisciplinary approach of the major. The student will write a dissertation proposal that outlines the completed project and will defend the proposal to obtain committee approval for beginning the dissertation. The dissertation will consist of a series of three articles with an introductory and conclusion chapter. The student will complete a public oral defense of the dissertation and the committee will judge the adequacy of the final document and the oral defense for approval for the Ph.D. degree.

Other Requirements
The Plan of Study must include at least 18 hours of coursework in an area that will fulfill the SACS teaching requirement of 18 hours in the field to ensure eligibility for university positions.

COURSES
See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
CHILD AND ADOLESCENT BEHAVIORAL HEALTH

Master of Science (M.S.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15
Spring: October 15
Summer: n/a

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 39
Level: Masters
CIP Code: 44.0000
Dept. Code: CFS
Major/College Codes: CAB/BC
State Approved: Spring 2014

Concentrations:
Developmental Disabilities (ABDD)
Leadership in Child and Adolescent Behavioral Health (ABLC)
Translational Research and Evaluation (ABTR)
Youth & Behavioral Health (ABYB)

CONTACT INFORMATION

College: Behavioral and Community Sciences
Department: Child and Family Studies (CFS)
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The M.S. in Child and Adolescent Behavioral Health (CABH) is offered by the Department of Child and Family Studies (CFS), College of Behavioral and Community Sciences (CBCS). This major will prepare students for careers in public and non-profit mental health, alcohol, drug abuse, youth behavioral health, developmental disabilities, and early childhood programs.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- A bachelor’s and/or graduate degree from a regionally accredited institution or the equivalent from a foreign institution
- GRE required with a preferred Verbal score in 58th percentile and Quantitative score in 18th percentile for applicants interested in the thesis option.
- A 3.0 GPA in the last 60 credits of major - as an upper level undergraduate working for a baccalaureate degree
- Submission of transcripts
- Letters of reference (3)
- One page statement of goals/career objectives and proposed concentration of interest
- Complete a background check prior to Field Experience placements
CURRICULUM REQUIREMENTS

**Total Minimum Hours:** 39 credit hours

**Program Core**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS 6074</td>
<td>Child &amp; Adolescent Behavioral Health</td>
<td>3</td>
</tr>
<tr>
<td>PHC 6240</td>
<td>Cultural Competency in Children’s Mental Health</td>
<td>3</td>
</tr>
<tr>
<td>MHS 6099</td>
<td>Child and Adolescent Behavioral Health Policy</td>
<td>3</td>
</tr>
<tr>
<td>PHC 6708</td>
<td>Evaluation and Research Methods in Community Health</td>
<td>3</td>
</tr>
</tbody>
</table>

**Concentrations**

Students select from the following concentration options:

**Developmental Disabilities (ABDD)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS 6095</td>
<td>Family-Centered Interdisciplinary Care</td>
<td>3</td>
</tr>
<tr>
<td>MHS 6410</td>
<td>Intensive Individualized Positive Behavior Support</td>
<td>3</td>
</tr>
<tr>
<td>MHS 6066</td>
<td>Systems, Services and Supports for Children and Adolescents with Developmental Disabilities</td>
<td>3</td>
</tr>
<tr>
<td>MHS 6065</td>
<td>Issues and Trends in Developmental Disabilities</td>
<td>3</td>
</tr>
<tr>
<td>MHS 6796</td>
<td>Single Subject Design -OR- MHS 6942- Practicum in Evidence Based Practice</td>
<td>3</td>
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</tbody>
</table>

**Leadership in Child and Adolescent Behavioral Health (ABLC)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS 6100</td>
<td>Applied Leadership in Children’s Behavioral Health</td>
<td>3</td>
</tr>
<tr>
<td>MHS 6097</td>
<td>Financing in Child and Adolescent Behavioral Health</td>
<td>3</td>
</tr>
<tr>
<td>MHS 6096</td>
<td>Program Development and Implementation in Children’s Mental Health</td>
<td>3</td>
</tr>
<tr>
<td>MHS 7740</td>
<td>Survey Course in Planning, Evaluation, and Accountability</td>
<td>3</td>
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</table>

**Translational Research and Evaluation (ABTR)**

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHC 6728</td>
<td>Translational Research Methods in Adolescent Behavioral Health</td>
<td>3</td>
</tr>
<tr>
<td>PHC 6729</td>
<td>Advanced Research Education in Adolescent Behavioral Health</td>
<td>3</td>
</tr>
<tr>
<td>MHS 7746</td>
<td>Statistical Applications in Adolescent Behavioral Health</td>
<td>3</td>
</tr>
<tr>
<td>MHS 6539</td>
<td>Foundations in Adolescent Behavioral Health</td>
<td>3</td>
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</table>

**Youth & Behavioral Health (ABYB)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>MHS 6095</td>
<td>Family-Centered Interdisciplinary Care</td>
<td>3</td>
</tr>
<tr>
<td>RCS 5450</td>
<td>Fundamentals of Substance Abuse</td>
<td>3</td>
</tr>
<tr>
<td>PHC 6542</td>
<td>Epidemiology of Mental Disorders</td>
<td>3</td>
</tr>
<tr>
<td>MHS 6096</td>
<td>Program Development &amp; Implementation in CABH</td>
<td>3</td>
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</table>

**Electives**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS 6972</td>
<td>Thesis in Child and Adolescent Behavioral Health</td>
<td>6</td>
</tr>
<tr>
<td>or</td>
<td>Applied Field Experience Seminar</td>
<td>6</td>
</tr>
</tbody>
</table>

**Comprehensive Examination**

Students will sit for the comprehensive exam in the semester in which they complete all core courses and required concentration courses.

**Thesis/Non Thesis**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>MHS 6972</td>
<td>Thesis in Child and Adolescent Behavioral Health</td>
<td>6</td>
</tr>
<tr>
<td>or</td>
<td>Applied Field Experience Seminar</td>
<td>6</td>
</tr>
</tbody>
</table>

**COURSES**

See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
COMMUNICATION SCIENCES AND DISORDERS

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: December 1
Spring: October 15

* for full consideration; however applications are accepted until February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 90 post-bacc
53 post-masters
Level: Doctoral
CIP Code: 51.0204
Dept Code: CSD
Major/College: CSD BC
Approved 2010

Concentrations:
Hearing Sciences and Audiology (HAS)
Neurocommunicative Sciences (NCS)
Speech-Language Sciences (SLS)

CONTACT INFORMATION

College: Behavioral & Community Sciences
Department: Communication Sciences and Disorders (CSD)
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Department of Communication Sciences and Disorders provides disciplinary and interdisciplinary education to prepare research scientists capable of addressing both theoretical and applied issues in laboratory, clinical, and classroom settings. Academic preparation emphasizes basic and advanced study in the communicative sciences, interdisciplinary study, and extensive research preparation. The program of study is tailored to meet individual interest areas. The overall aim of the doctoral major is to produce graduates who excel in meeting the rigorous demands of an academic/research career.

Major Research Areas:

Speech-Language Sciences:
Speech perception and production processes, speech perception by normal hearing listeners and listeners with hearing loss, non-native speech, language development in at-risk populations, linguistic and discourse correlates for reading, writing, and spelling, second language learning and literacy learning, and language variation and multiculturalism;

Hearing Sciences and Audiology:
Aural rehabilitation, psychoacoustics, aging, temporal processing, speech perception by impaired listeners, auditory evoked potentials, and otoacoustic emissions;

Neurocommunicative Sciences:
Aphasia, cognitive/linguistic processing in normal aging and adults with neurological disorders, cognitive neuroscience.
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- Three letters of recommendation
- A letter of intent
- A bachelor’s degree from a regionally accredited institution and a GPA of at least 3.50; or a master’s degree from a regionally accredited institution and a GPA of 3.50.00 or better (on a 4.00 scale) during graduate study. Students with a non-CSD background may be required to take pre-requisite coursework in the basic speech, language, and hearing sciences depending on career plans and desired area of focus.
- GPA of 3.50 or above from previous graduate study.
- GRE with preferred scores at the 33rd percentile for Verbal and, Quantitative subtests, and a 3.50 or better on the Writing subtest, taken within 5 years preceding the application. Students with lower scores may be offered admission on a conditional basis if the letter of intent and letters of recommendation are particularly strong.

CURRICULUM REQUIREMENTS

The specific coursework to be completed for research and tools of research, core content, and concentration/specialized study are determined individually to create a course of study appropriate to the student’s desired specialization. The core content normally consists of four advanced seminars (SPA 7931) covering the four major content areas of the field (speech, language, hearing, and neurocommunicative science). In certain cases, with approval of the Major Advisor and Program Director, previously completed graduate level coursework may be applied towards requirements in the Core content or Specialized Study areas. Completion of the Ph.D. in Communication Sciences and Disorders after the Master’s normally requires a minimum of four years of study; a minimum of five years after the bachelor’s.

Total Minimum hours:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Minimum Hours</th>
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<tbody>
<tr>
<td>90 (post-bacc)</td>
<td></td>
</tr>
<tr>
<td>53 (post-master’s)</td>
<td></td>
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</tbody>
</table>

All Students must complete the following requirements

CORE REQUIREMENTS

Research and tools of research

Two course sequence in statistical analysis

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDF 6407</td>
<td>Statistical Analysis for Ed. Research I</td>
<td>4</td>
</tr>
<tr>
<td>EDF 7408</td>
<td>Statistical Analysis for Ed. Research II</td>
<td>4</td>
</tr>
<tr>
<td>OR</td>
<td>GEY 6934 Research Methods I</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>GEY 6934 Research Methods II</td>
<td>3</td>
</tr>
</tbody>
</table>

Research Design

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPA 7806</td>
<td>Advanced Research Design in CSD</td>
<td>3</td>
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</table>

Research rotation

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Two research rotations, as described below.</td>
<td></td>
</tr>
</tbody>
</table>

Core Content

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPA 7811</td>
<td>Research Foundations in Speech Science</td>
<td>3</td>
</tr>
<tr>
<td>SPA 7812</td>
<td>Research Foundations in Hearing Science</td>
<td>3</td>
</tr>
<tr>
<td>SPA 7826</td>
<td>Research Foundations in Neurocommunicative Sciences</td>
<td>3</td>
</tr>
<tr>
<td>SPA 7841</td>
<td>Research Foundations in Language Science</td>
<td>3</td>
</tr>
</tbody>
</table>
CONCENTRATION REQUIREMENTS

Hearing Sciences and Audiology (HAS)
Neurocommunicative Sciences (NCS)
Speech-Language Sciences (SLS)

Foundational knowledge

Master’s and Au.D. level students will be credited with 36 hours from their previous degree. Bachelor’s level students, in consultation with their academic advisor, will design an appropriate curriculum to obtain foundational content and skills in their area of interest that will prepare them for Advanced Study. This curriculum is required to include a minimum of eight (8) hours of structured coursework at the 6000-level or above, either within the department or in related departments. The remainder of credits may take the form of additional structured coursework, directed research, or independent study.

Courses in the Department frequently used to satisfy this requirement are listed below.

Note: Students admitted to the major from a non-CSD background may be required to take pre-requisite coursework at the undergraduate level in the basic speech, language, and hearing sciences, depending on their career plans and desired area of focus.

Speech-Language Pathology Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPA 5403</td>
<td>Language Learning in the School-Age Years</td>
<td>3</td>
</tr>
<tr>
<td>SPA 5204</td>
<td>Advanced Clinical Phonology</td>
<td>3</td>
</tr>
<tr>
<td>SPA 5552</td>
<td>Diag Prin &amp; Pratice</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6401</td>
<td>Pediatric Lang Dis</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6404</td>
<td>Language Learning Dis</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6473</td>
<td>Multicultural Differences in Lang Use</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6413</td>
<td>Augmentative and Alternative Comm</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6571</td>
<td>Ethical Practice Issues in Comm. Dis</td>
<td>1-2</td>
</tr>
<tr>
<td>SPA 7150</td>
<td>Advanced Speech Science</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6211</td>
<td>Adv Vocal Dis</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6225</td>
<td>Adv Fluency</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6232</td>
<td>Neuromotor</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6417</td>
<td>Communication and Cognition in TB</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6564</td>
<td>Seminar in Aging, Cognition, and Comm.</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6410</td>
<td>Aphasia</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6565</td>
<td>Dysphagia</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6805</td>
<td>Research Procedures in CSD</td>
<td>3</td>
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Audiology Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPA 6571</td>
<td>Profession of Audiology</td>
<td>1-2</td>
</tr>
<tr>
<td>SPA 5153</td>
<td>Quant Prov Solving</td>
<td>3</td>
</tr>
<tr>
<td>SPA 5120</td>
<td>Psychoacoustics</td>
<td>3</td>
</tr>
<tr>
<td>SPA 5132</td>
<td>Audiology Instrumentation</td>
<td>3</td>
</tr>
<tr>
<td>SPA 5303</td>
<td>Auditory A&amp;P</td>
<td>3</td>
</tr>
<tr>
<td>SPA 5328</td>
<td>Rehabilitative Audiology for Adults</td>
<td>3</td>
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<tr>
<td>SPA 6305</td>
<td>Pediatric Audiology</td>
<td>3</td>
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<tr>
<td>SPA 6307</td>
<td>Speech Perception &amp; Hearing Loss</td>
<td>3</td>
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<tr>
<td>SPA 6311</td>
<td>Medical Audiology</td>
<td>3</td>
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<tr>
<td>SPA 6314</td>
<td>Electrophys</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6316</td>
<td>Vestibular Eval &amp; Treatment</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6324</td>
<td>Aural Rehab: Children</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6340</td>
<td>Principles of Amplification I</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6341</td>
<td>Principles of Amplification II</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6354</td>
<td>Hearing Conservation</td>
<td>3</td>
</tr>
<tr>
<td>SPA 7346</td>
<td>Cochlear Implants</td>
<td>3</td>
</tr>
<tr>
<td>SPA 7330</td>
<td>Adv Vestibular Eval &amp; Treatment</td>
<td>3</td>
</tr>
<tr>
<td>SPA 7331</td>
<td>Adv Medical Audiology</td>
<td>3</td>
</tr>
<tr>
<td>SPA 7332</td>
<td>Adv Electrophysiology</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6393</td>
<td>Audiology Practice Management</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6805</td>
<td>Research Procedures in CSD</td>
<td>3</td>
</tr>
</tbody>
</table>
Advanced Study  
9 credit hours  
Advanced topics in Communication Sciences and Disorders  
SPA 7931 Advanced Seminar in Communication Sciences and Disorders

Remaining coursework required for Advanced Study (beyond at least one SPA 7931 course) may take the form of elective coursework, either within the department or in related departments, directed research, or independent study. The student’s academic advisor, major professor and Dissertation Committee will advise students on the selection of the proper mix of coursework and other study to support knowledge development in the student’s area of specialization and/or to facilitate development of a research tool or methodology that may be needed for the student’s dissertation research. As part of the advanced study requirement, it is likely that students will also be advised to take directed research credits with Dissertation Committee members, as they begin directed readings to prepare for the Qualifying Examination.

Dissertation  
12 credit hours minimum  
SPA 7980 Dissertation

Other

In addition to specific degree requirements, a student must complete the following to qualify for graduation:

1. Satisfactory completion of two research rotations, with one rotation in the student’s primary area of interest and a second rotation in a different research area. The “depth” research rotation in the student’s primary area of interest is required to be a minimum of nine (9) credit hours (typically spread over 3-4 semesters) and to result in a completed project that generates publishable data. The “breadth” research rotation, which must be conducted in a different research area, is an experiment-focused laboratory experience. It is required to be a minimum of two (2) credit hours (typically completed in one semester), and the student’s contribution need not (on its own) result in a publishable work.

2. With the supervision of a qualifying committee, pass a written qualifying examination that evaluates the student’s specialty knowledge and methodological competence. At the discretion of the qualifying committee an oral examination may follow the written examination.

3. Establish a doctoral committee prior to admission into doctoral candidacy.

4. Prepare and defend a dissertation proposal.

5. Following completion of the dissertation research, successfully defend the work before the dissertation committee.

6. Departmental policy specifies that any student earning a C+ or below in two courses will be recommended for dismissal from the Ph.D. major.

COURSES
See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
Criminal Justice Administration (M.A.)

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: June 1
*Rolling admissions; applications continually accepted for Fall cohort program (alternative calendar).

International applicant deadlines: http://www.grad.usf.edu/majors

Minimum Total Hours: 33
Level: Masters
CIP Code: 43.0103
Dept Code: CJP
(Major/College Codes: CJA BC
Approved: 2006

CONTACT INFORMATION

College: Behavioral & Community Sciences
Department: Criminology (CJP)
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The M.A. in Criminal Justice Administration is a specialized and concentrated program of study designed specifically for practitioners and those whose desire is to complete an M.A. with a special emphasis on administration and management within the criminal justice system. Generally it targets individuals who do not anticipate continuing on to the doctoral studies. It is a concentrated weekend, cohort-based major leading to the M.A. in five consecutive semesters. Up to two classes may be offered via the internet. Classes are held on weekends, meet for one day, and run seven weeks back-to-back. The major is modeled after a typical executive MBA program for working professionals.

This is a cohort based model. This major concentrates on issues related to the organization and operation of criminal justice agencies and related organizations.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- A bachelor’s degree from a regionally accredited university or college
- A minimum undergraduate GPA of 3.00
- Two letters of recommendation attesting to the applicant’s abilities to succeed at the graduate level
- A statement of purpose addressing the motivations to attain a graduate diploma and the intention to apply the diploma to a specific set of purposes
CURRICULUM REQUIREMENTS

CORE REQUIREMENTS
Coursework Requirements (33 hrs. total)

CCJ 6936  Current Issues in Law Enforcement  3
CCJ 6605  Theoretical Approaches to Criminal Behavior  4
CCJ 6705  Research Methods in Criminology  4
CJE 6025  Policy Organization, Behavior, and Administration  3
CJE 6029  Adv Seminar in Law Enforcement  3
CJE 6712  Criminal Justice Graduate Capstone Seminar  3
CCJ 6706  Quantitative Analysis I  4
CCJ6406  Theory, Practice, and Research in Law Enforcement  3

Additionally, two courses in public administration at the 6000 level are required.  6
The department recommends PAD 6041 (3), PAD 6934 (3) or similar courses in PAD
approved by the CJA Program Director in coordination with the Public Administration
Program.

COURSES
See  http://www.ugs.usf.edu/course-inventory/
CRIMINOLOGY

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: March 1
Spring: September 30

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 33
Level: Masters
CIP Code: 45.0401
Dept Code: CJP
Major/College Codes: CCJ BC
Approved: 1974

CONTACT INFORMATION

College: Behavioral & Community Sciences
Department: Criminology (CJP)
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The M.A. in Criminology is a two-year major designed to provide the student with an in depth understanding of the major ideas, issues, theories, and research comprising the field of Criminology and Criminal Justice.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- A bachelor’s degree from a regionally accredited university or college
- An upper division GPA of 3.00 and preferred minimum scores of 153V (53\textsuperscript{rd} percentile), 144Q (18\textsuperscript{th} percentile) or higher on the Graduate Record Exam (GRE). All applicants must submit GRE scores taken within the preceding five years.
- A statement of purpose detailing reasons for seeking a graduate degree in Criminology, future career plans, and research interests
- A professional or academic writing sample providing evidence of the candidate’s academic capabilities.
- Three letters of reference speaking to the applicant’s academic capabilities

CURRICULUM REQUIREMENTS

Total Minimum Hours - 33 credit hours
Core requirements - 18 hours
Electives – Non-thesis option -15 hours
Electives – Thesis option - 9 hours
Thesis (optional) - 6 hours

CORE REQUIREMENTS – 18 hours
CCJ 6118 (4) Introduction to Criminological Theory
CCJ6485 (3) Criminal Justice and Public Policy
CCJ 6705 (3) Research Methods in Criminology
CCJ 6706 (4) Quantitative Analysis I
Criminology (M.A.)

CCJ 6707 (3)  Quantitative Analysis II
CCJ 6937 (1)  ProSeminar in Criminology

Thesis Option
Core requirements plus the following:
Electives – 9 hours
Options include:
CCJ 6638 (3)  Seminar in Nature and Causes of Crime
CCJ 6624 (3)  Seminar in Violence
CCJ 6668 (3)  Seminar in Social Inequality and Crime
CCJ 6654 (3)  Seminar in Drugs and Crime

A maximum of three hours may be directed independent study. Up to three graduate hours may be taken in an area outside the department with the approval from the Graduate Director.

Thesis – 6 hours
CCJ 6971 (6)  Thesis: Master’s

The thesis will consist of research that makes an original contribution to the scholarly literature and may be of either a quantitative or qualitative nature. An oral defense of the thesis is required after the final draft of the thesis has been accepted by the candidate’s supervisory committee.

Non-Thesis Option
Core requirements plus the following:
Electives 15 hours
Options include:
CCJ 6638 (3)  Seminar in Nature and Causes of Crime
CCJ 6624 (3)  Seminar in Violence
CCJ 6669 (3)  Seminar in Social Inequality and Crime
CCJ 6654 (3)  Seminar in Drugs and Crime

A maximum of three hours may be directed Independent Study. Up to six graduate hours may be taken in the area outside the Department with approval from the Graduate Director.

Comprehensive Exam

COURSES
See  http://www.ugs.usf.edu/course-inventory/
See  http://criminology.cbsc.usf.edu/masterCriminology/
CRIMINOLOGY

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: January 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 55 post-master’s
Level: Doctoral
CIP Code: 45.0401
Dept Code: CJP
Major/College Codes: CCJ BC
Approved 1998

CONTACT INFORMATION

College: Behavioral & Community Sciences
Department: Criminology (CJP)
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Ph.D. is a research degree granted in recognition of high achievement in criminology. This achievement requires accomplishments beyond the completion of coursework that demonstrate the ability to work independently and contribute to criminological knowledge.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- a master’s degree from a regionally accredited institution and a GPA of at least 3.40 or better (on a 4.00 scale) during graduate study.
- A preferred minimum score of 153V (53rd percentile), 144Q (18th percentile) or higher on the Graduate Record Exam (GRE) within the preceding five (5) years. All applicants must submit GRE scores.
- Three 3 letters of recommendation speaking to the applicants academic capabilities
- A statement of purpose detailing reasons for seeking a Ph.D. degree in Criminology, future career plans and research interests.
- A professional or academic writing sample providing evidence of the candidate’s academic capabilities
CURRICULUM REQUIREMENTS

Total minimum hours: 55 hours post-master’s

Core requirements – 22 hours
Electives – 9 hours
Advanced Research – 6 hours
Dissertation – 18 hours

In addition to the general requirements of the University, the 55 credit hour post-M.A./M.S. degree is as follows:

Core Requirements - 22 Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCJ 6937</td>
<td>1</td>
<td>Pro Seminar in Criminology*</td>
</tr>
<tr>
<td>CCJ 6485</td>
<td>3</td>
<td>Criminal Justice and Public Policy*</td>
</tr>
<tr>
<td>CCJ 6707</td>
<td>3</td>
<td>Quantitative Analysis in Criminology II*</td>
</tr>
<tr>
<td>CCJ 6708</td>
<td>3</td>
<td>Quantitative Analysis in Criminology III</td>
</tr>
<tr>
<td>CCJ 7705</td>
<td>3</td>
<td>Research Methods in Criminology II** proposed course</td>
</tr>
<tr>
<td>CCJ 7605</td>
<td>3</td>
<td>Theories of Criminal Behavior I</td>
</tr>
<tr>
<td>CCJ 7606</td>
<td>3</td>
<td>Theories of Criminal Behavior II</td>
</tr>
<tr>
<td>CCJ 7065</td>
<td>2</td>
<td>Professional Development in Criminology</td>
</tr>
<tr>
<td>CCJ 7940</td>
<td>1</td>
<td>Teaching Practicum in Criminology</td>
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</tbody>
</table>

Electives – 9 hours
Options include:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCJ 6638</td>
<td>3</td>
<td>Seminar in Nature and Causes of Crime</td>
</tr>
<tr>
<td>CCJ 6624</td>
<td>3</td>
<td>Seminar in Violence</td>
</tr>
<tr>
<td>CCJ 6669</td>
<td>3</td>
<td>Seminar in Social Inequality and Crime</td>
</tr>
<tr>
<td>CCJ 6654</td>
<td>3</td>
<td>Seminar in Drugs and Crime</td>
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</tbody>
</table>

Six graduate credit hours may be taken outside the Department with approval from the Graduate Director. All courses must be USF courses.

*For students who have taken CCJ 6937, CCJ 6485 and/or CCJ 6707 or the equivalent as M.A. students, those credit hours will be substituted with additional departmental electives.

**An introductory research methods course at the graduate level prior is a pre-requisite to taking this course.

†An introductory quantitative analysis at the graduate level prior is a pre-requisite to taking this course.

Advanced Research – 6 hours*

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>CCJ 7910</td>
<td>6</td>
<td>Advanced Research</td>
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</table>

*Differential credit hours from 1-6 credit hours can be taken in a given semester

Dissertation - 18 hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCJ 7980</td>
<td>18</td>
<td>Doctoral Dissertation</td>
</tr>
</tbody>
</table>

In addition to successfully completing these requirements, students will qualify for candidacy as described below and write and defend a dissertation prospectus and dissertation.

Qualifying Examination

Students must pass two exams and produce an approved publishable manuscript as determined by a graduate faculty member. The comprehensive exams assess the student’s comprehensive knowledge of (a) theories of criminology, and (b) research methods and data analysis and assess a student’s (a) innovative, critical and analytical thinking and (b) writing skills.

COURSES

See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
**CYBERCRIME**

**Master of Science (M.S.) Degree**

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### DEGREE INFORMATION

<table>
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<th>Priority Admission Application Deadlines:</th>
<th>CONTACT INFORMATION</th>
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<tbody>
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<td>Fall: March 1</td>
<td>College: Behavioral &amp; Community Sciences</td>
</tr>
<tr>
<td>Spring: September 30</td>
<td>Department: Criminology (CJP)</td>
</tr>
</tbody>
</table>

**Minimum Total Hours:** 30  
**Level:** Masters  
**CIP Code:** 45.0401  
**Dept Code:** CJP  
**Major/College Codes:** CBRC BC  
**Approved:** 2017

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### CONTACT INFORMATION

**Contact Information:** [www.grad.usf.edu](http://www.grad.usf.edu)

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### MAJOR INFORMATION

The Master of Science in Cybercrime is a fully online major designed to provide the student with an in-depth understanding of the major issues in criminology as it relates to cybercrime. Students will master current criminology theory as it relates to the social and behavioral aspects of cybercrime, and learn methodology, tools of inquiry, and investigation into digital forensics and evidence collection.

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### ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- A bachelor’s degree from a regionally accredited university or college
- An upper division GPA of 3.00 (based on the last 60 hours)
- A statement of purpose detailing reasons for seeking a graduate degree in Cybercrime
- A professional or academic writing sample providing evidence of the candidate’s academic capabilities.
- Three letters of reference speaking to the applicant’s academic capabilities

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### CURRICULUM REQUIREMENTS

**Total Minimum Hours - 30 credit hours**
- Core requirements - 11 hours
- Required courses: 16 hours
- Elective courses: 3 hours

**CORE REQUIREMENTS – 11 hours**
- CCJ 6118 (4) Introduction to Criminological Theory
- CCJ 6705 (3) Research Methods in Criminology
- CCJ 6706 (4) Quantitative Analysis I

**REQUIRED COURSES – 16 hours**
- CCJ 6616 (3) Profiling Cybercrime
- CJE 6688 (3) Intro to Cybercrime and Criminal Justice
- CCJ 6022 (3) Cyber Crime, Law & Public Policy
CJE 6624 (3) Introduction to Digital Evidence
CJE 6626 (3) Digital Forensic Criminal Investigations
CCJ 6050 (1)  Pro-Seminar in Criminology: Portfolio

One of the Two Following Electives
CCJ 6675 (3) Cyber Victimization
CCJ 6625  (3) Social Media and Technology

Students who have completed graduate coursework prior to admission to the major may have their transcripts evaluated to determine coursework that could be applicable toward completion of the M.S. in Cybercrime

Comprehensive Exam

COURSES
See http://www.ugs.usf.edu/course-inventory/
See http://criminology.cbc.usf.edu/masterCriminology/
GERONTOLOGY

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15
Spring: October 15
Summer: February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 36
Level: Masters
CIP Code: 30.1101
Dept Code: GEY
Major/College Codes: GEY BC
Approved: 1969

CONTACT INFORMATION

College: Behavioral & Community Sciences
Department: School of Aging Studies (GEY)
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

Gerontology is the study of the process of human aging in all its aspects: physical, psychological, and social. In the School of Aging Studies, particular emphasis is placed on educating Gerontology students who, in their professional careers, will work to sustain or improve the quality of life of older people. Many of our graduates are employed in agencies providing services for older adults. For information about the interdisciplinary Ph.D., see the separate listing for Aging Studies Ph.D.

The School offers the M.A. in Gerontology, with either a thesis or non-thesis option. In addition to completing a required core curriculum, students may select gerontology courses suited to their particular career goals. These include courses focused on such diverse concentrations as research, program administration, direct service, and case management. While the M.A. program does not have separate tracks, students are advised to select courses in the concentration(s) that match their intended career. Students should meet with their advisors to select concentrations appropriate to their professional goals.

Internships are recommended and available for students who need practical experience in the field of aging. Students interested in internships should see the school’s internship director. Following completion of the necessary coursework there is a comprehensive examination designed to test the student’s knowledge of, and ability to integrate, key concepts and information in the field of gerontology. This examination must be taken and passed by all students in the M.A. program. Students electing the thesis option must successfully pass an oral examination on the thesis. There are no language requirements.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- a GPA of 3.00 or greater and
- a preferred GRE score of at least 149V (41st percentile), 142Q (16th percentile), 3.5A.W.
- Applicants where English is not the language of instruction must also submit a TOEFL iBT score of at least 79 which corresponds to a score of 600 on the old TOEFL test
- State of Purpose in pursuing a MA in Gerontology
- Current Resume
CURRICULUM REQUIREMENTS

The M.A. degree requires 36 credits of graduate study.

CORE REQUIREMENTS

Required courses (15 credits) include:

- GEY 5620 3  Sociological Aspects of Aging
- GEY 5630 3  Economics and Aging
- GEY 6600 3  Human Development
- GEY 6613 3  Physical Change and Aging
- GEY 6450 3  Gerontological Research and Planning

Comprehensive exam
Following completion of the required 15-credit coursework, there is a comprehensive examination designed to test the student’s knowledge of, and ability to integrate, key concepts and information in the field of gerontology. This examination must be taken and passed by all students in the M.A. major to meet requirements.

Internship
Internships are available for students who need practical experience in the field of aging.

Thesis
Students electing the thesis option must successfully pass an oral examination on the thesis. There are no language requirements

Electives  (21 credits)
The remaining 21 hours of coursework must be selected from other graduate courses in gerontology. The following courses are suggested for four areas of study:

Further Educational/Research Goals

- GEY 6402 3  Statistical Methods in Aging Research
- GEY 6403 3  Multivariate Statistical Analysis for Aging Research
- GEY 6901 3  Directed Reading in Gerontology
- GEY 6910 3  Directed Research in Gerontology
- GEY 6971 2-19 Thesis: Master’s

Administrative Goals

- GEY 6934 3  Understanding Principles and Practices in Long Term Care
- GEY 5501 3  Health Care Operations in Long Term Care3
- GEY 5476 3  Program Evaluation in an Aging Society
- GEY 6325 3  Social Policy and Planning for Gerontologists
- GEY 6500 3  Seminar in Principles of Administration
- GEY 6626 3  Health, Ethnicity, and Aging
- GEY 6221 3  Ethical and Legal Issues in Aging

Clinical Services Goals

- GEY 6607 3  Alzheimer’s Disease Management
- GEY 6614 3  Aging and Mental Disorders
- GEY 6615 3  Topics in Psychopathology and Aging
- GEY 6616 3  Mental Health Assessment and Intervention with Older Adults
- GEY 6617 3  Gerontological Counseling Theory and Practice
- GEY 6618 3  Gerontological Group & Family Counseling

Case Management Goals

- GEY 6206 3  Family Caring in Aging and Chronic Illness
- GEY 6321 3  Gerontological Case management
- GEY 6326 3  Geriatric Interdisciplinary Team Training
- GEY 6614 3  Aging and Mental Disorders
GEY 6616  3  Mental Health Assessment and Intervention with Older Adults
GEY 6617  3  Gerontological Counseling Theory and Practice

COURSES
See http://www.ugs.usf.edu/course-inventory/
REHABILITATION AND MENTAL HEALTH COUNSELING (POST-BACC)

Master of Arts (M.A.) Degree

DEGREE INFORMATION

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<tr>
<td>Fall: January 15</td>
<td>College: Behavioral &amp; Community Sciences</td>
</tr>
<tr>
<td>Fall Admission only</td>
<td>Department: Child and Family Studies (CFS)</td>
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</tbody>
</table>

International applicant deadlines: http://www.grad.usf.edu/majors

Minimum Total Hours: 60
Level: Masters
CIP Code: 51.2310
Dept Code: REH
Major/College Codes: REH BC
Approved: 1971

Concentrations:
Addictions and Substance Abuse Counseling (ASA)
Marriage and Family Therapy (MFL)

Also offered as a 5-year program:
5-year program is currently inactive.

MAJOR INFORMATION

The Department of Child and Family Studies trains counselors to work with physically, mentally, emotionally, and chemically disabled individuals. Training emphasizes psychological, social, medical, and vocational aspects of disability, and also the development and refinement of personal adjustment counseling skills. Graduates with this M.A. are prepared for careers as both rehabilitation specialists and mental health counselors.

The Department offers only the M.A. degree. Most students are admitted after earning a baccalaureate degree in one of the behavioral, social, health-related, or educational disciplines (REH). The Major offers two areas of Concentration that may also lead to a certificate: (1) Addictions and Substance Abuse Counseling; and (2) Marriage and Family Therapy. Each student may elect to pursue a program of specialization in any of these areas. The Addictions and Substance Abuse counseling program is approved by the Certification Board for Addictions Professionals of Florida (CBAPF Approved Provider #179A).

Upon completion of at least 75% of the major, students are eligible to sit for the national examination to become a Certified Rehabilitation Counselor (CRC). Upon graduation, individuals are also eligible to take the examination for the state licensure as a Mental Health Counselor. Upon completion of 1500 hours of post-graduate clinical supervision graduates receive their license as a Mental Health Counselor in the State of Florida. For a complete description of the department and its program, visit the department’s Web page at: http://rmhc.bcs.usf.edu

Accreditation:
The Major is accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP) and the Commission on Rehabilitation Education (CORE).
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- Three letters of recommendation
- Online department application (which includes a personal statement of intent)
- GRE
- Interview (on campus)
- Undergraduate statistics or research methods course

CURRICULUM REQUIREMENTS

Total Minimum Credit Hours - 60 credits

Core Requirements – 60 hours
Optional Thesis – 6 hours
Optional Concentration – 15 hours

The department offers both a thesis and a non-thesis option. There is no language requirement; however, a comprehensive examination is required of all students. The following 60-hour core curriculum is consistent with national certification standards for rehabilitation counselors and must be taken by all students (post-baccalaureate, thesis, and non-thesis). Students must receive a B (3.00) or better in all core curriculum and elective classes.

Core Course Requirements – 60 hours
MHS 5020 Foundations of Mental Health Counseling 3
MHS 5480 Human Growth & Development 3
RCS 5780 Legal & Ethical Issues & Professional Standards and Issues in Counseling 3
RCS 5035 Rehabilitation Counseling in Community Settings: Concepts & Applications 3
RCS 5080 Medical Aspects of Disability 3
RCS 5450 Fundamentals of Substance Abuse Counseling 3
RCS 6220 Individual Evaluation & Assessment 3
RCS 6476 Human Sexuality Counseling 3
RCS 6301 Career & Lifestyle Assessment 3
RCS 6408 Diagnosis & Treatment Psychopathology 3
RCS 6440 Social & Cultural Foundations of Counseling 3
RCS 6510 Group Theories and Practice 3
RCS 6407 Counseling Theories and Practice 3
RCS 6740 Research & Program Evaluation 3
RCS 6803 Practicum in Counseling 6
RCS 6825 Internship 6
Two Electives or Thesis Credits 6

Optional Thesis - 6 hours
RSC 6970 Thesis
All students are initially admitted to the non-thesis program. Admitted students may subsequently apply to the faculty for a thesis program. Students in a thesis program must complete a minimum of 60 hours in the Post-Baccalaureate Program (54-hr.) core curriculum including a minimum of 6 hours of RCS 6970. An oral defense of the thesis is required.

Optional Concentration Requirements

Addictions and Substance Abuse Counseling - 15 credit hours
RCS 5450 Fundamentals of Substance Abuse Counseling 3
RCS 6459 Professional Skills for Addictions Counselors 3
RCS 6930 Seminar in Rehabilitation Counseling: Employee Assistance Programs 3 or approved elective 3
RCS 6803 Practicum (Substance Abuse) 3
RCS 6456 Counseling Approaches for Substance Abusers 3
**Marriage and Family Therapy -15 hours**
- RCS 6476  Human Sexuality in Counseling  3
- RCS 6930  Seminar in Rehabilitation Counseling: Dynamics of Marriage and Family Therapy  3
- RCS 6930  Seminar in Rehabilitation Counseling: Marital Therapy, Theory, and Techniques  3
- RCS 6930  Seminar in Rehabilitation Counseling: Family Therapy, Theory, and Techniques  3
- RCS 6803  Practicum in Counseling  3

**Comprehensive Examination**
In order to graduate from the program students must pass the comprehensive exam. The written comprehensive examination assesses the student’s understanding of the significant content and process areas of the entire major curriculum.

**COURSES**
See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
SOCIAL WORK

Master of Social Work (M.S.W.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:

Full-time two-year program: February 15

Full-time Adv Standing:
  *Summer: February 15
  *Spring: October 15

Part-time program: Contact School for further information. Please call 813-974-2063 regarding deadlines

Minimum Total Hours:
- 35 (with B.S.W.)
- 60 (without B.S.W.)

Level: Masters

CIP Code: 44.0701

Dept Code: SOK

Major/College Codes:
- SOK BC
- 1981

Also offered as: Dual Degree – M.S.W./M.P.H.

CONTACT INFORMATION

College: Behavioral & Community Sciences
Department: School of Social Work (SOK)
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The School of Social Work offers a program leading to a Master of Social Work (M.S.W.) degree. The Major is fully accredited by the Council on Social Work Education. A concurrent degree option is available with Public Health/Maternal and Child Health or Behavioral Health. The primary objective of the major is preparation of the graduate for professional social work practice through acquisition of specialized knowledge and skills necessary for clinical practice with individuals, families, and groups. The secondary objectives of the M.S.W. are:

1. to prepare students academically for pursuit of doctoral education in social work or related human service disciplines or professions;

2. to contribute to the needed supply of professionally educated clinical social workers in the Tampa Bay area, the state, the region, and the nation.

The M.S.W. offers a specialized course of study in direct clinical practice. The major offers students a core curriculum, plus electives, and a supervised field experience designed to produce professionals with individual, family, and group practice skills. M.S.W. graduates are prepared to engage in advanced clinical social work practice. As such, it is our goal that by completion of the major, students will be prepared:

1. To become advanced social work practitioners who integrate the knowledge, skills, and values of the profession so they are able to conduct evidence-informed practice effectively and ethically with individuals, groups, families, organizations, and communities ranging from local to global levels.

2. To engage in addressing the needs of vulnerable, oppressed, and underserved populations and to promote university-community partnerships that strengthen communities and further social and economic justice.
3. To further the development of social policies and social service delivery systems that are effective in meeting the needs of individuals and communities at local-global levels and that are in concert with values of the social work profession.

4. To contribute to the body of knowledge regarding theory and skills that is critical to the practice of effective social work and the vitality of the profession.

5. To engage in the pursuit of professional life-long learning, which may include advanced education preparation necessary to sustain professional competency.

The M.S.W. places great emphasis on standards of professional behavior and ethics in the practice of social work. Entrance into the M.S.W. does not guarantee graduation from the major. Students admitted to the M.S.W. must maintain a minimum GPA of 3.00, in all social work courses, with no grade below “B-” counting toward graduation. Failure to maintain the specified GPA or to exhibit responsible professional behavior determined by the School may result in suspension or dismissal from the major. Courses with grades below “B-” must be repeated before progressing to the next sequence. Students must pass the comprehensive paper during the last semester in order to graduate from the major.

Students may pursue the M.S.W. on either a full- or part-time basis. Both options consist of 60 semester hours of study. Students should check directly with the School of Social Work for applications and timelines. The full-time option takes four semesters to complete; the part-time option lasts for eight (8) consecutive semesters. The major offers graduates from a Council on Social Work Education (CSWE) accredited BSW program (within 5 years) the option of applying for advanced standing. The advanced standing program is available online on either a full- or part-time basis. The advanced standing program is also offered on campus. Students qualify by receiving “B” or better grades in the undergraduate social work courses that equate to the MSW foundation courses. (Students do not qualify with “B-“ grades in these courses). Both the full- and part-time options are heavily sequenced and students must stay in sequence.

Accreditation:
Accredited by the Council of Social Work Education.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- School of Social Work Application
- Three letters of recommendation
- 500-word personal statement and a 500-word essay describing a social problem
- Liberal arts pre-requisites; to be eligible for admission to the MSW Major, students must have taken courses with a liberal arts perspective. Liberal Arts perspective is defined as 12 credits which include three credits of biology with human content and a minimum of three credits of social and behavioral sciences. The remaining credits may be completed through additional social and/or behavioral sciences, humanities and fine arts classes. (One statistics course may also be used in completing this requirement.) Liberal Arts requirements may be waived at the discretion only of the MSW chair in consultation with the Director.
- Interview may be required; experience in the field preferred.

CURRICULUM REQUIREMENTS

Total Minimum hours: 60 (non-BSW students) 35 (BSW students)

Non BSW Students – 60 hour minimum

Curriculum Requirements (non-B.S.W. students) 60 hours minimum

Summary

Foundations Courses 17 hours
(ex: SOW 6105, SOW 6305, SOW 6235, SOW 6405, SOW 6348, SOW 6xxx)
Advanced Courses 20 hours
Field Courses 13 hours
Electives 9 hours
Capstone Project 1 hour
Total 60 hours for non-BSW students

Core Requirements - 37 hours

Human Behavior and Social Environment Courses - 8 hours
SOW 6105 3 Foundations of Human Behavior
SOW 6124 3 Psychopathology
SOW 6126 2 Health, Illness, and Disability

Social Work Practice Courses - 17 hours
SOW 6342 3 Social Work Practice With Individuals
SOW 6305 3 Foundations of Social Work Micro Practice
SOW 6348 3 Diversity and Social Justice
SOW 6362 3 Social Work Practice With Couples and Families
SOW 6368 3 Social Work Practice With Groups
SOW 6186 3 Foundations of Social Work Macro Practice

Policy and Services Courses - 6 Hours
SOW 6235 3 Foundations of Social Welfare Policy
SOW 6236 3 Social Welfare Policy Development and Analysis

Social Work Research Courses - 6 hours
SOW 6405 3 Foundations of Social Work Research and Statistics
SOW 6438 3 Evaluation of Clinical Practice in Diverse Settings

Supervised Field Experience - 13 hours
For full-time students:
SOW 6534 1 Field Instruction I
SOW 6535 4 Field Instruction II
SOW 6536 4 Field Instruction III
SOW 6539 4 Field Instruction IV

For part-time students:
SOW 6534 1 Field Instruction I
SOW 6553 2 Field Instruction Sequence II: Part-time
SOW 6554 2 Field Instruction Sequence II: Part-Time
SOW 6555 2 Field Instruction Sequence III: Part-Time
SOW 6556 2 Field Instruction Sequence III: Part-Time
SOW 6557 2 Field Instruction Sequence IV: Part-Time
SOW 6558 2 Field Instruction Sequence IV: Part-Time

Electives - 9 hours
All MSW students are required to take 9 clinical elective credit hours. All clinical electives must be taken in the School of Social Work. Students may take clinical electives during any semester including summer sessions. However, part-time students should check the program course schedule for the recommended semesters for electives.

Comprehensive Exam - 1 hour

Capstone Project - In lieu of the Comprehensive exam, students will complete a Capstone Project involving the content from across the curriculum. It will be completed in the final semester. It is worth 1 credit hour and meets the requirement for the Comprehensive Exam.
SOW 8907 1 Capstone Project
BSW Students (Advanced Standing Students) – 35 hour minimum
This option offers graduates from a CSWE accredited BSW (within 5 years) the opportunity of applying for advanced standing. Students qualify by receiving “B” or better grades in the undergraduate social work courses that equate to the MSW foundation courses. (Students do not qualify with “B-” grades in these courses).

Curriculum Requirements (B.S.W. students) 35 hours minimum

Summary
Core requirements 20 hours
Field Experience 8 hours
Electives 6 hours
Capstone Project 1 hour
Total 35 hours for BSW students

Core requirements for advanced standing students -20 hours

Human Behavior and Social Environment Courses - 5 hours
SOW 6124 3 Psychopathology
SOW 6126 2 Health, Illness, and Disability

Social Work Practice Courses - 9 hours
SOW 6342 3 Social Work Practice With Individuals
SOW 6362 3 Social Work Practice With Couples and Families
SOW 6368 3 Social Work Practice with Groups

Policy and Service Courses - 3 hours
SOW 6236 3 Social Welfare Policy Development and Analysis

Social Work Research Courses - 3 hours
SOW 6438 3 Evaluation of Clinical Practice in Diverse Setting

Supervised Field Experience - 8 hours
For full-time students:
SOW 6536 4 Field Instruction III
SOW 6539 4 Field Instruction IV

For part-time students:
SOW 6555 2 Field Instruction Sequence II:Part-Time
SOW 6556 2 Field Instruction Sequence III:Part-Time
SOW 6557 2 Field Instruction Sequence IV:Part-Time
SOW 6558 2 Field Instruction Sequence IV:Part-Time

Electives - 6 hours
Students are required to take 6 hours of clinical electives. All clinical electives must be taken in the School of Social Work. Students may take clinical electives during any semester including summer sessions. However, part-time students should check the program course schedule for the recommended semesters for electives.

Comprehensive Exam - 1 hour
Capstone Project - In lieu of the Comprehensive exam, students complete a Capstone Project involving the content from across the curriculum will be completed in the final semester. It is worth 1 credit hour and meets the requirement for the Comprehensive Exam.
SOW 8907 1 Capstone Project

COURSES
See http://www.ups.usf.edu/course-inventory/
SOCIAL WORK AND PUBLIC HEALTH

Concurrent Degrees
Master of Social Work (M.S.W.) /Master of Public Health (M.P.H.)

**DEGREE INFORMATION**

<table>
<thead>
<tr>
<th>Minimum Total Hours</th>
<th>Social Work: 35 (for advanced standing)</th>
<th>Public Health: 42</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level</td>
<td>Masters</td>
<td></td>
</tr>
<tr>
<td>CIP Code:</td>
<td>Social Work: 44.0701</td>
<td>Public Health: 51.2201</td>
</tr>
<tr>
<td>Dept Codes:</td>
<td>SOK, DEA</td>
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<tr>
<td>Major/College Codes</td>
<td>SOK BC / MPH PH</td>
<td></td>
</tr>
<tr>
<td>Concentrations:</td>
<td>Maternal and Child Health</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Behavioral Health</td>
<td></td>
</tr>
</tbody>
</table>

**CONTACT INFORMATION**

- Colleges: Behavioral and Community Sciences
  - Public Health
- Contact: [www.grad.usf.edu](http://www.grad.usf.edu)

**MAJOR INFORMATION**

School of Social Work and the College of Public Health offer a concurrent degree option with M.P.H. concentrations in either Maternal and Child Health or Behavioral Health.

For social work students seeking the concurrent -degree, expanded study in public health encourages a well-balanced macro-micro orientation to clinical practice. Such expansion can provide the social work student with specific skills that result in comprehensive and effective client interventions in health care settings. The fundamental methodological tools of public health, such as biostatistics, epidemiology, and health management and evaluation, further assist the social worker in targeting the needs of individuals and communities. The MSW/MPH concurrent -degree option is a two to three year full-time course of study.

**ADMISSION INFORMATION**

Students may apply either simultaneously for the Concurrent Master’s Degree Students (indicating this intention on their application forms) or may add Social Work after admission to the Public Health Major, or add Public Health after admission to the Social Work Major. Applications for the Concurrent Master’s Degree may be obtained from the Admissions Office at the School of Social Work or at the College of Public Health. The application should be signed by the Chair of the Social Work Graduate office and then returned the College of Public Health. Admissions are conducted independently and admission to one major in no way guarantees admission in a different major.

**CURRICULUM REQUIREMENTS**

Refer to the requirements for each major.

**COURSES**

See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
SOCIAL WORK

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Program is currently suspended for admissions (Effective Spring 2014)

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 60
Level: Doctoral
CIP Code: 44.0701
Dept Code: SOK
Major/College Codes: SOK BC
Approved: 2004

CONTACT INFORMATION

College: Behavioral & Community Sciences
Department: School of Social Work (SOK)
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The School of Social Work offers a major leading to a Ph.D. in Social Work. The Ph.D. major provides a course of study to prepare graduates for academic and research careers, to provide leadership in research and education committed to excellence in social work clinical practice and to provide leadership in the development of clinical services for diverse, vulnerable and underserved populations.

The Ph.D. major, requiring 60 hours of study, is offered via a nontraditional model of delivery. During the first three years, students complete thirty-six hours of course work in nine semesters. These courses are offered in intensive weekend sessions during the fall and spring semesters and in concentrated three-week summer sessions. Dissertation work (24 hours) is taken during the course of years four and five.

This doctoral major allows students to attend course work while maintaining full-time employment commitments.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- Bachelor’s degree from a regionally-accredited university or college; undergraduate G.P.A. of 3.00 in last two (2) years of undergraduate work;
- Master’s degree from CSWE accredited social work program; G.P.A. of at least 3.05 (on a 4.00 scale);
- GRE required, with preferred scores of 500V, 500Q;
- School of Social Work Application;
- Three recommendations addressing applicant’s academic and professional capabilities;
- Candidate’s statement that describes reasons for seeking admission to the Ph.D. in Social Work major, career goals, and research interests;
- Professional or academic writing sample providing evidence of scholarly abilities such as single-authored journal article, book chapter, technical report, thesis, grant application, or other comparable work; and
- Interview.
CURRICULUM REQUIREMENTS

Total Minimum Hours: 60

Thirty-six hours (36) of course work

Core Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOW 7491</td>
<td>Theoretical Perspectives in Social Work Research</td>
<td>3</td>
</tr>
<tr>
<td>SOW 7490</td>
<td>Foundations of Social Work Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>SOW 7496</td>
<td>Qualitative Methods in Social Work Research</td>
<td>3</td>
</tr>
<tr>
<td>SOW 7497</td>
<td>Quantitative Methods in Social Work Research</td>
<td>3</td>
</tr>
<tr>
<td>SOW 7417</td>
<td>Advanced Statistics in Social Work Research</td>
<td>3</td>
</tr>
<tr>
<td>SOW 7616</td>
<td>Advanced Clinical Practice With Complex Problems</td>
<td>3</td>
</tr>
<tr>
<td>SOW 7446</td>
<td>Evaluation of Social Work Practice/Program Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>SOW 7776</td>
<td>The Social Work Educator in the University</td>
<td>3</td>
</tr>
<tr>
<td>SOW 7775</td>
<td>Critical Issues in Social work</td>
<td>3</td>
</tr>
<tr>
<td>SOW 7919</td>
<td>Directed Studies in Social work Research</td>
<td>3</td>
</tr>
<tr>
<td>SOW 7981</td>
<td>Proposal Writing I</td>
<td>3</td>
</tr>
<tr>
<td>SOW 7982</td>
<td>Proposal Writing II</td>
<td>3</td>
</tr>
</tbody>
</table>

**Qualifying Exam**

Successful completion of qualifying examinations at the end of Semester seven prepares the student for Candidacy.

**Other Requirements**

Completion of remaining course work in semesters eight and nine, and successful defense of a dissertation proposal admits the student for Candidacy

**Dissertation**

Successful defense of a dissertation consisting of original Social Work research

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOW 7980</td>
<td>Dissertation Hours</td>
<td>24</td>
</tr>
</tbody>
</table>

COURSES

See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
Speech-Language Pathology (Post-Bacc) (M.S.)

Master of Science (M.S.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: January 15

Minimum Total Hours: 62
Level: Masters
CIP Code: 51.0204
Dept Code: CSD
Major/College Codes: SPP BC
Approved: 1970

CONTACT INFORMATION

College: Behavioral & Community Sciences
Department: Communication Sciences and Disorders (CSD)
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Department of Communication Sciences and Disorders is devoted to the study of normal and disordered human communication. Courses and clinical practice provide the student with principles, research methods and application of knowledge about the spectrum of verbal and non-verbal communication skills. Diagnosis and remediation of communicative problems dominate the clinical component of this course of study. The Master of Science in Speech Language Pathology is structured to meet the preparation requirements of the American Speech-Language-Hearing Association for the Certificate of Clinical Competence.

Accreditation:
Accredited by the Council of Academic Accreditation of the American Speech-Language-Hearing Association.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

In addition to the USF Admission Application, applicants to the Program are required to complete a CSDCAS application.

- completion of a set of pre-requisite courses, also required for state licensure and national certification in speech-language pathology, these pre-requisite courses include:
  - SPA 3004 Introduction to Language Development and Disorders
  - SPA 3011 Introduction to Speech Science
  - SPA 3030 Introduction to Hearing Sciences
  - SPA 3101 Anatomy and Physiology of the Speech and Hearing Mechanism
  - SPA 3112 Applied Phonetics in Communication Disorders
  - SPA 3310 Introduction to Disorders of Hearing
  - SPA 4104 Neuroanatomy
- at least a 3.20 average on a 4.00 scale in all work attempted while registered as a upper division student working for a baccalaureate degree,
- GRE with preferred scores of: 52nd percentile (approx. 151) on the verbal portion OR the 52nd percentile (approx. 4) on the writing section AND the 32nd percentile (approx. 145) on the quantitative section, taken within five years preceding application
- three letters of recommendation
- a letter of intent and resume, and
- applicant must also demonstrate competency in communication skills as determined by the chairperson or delegate.
CURRICULUM REQUIREMENTS

Total Minimum hours - 62 hours

All speech-language pathology majors must complete the following:

Core Requirements - 29 hours

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPA 5204</td>
<td>Advanced Clinical Phonology</td>
<td>3</td>
</tr>
<tr>
<td>SPA 5403</td>
<td>Language Learning in the School-Age years</td>
<td>3</td>
</tr>
<tr>
<td>SPA 5552</td>
<td>Diagnostic Principles and Practices</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6211</td>
<td>Advanced Vocal Disorders</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6225</td>
<td>Advanced Fluency Disorders</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6410</td>
<td>Aphasia</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6559</td>
<td>Augmentative and Alternative Communication</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6571</td>
<td>Ethical Practice Issues in Comm. Disorders</td>
<td>2</td>
</tr>
<tr>
<td>SPA 6805</td>
<td>Research Procedures in Comm. Sci. &amp; Disorders</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6565</td>
<td>Seminar in Dysphagia</td>
<td>3</td>
</tr>
</tbody>
</table>

Practicum - 24 hours

Also, students will enroll in sufficient graduate clinical practicum (24 credits) to meet a minimum of 400 clock hours to fulfill the requirements of the American Speech-Language-Hearing Association. Of these hours, 25 hours must be in observation and at least 250 clock hours must be in speech-language pathology.

Thesis option - 9 hours

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPA 6910</td>
<td>Directed Research</td>
<td>1 hour min</td>
</tr>
<tr>
<td>SPA 6971</td>
<td>Thesis</td>
<td>8 hours min</td>
</tr>
</tbody>
</table>

The number of practicum hours is adjusted from 24 hours to 21 hours to allow the thesis student to take one elective. This elective will be selected with the assistance of the thesis advisor.

Non-thesis option

Each student must complete an additional nine (9) hours of coursework selected with the assistance of an advisor from the electives list.

Electives

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPA 5133C</td>
<td>Speech Science Instrumentation</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6232</td>
<td>Neuromotor Disorders of Speech</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6245</td>
<td>Craniofacial Communication Disorders</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6324</td>
<td>Aural Rehabilitation: Children*</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6401</td>
<td>Pediatric Language Disorders</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6404</td>
<td>Language Learning Disabilities</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6417</td>
<td>Communication &amp; Cognition in Traumatic Brain Injury</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6473</td>
<td>Multicultural Differences in Language Use</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6564</td>
<td>Seminar in Aging, Cognition, and Communication</td>
<td>3</td>
</tr>
<tr>
<td>SPA 6910</td>
<td>Directed Research</td>
<td>varies</td>
</tr>
</tbody>
</table>

*required for students who have not had a course in aural rehabilitation at the undergraduate level
GPA and Comprehensive Exam Requirements
Also required for graduation are the attainment of a ‘B’ or better in each graduate Speech-Language Pathology course, the attainment of clinical competence and a GPA of 3.00 in all coursework and clinical practica, and satisfactory passage of a comprehensive examination.

Online Option
For individuals who have a bachelor’s degree in speech-language pathology and are currently working in the public school system as a speech-language pathology assistant, we offer a part-time online graduate major, which can be completed in 9 semesters. The admission and degree requirements are the same as those listed for the residential program. All academic coursework is offered online. The three electives for the non-thesis option are selected by the major and are designed to meet the unique needs of the clinician practicing in a school setting. The thesis option is not available for this track. Out of the six required clinical practicum (a total of 24 credits), four are completed on the job during the school year, one is completed on the Tampa campus during the second summer, and the third summer is devoted to accruing clinical hours at a local externship site.

COURSES
See http://www.ups.usf.edu/course-inventory/
Section 14

MUMA

COLLEGE OF BUSINESS
### Changes to Note

The USF Graduate Council approved the following on the date noted.

#### Concurrent Degree Options

<table>
<thead>
<tr>
<th>Program</th>
<th>Degree</th>
<th>Changes</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>Business Admin: Sport Business AND Sport and Entertainment Management</td>
<td>MBA / MS</td>
<td>Update to match MBA; total 51, 12 shared</td>
<td>4/3/2017</td>
</tr>
<tr>
<td>Business Admin: Sport Business AND Sport and Entertainment Management</td>
<td>MBA / MS</td>
<td>Additional changes to address SACSCOC issues 33+36=69-9=60.</td>
<td>5/8/2017</td>
</tr>
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#### Majors

<table>
<thead>
<tr>
<th>Major</th>
<th>Degree</th>
<th>Changes</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>Accountancy</td>
<td>M.Acc.</td>
<td>Change Admission requirements, curriculum, deadlines</td>
<td>4/3/2017</td>
</tr>
<tr>
<td>Business Administration</td>
<td>DBA</td>
<td>Add language for Doctoral Project Course Option</td>
<td>5/8/2017</td>
</tr>
<tr>
<td>Business Administration</td>
<td>M.B.A.</td>
<td>Online delivery for: Cybersecurity; Compliance, Risk Mgmt, &amp; Anti-money Laundering; Data Analytics</td>
<td>9/26/2016</td>
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<tr>
<td>Business Administration</td>
<td>M.B.A.</td>
<td>Change Major - add Pharmacy Specialization</td>
<td>3/6/2017</td>
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<tr>
<td>Business Analytics &amp; Information Systems</td>
<td>M.S.</td>
<td>Change Major - Create regular and prof options</td>
<td>2/6/2017</td>
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<tr>
<td>Finance</td>
<td>M.S.</td>
<td>Change Major; add FIN 6455 to core</td>
<td>11/7/2016</td>
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<td>Finance</td>
<td>M.S.</td>
<td>Change Major - additional changes - admissions</td>
<td>5/1/2017</td>
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<td>Management</td>
<td>M.S.</td>
<td>Add new Concentration in Human Resources (HRM)</td>
<td>5/1/2017</td>
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<td>Marketing</td>
<td>M.S.</td>
<td>Change Major - Admissions information</td>
<td>5/1/2017</td>
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<tr>
<td>Sport and Entertainment Management</td>
<td>M.S.</td>
<td>Change Major - Admissions information</td>
<td>4/3/2017</td>
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<td>M.S.</td>
<td>Change Major; revised submission per GC request</td>
<td>5/8/2017</td>
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#### Certificates

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<th>Certificate</th>
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<tr>
<td>Compliance, Risk and Anti-money laundering</td>
<td>Change Certificate - pre-reqs</td>
<td>4/3/2017</td>
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<tr>
<td>Human Resources</td>
<td>New Certificate</td>
<td>2/5/2016</td>
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<tr>
<td>Joint SAS/USF - Analytics &amp; Business Intelligence</td>
<td>Change electives and Name</td>
<td>4/3/2017</td>
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University of South Florida
Muma College of Business
4202 E. Fowler Ave., BSN 3403 (loc BSN 103)
Tampa, FL 33620

Web address:  http://business.usf.edu
Email:  mba@coba.usf.edu
Phone:  813-974-3335
Fax:  813-974-4518

College Dean:  Moez Limayem
Associate Deans:  Kaushal Chari and Jacqueline Reck
Faculty Director:  Jerry Koehler
Graduate Coordinator:  Irene Hurst

Accreditation:
The Ph.D., D.B.A., M.B.A., M.S. in Business Analytics and Information Systems, M.S. in Management, M.S. in Finance, Master of Accountancy, M.S. in Marketing, M.S. in Entrepreneurship, M.S. in Sport and Entertainment Management and M.S. in Real Estate majors in the Muma College of Business are accredited by the AACSB International – The Association to Advance Collegiate Schools of Business. The College also is a member of the Graduate Management Admission Council (GMAC).

Mission Statement:
The USF Muma College of Business will provide a high-quality, diverse learning environment preparing students to contribute to and take leading positions in business and society. Our teaching, scholarship, and service will link theory and practice to benefit the University and the communities it serves.

Degrees, Majors, and Concentrations:

Master of Accountancy (M.Acc.)
  Accountancy (MAC)
  Audit/Systems (AUS)
  Tax (TAX)

Master of Business Administration (M.B.A.)
  Business Administration (full-time or part-time) (BUS)
  Data Analytics (DAT)
  Cyber Security (CYS)
  Compliance, Risk Management & Anti-Money Laundering (RAM)
  Sport Business (SEM)
  Supply Chain Management
  Executive M.B.A. (MBA)

Master of Science (M.S.)
  Entrepreneurship in Applied Technologies (EAT)
  Finance (FIN)
  Management (MAN)
    Human Resources (HRM)
    Project Management (PMT)
  Business Analytics and Information Systems (BAI)
    Analytics & Business Intelligence (ABI)
    Information Assurance (CIA)
  Sport and Entertainment Management (SMG)
Master of Science in Marketing (M.S.M.)
Marketing (MKT)

Master of Science in Real Estate (M.S.R.E.)
Real Estate (RST) – Currently Suspended for Admissions

Doctor of Business Administration (D.B.A.)
Business Administration

Doctor of Philosophy (Ph.D.)
Business Administration (BUD)
Accounting (ACC)
Economics (ECO)
Finance (FIN)
Information Systems (IST)
Marketing (MKT)
Also see application areas in major descriptions.

Accelerated Major Option
BS/MS – Business Analytics and Information Systems

Concurrent Degrees
Biomedical Engineering (MSBE) / Entrepreneurship in Applied Technologies (M.S.)
Business Administration (MBA): Sport Business Concentration / Sport and Entertainment Management (M.S.)

Graduate Certificates Offered:
See Graduate Certificate website http://www.gradcerts

COLLEGE REQUIREMENTS

Non-Degree Seeking Students
The Muma College of Business will approve, on a space available basis, non-degree seeking student status for transient students (degree-seeking students at another AACSB accredited institution) or for students with valid reasons to register in this status and who meet all admission requirements. Contact the College for additional requirements.
ACCOUNTANCY

Master of Accountancy (M.Acc.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: March 1
Spring: October 1
Summer: February 15

Minimum Total Hours: 30
Level: Masters
CIP Code: 52.0301
Dept. Code: ACC
Major/College Codes: MAC BA
Effective: 1970

Concentrations:
Audit/Systems (AUS)
Tax (TAX)

CONTACT INFORMATION

College: Business
Department: School of Accountancy (ACC)
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The objective of the Master of Accountancy (M.Acc.) Degree Program is to provide candidates with greater breadth and depth of knowledge in accountancy than is possible in the baccalaureate program. The major is designed to meet the increasing needs of business, government, and public accounting. Students entering the Accountancy major must already have the equivalent of an undergraduate degree in accounting from an AACSB accredited school. The major may also be structured to satisfy the requirements to sit for the CPA Examination in Florida.

Accreditation:
Accredited by the AACSB International (The Association to Advance Collegiate Schools of Business).

Major Research Areas: Contact department.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- 3.00 overall upper-level GPA and a 3.00 GPA in principles of financial accounting, managerial accounting, and all upper-level accounting courses (minimum of 21 hours at a U.S. AACSB accredited program within the past 5 years; OR Completion of the following six 5000 level “foundation” courses with a minimum grade of B in each course:
  a. Intermediate Financial Accounting I (ACG 5103),
  b. Intermediate Financial Accounting II (ACG 5113),
  c. Cost Accounting and Control I (ACG 5341),
  d. Accounting Information Systems (ACG 5410),
  e. Auditing I (ACG 5632), and
Minimum GMAT score of 500 or higher, or equivalent GRE score of 305

Applicants from countries where English is not the official language must also demonstrate proficiency in English in one of the following ways:

- Score $\geq 92$ on the internet based Test of English as a Foreign Language (TOEFL iBT) with a speaking sub-score $\geq 26$.
- Score $\geq 7.0$ on the International English Language Testing System (IELTS).
- Score $\geq 64$ on the Pearson Test of English Academic (PTE-A)
- Score $\geq 155$ on the GRE Verbal exam
- By earning a baccalaureate or higher degree at a regionally accredited institution in the US. Applicants who earn a baccalaureate or equivalent degree at a foreign institution where English is the language of instruction (for the institution and not just the major) may meet this requirement. However, other related factors (including test scores) will also be considered. Medium of Instruction must be documented on the transcript or on an official Certificate of Medium of Instruction from the Institution.

Admission to the M.Acc. Degree Program is competitive. For full consideration, please submit your application by the deadlines shown above.

CURRICULUM REQUIREMENTS

For the student who has the equivalent of an undergraduate major in accounting at USF (including 21-24 hours of upper-level accounting coursework taken within the last 5 years), the program consists of 30 hours. Most (24) hours of the program is devoted to the study of accounting. The remaining six (6) graduate level hours consist of study in other business areas including economics, entrepreneurship, finance, and information systems/decision sciences. These six (6) graduate level hours are elected by the student in consultation with the M.Acc. Advisor. At least 70% of the coursework must be at the 6000 level, with 100% being graduate level.

The M.Acc. Curriculum has a set of three required common core accounting courses. Students may elect a concentration (12 hours) in either Tax or Audit/systems. If a student does not wish to elect a concentration, a student may follow the “Generalist Track” below. The sequencing of courses will be determined in consultation with the M.Acc. Advisor.

**Total Minimum hours:** 30
At least 21 hours must be in 6000-level courses.

**Core Requirements**

**Required Core Accounting Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ACG 6875</td>
<td>Financial Reporting and Professional Issues</td>
<td>3</td>
</tr>
<tr>
<td>ACG 6932</td>
<td>Integrative Accounting Seminar</td>
<td>3</td>
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**GENERALIST TRACK**

**Accounting Electives**

Select from:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACG 6476</td>
<td>Contemporary Issues in Accounting Information Systems</td>
<td>3</td>
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<tr>
<td>ACG 6636</td>
<td>Contemporary Issues in Auditing</td>
<td>3</td>
</tr>
<tr>
<td>TAX 6065</td>
<td>Contemporary Issues in Taxation</td>
<td>3</td>
</tr>
<tr>
<td>ACG 6346</td>
<td>Contemporary Issues in Managerial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACG 6936</td>
<td>Selected Topics in Accounting</td>
<td>3</td>
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<tr>
<td>TAX 6445</td>
<td>Estate Planning</td>
<td>3</td>
</tr>
<tr>
<td>ACG 5205</td>
<td>Advanced Financial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACG 5675</td>
<td>Internal and Operational Auditing</td>
<td>3</td>
</tr>
<tr>
<td>ACG 5505</td>
<td>Governmental / Not-for-Profit Accounting</td>
<td>3</td>
</tr>
<tr>
<td>TAX 5015</td>
<td>Federal Taxation for Business Entities</td>
<td>3</td>
</tr>
<tr>
<td>ACG 6457</td>
<td>Accounting Systems Audit, Control &amp; Security</td>
<td>3</td>
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TAX 6134 Advanced Corporate Taxation 3
TAX 6005 Advanced Partnership Taxation 3

Non-accounting Electives 6 hours
Graduate level electives must be approved in advance by M.Acc. Advisor 6

TAX CONCENTRATION
Tax Courses 12 hours
Select from:
- TAX 5015 Taxation of Business Entities* 3
- TAX 6134 Advanced Corporate Taxation 3
- TAX 6005 Advanced Partnership Taxation 3
- TAX 6445 Estate Planning 3
- TAX 6065 Contemporary Issues in Taxation 3
(*Note: TAX 5015 may count in the M.Acc. program only if it is not counted towards the Bachelor’s Degree)

Accounting Electives 6 hours
Select from:
- ACG 6476 Contemporary Issues in Accounting Information Systems 3
- ACG 6636 Contemporary Issues in Auditing 3
- TAX 6065 Contemporary Issues in Taxation 3
- ACG 6346 Contemporary Issues in Managerial Accounting 3
- ACG 6936 Selected Topics in Accounting 3
- TAX 6445 Estate Planning 3
- ACG 5205 Advanced Financial Accounting 3
- ACG 5675 Internal and Operational Auditing 3
- ACG 5505 Governmental / Not-for-Profit Accounting 3
- TAX 5015 Federal Taxation for Business Entities 3
- ACG 6457 Accounting Systems Audit, Control & Security 3
- TAX 6134 Advanced Corporate Taxation 3
- TAX 6005 Advanced Partnership Taxation 3

Non-accounting Electives 6 hours
Electives must be approved in advance by M.Acc. Advisor 6

AUDIT/SYSTEMS CONCENTRATION
Audit/Systems Courses 12 hours
Select two (2) courses from:
- ACG 6405 Advanced Accounting Information Systems 3
- OR
- ACG 6457 Accounting Systems Audit, Control & Security 3
- ACG 6636 Contemporary Issues in Audit 3
- OR
- ACG 5675 Internal and Operational Audit 3

The remaining two (2) courses should be selected from:
- ACG 6405 Advanced Accounting Information Systems 3
- ACG 6457 Accounting Systems Audit, Control & Security 3
- ACG 6636 Contemporary Issues in Audit 3
- ACG 5675 Internal and Operational Audit 3
- ISM 6930 Enterprise Resource Planning & Business Proc. Mgmt. 3
- ISM 6930 Information Security & Risk Management 3
Accounting Electives

Select from: 6 hours
- ACG 6476 Contemporary Issues in Accounting Information Systems 3
- ACG 6636 Contemporary Issues in Auditing 3
- TAX 6065 Contemporary Issues in Taxation 3
- ACG 6346 Contemporary Issues in Managerial Accounting 3
- ACG 6936 Selected Topics in Accounting 3
- TAX 6445 Estate Planning 3
- ACG 5205 Advanced Financial Accounting 3
- ACG 5675 Internal and Operational Auditing 3
- ACG 5505 Governmental / Not-for-Profit Accounting 3
- TAX 5015 Federal Taxation for Business Entities 3
- ACG 6457 Accounting Systems Audit, Control & Security 3
- TAX 6134 Advanced Corporate Taxation 3
- TAX 6005 Advanced Partnership Taxation 3

Non-accounting Electives

Electives must be approved in advance by M.Acc. Advisor 6

Comprehensive Exam

Total Minimum Hours: 30
At least 21 hours must be in 6000-level courses

COURSES

See [http://ugs.usf.edu/course-inventory](http://ugs.usf.edu/course-inventory)
BUSINESS ADMINISTRATION

Master of Business Administration (M.B.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: June 1
Spring: October 15**
Summer: No Admit

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 32
Level: Masters
CIP Code: 52.0201
Dept. Code: DEA
Major/College Codes: BUS BA
Effective: 1965

Concentrations:
Cyber Security (CYS)*
Compliance, Risk Management and Anti-Money Laundering (RAM)*
Data Analytics (DAT)*
Sport Business (SEM)**
Supply Chain Management (SCMG)

*This concentration is currently only available online
**Sport Business is not available in Spring

CONTACT INFORMATION

College: Business
Contact Information: www.grad.usf.edu
Other Resources: www.mba.usf.edu

MAJOR INFORMATION

The Master of Business Administration (M.B.A.) is a professional degree designed to prepare graduates for managerial roles in business and not-for-profit organizations. Graduates will develop the necessary skills and problem-solving techniques that will permit them to make an early contribution to management and eventually to move into broad, general management responsibilities at the executive level. This major offers several concentrations in an online format.

Accreditation:
Accredited by the AACSB International. (The Association to Advance Collegiate Schools of Business).

Major Research Areas:
Contact coordinator for department

http://www.coba.usf.edu
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below. The USF MBA admission committee uses a portfolio approach: the strength of each applicant is determined based on the entire application. The admission committee will consider the following:

- prior college-level academic performance (bachelor’s degree from a regionally accredited institution required);
- GMAT (preferred), GRE, MCAT, LSAT, and PCAT (submitted scores must be within five (5) years of the term of entry);
  - Applicants with a USF-Tampa Bachelor’s degree and a cumulative GPA of 3.5 or greater may request waiver of GMAT;
  - Applicants with five (5) or more years of managerial or professional experience may request a GMAT/GRE waiver;
- a statement of purpose;
- recommendation letters;
- relevant professional work experience
- any other information that helps in ensuring the potential success of the applicant in the program (e.g. community/volunteer service, etc.).
- For applicants whose native language is not English, English proficiency must be demonstrated as detailed in the USF Graduate Catalog.

CURRICULUM REQUIREMENTS

All M.B.A. candidates must complete all degree requirements within five (5) years of beginning the major. The full time student will need at least four students can complete all work within a reasonable time—approximately three years. Part time students are encouraged to take two courses per semester and must complete 12 hours per calendar year to remain on active status as a degree-seeking student. Courses are scheduled to accommodate both full time and part time students. All courses are at the graduate level. Students entering the major are expected to have sufficient competency in mathematics (college algebra), communication skills (written and verbal), basic computer skills, high-speed internet access, and a business foundation.

Total Minimum hours: 32 credit hours

Options:

**Pre-Requisites Waived:**
- Core – 14 hours
- Concentration/Specialization – 18 hours
- Total 32 hours minimum

**Pre-Requisites Required:**
- Pre-req – 16 hours
- Core – 14 hours
- Electives – 18 hours
- Total 48 hours minimum
PRE-REQUISITE - BUSINESS FOUNDATION – 16 hours

Students accepted to the MBA degree program are expected to have a common body of business knowledge as demonstrated with an undergraduate degree in business from a regionally-accredited program or completion of business foundation courses. If a student has an undergraduate degree from a regionally-accredited institution the student may request to waive foundation courses taken within the last 7 years. The foundation courses assume little or no prior knowledge in the field targeted toward MBA students without a Business degree. Students who wish to complete foundation coursework before applying to the MBA degree program and those wishing to complete only the foundation courses without applying to the MBA degree program may choose to pursue the Certificate in Business Foundations. Information about and admission requirements for the Certificate in Business Foundations is available at the Muma College of Business Website [http://business.usf.edu/](http://business.usf.edu/).

Students pursuing a general MBA may choose electives from among non-foundation graduate level courses offered in the college, or other colleges if an approved part of their program of study. NOTE: Foundation courses may not be counted as electives.

Pre-Requisite Business Foundation Courses - 16 Credits

**Business Decision Making**
- MAN 6055 2 Organizational Behavior and Leadership
- ISM 6021 2 Management Information Systems

**Business Measurement**
- ACG 6026 3 Accounting Concepts for Managers
- QMB 6305 2 Managerial Decision Analysis
- FIN 6406 2 Financial Management

**Market Orientation**
- MAR 6815 2 Marketing Management
- ECO 6005 3 Introduction to Economic Concepts for Managers

**Core Requirements – 14 credits minimum**
- GEB 6445 2 Social, Ethical, Legal Systems
- MAN 6147 2 Leadership/Management Concepts
- QMB 6603 2 Operations Management and Quality Enhancement
- FIN 6466 2 Financial Analysis
- MAN 6726 2 Strategic Business Analysis
- QMB 6358 2 Data Analytics for Business
- GEB 6215 2 Communication Skills for Managers

Students select the following options (See below for specific requirements):

- General Electives – 19 credit hours
- General Pathway – 18 credit hours
- Concentration in Sport Business - 19 credit hours
- Concentration in Supply Chain Management – 19 credit hours
- Concentration in Data Analytics – 18 credit hours
- Concentration in Cyber Security – 18 credit hours
- Concentration in Compliance, Risk Management & Anti-Money Laundering – 18 credit hours
- Specialization in Healthcare – 19 credit hours
- Specialization in Pharmacy – 19 credit hours
- Specialization in Pharmaceutical Nanotechnology – 19 credit hours
- Specialization in other areas – 9 credit hours
Electives - 15 credit hours minimum

NOTE: Some elective courses may not be offered each year.
At least one of the electives taken must be related to global issues.

OPTIONS:

General Pathway – 18 hours
Combination of electives from Data Analytics, Cyber Security, and Compliance, Risk & Anti-Money Laundering available online – 15 credit hours

In addition, students are required to take:
GEB 6898 3 MBA Capstone for Analytics, Compliance & Cybersecurity.

Sport Business Concentration - 19 hours

The MBA with a Concentration in Sport Business prepares graduates to contribute to and take leading positions in the global sport and entertainment industry. It complements the solid grounding in the applied fundamentals of accounting, finance, information systems, management and marketing provided by a recognized, high-quality MBA with coursework focused on the business of sport—human capital, organization resources and development, innovation and technology in sport, culture and business relationships, sport and law and emerging issues in global sport. Academic course work is supported by internships, mentorships, professional seminars, guest speakers, and networking opportunities to provide graduates the tools and skills to function effectively in the competitive global environment of sport and entertainment management.

The ideal degree candidate will have a passion for the business and industry rather than simply be a lover of sports. The Business Administration major with a Concentration in Sport Business is a “direct admit” major: applicants should apply via the major Website: http://business.usf.edu/programs/graduate/sport-entertainment/ rather than to the College’s MBA Office.

Total Minimum hours with this concentration: 33 hours
Concentration Requirements – 19 credit hours
In addition to the 14 hours of required MBA coursework, students complete:

- SPB 6719  3  Sport and Entertainment Marketing Strategy
- SPB 6406  3  Sport and Entertainment Law
- SPB 6816  3  Contemporary Issues in Sport & Entertainment Management
- SPB 6706  3  Sport Business Analytics
- SPB 6946  3  Internship in Sport and Entertainment Management
- GEB 6895  4  Integrated Business Applications

Supply Chain Management Concentration – 19 credit hours

The Business Administration major with a Concentration in Supply Chain Management prepares graduates for careers in managing global supply chains. Supply chain management encompasses the coordination of physical, informational, and financial flows across companies in a supply chain network for the purpose of improving performance for individual companies and the supply chain as a whole. Academic coursework introduces students to supply chain processes and activities including procurement, transportation, warehousing, inventory management, and relationship management. In addition, courses provide hands-on experience with analytical models and software tools that support decision making. The Center for Supply Chain Management and Sustainability provides students with opportunities for field-based internships, participation in professional seminars, and networking with supply chain executives.

The Admissions Committee for the Business Administration major with a Concentration in Supply Chain Management will consider the strength of each applicant based on the entire completed application; outstanding qualities in one area may
compensate for a weakness in another. In addition to the Admission requirements, this concentration also requires a mandatory personal interview.

The ideal candidate will have strong quantitative analysis skills coupled with effective written and oral communication abilities.

**Total Minimum hours with this concentration: 33 hours**

**Concentration Requirements – 19 credit hours**

In addition to the 14 hours of required MBA coursework, students complete:

- **MAN 6596** 3 Supply Chain Management
- **MAR 6216** 3 Logistics and Physical Distribution Management
- **MAN 6599** 3 Logistics Systems and Analytics
- **GEB 6895** 4 Integrated Business Applications**

Plus two electives from the following list:

- **MAR 6936** 3 Marketing Special Topics
- **GEB 6527** 3 Lean Six Sigma
- **ISM 6436** 3 Operations and Supply Chain Processes
- **ISM 6217** 3 Database Administration
- **ISM 6156** 3 Enterprise Resource Planning and Business Process Management
- **MAN 6448** 3 Negotiating Agreement and Resolving Conflict
- **ESI 6324** 3 Engineering the Supply Chain
- **CGN 6933** 3 Special Topics in CEE: Green Infrastructure for Sustainable Communities

**Data Analytics Concentration- 18 credit hours**

The Business Administration major with a Concentration in Data Analytics is an online concentration that prepares graduates with the necessary skill set to draw insights from data for decision making in different functional areas of business. Courses in the concentration will provide hands-on experience with analytical tools and database software. The capstone course focuses on integrating concepts through project work and applied cases.

**Total Minimum hours with this concentration: 32 hours**

**Concentration Requirements – 18 credit hours**

In addition to 14 required hours of MBA coursework, students complete:

- **ISM 6136** 3 Data Mining
- **ISM 6930** 3 Statistical Programming for Business

Plus at least two electives from the following list:

- **MAR 6936** 3 Special Topics: Marketing Analytics
- **ACG 5841** 3 Analytics in Accounting
- **ISM 6217** 3 Database Management

The fifth elective (3 hours) can be taken with the approval of the MBA academic advisor.

Data Analytics concentration requires the completion of the capstone course:

- **GEB 6898** 3 MBA Capstone for Analytics, Compliance & Cybersecurity.
Cybersecurity Concentration - 18 credit hours

The Business Administration major with a Concentration in Cyber Security is an online concentration that prepares graduates for a career in information security management and business continuity. This concentration is fairly technical, given the nature of cybersecurity. The capstone course focuses on integrating concepts through project work and applied cases.

Total Minimum hours with this concentration: 32 hours
Concentration Requirements – 18 credit hours

In addition to 14 required hours of MBA coursework, students complete:

- ISM 6328 3 Basics of Information Security and Risk Management
- ISM 6225 3 Distributed Information Systems
- ISM 6930 3 Special Topics: Decision Processes for Business Continuity and Disaster Recovery

Plus at least one elective from the following list:
- ISM 6217 3 Database Management
- CIS 5362 3 Cryptology
- BUL 5832 3 Risk Management and Legal Compliance

The fifth elective (3 hours) can be taken with the approval of the MBA academic advisor.

Cybersecurity concentration requires the completion of the capstone course:
- GEB 6898 3 MBA Capstone for Analytics, Compliance & Cybersecurity.

Compliance, Risk Management & Anti-Money Laundering - 18 credit hours

The Business Administration major with a Concentration in Compliance, Risk Management & Anti-Money Laundering is an online concentration that prepares graduates for a career in compliance, risk management and anti-money laundering. This concentration is especially attractive to those who want to work in the financial services sector. The capstone course focuses on integrating concepts through project work and applied cases.

Total Minimum hours with this concentration: 32 hours
Concentration Requirements – 18 credit hours

In addition to 14 required hours of MBA coursework, students complete:

- BUL 5832 3 Risk Management and Legal Compliance
- ACG 6688 3 Forensic Accounting and Legal Compliance
- ACG 6457 3 Accounting Systems Audit, Control and Security

Plus at least one elective from the following list:
- ISM 6217 3 Database Management
- ISM 6930 3 Decision Process for Business Continuity and Disaster Recovery

The fifth elective (3 hours) can be taken with the approval of the MBA academic advisor.

Compliance, Risk Management & Anti-Money Laundering concentration requires the completion of the capstone course:
- GEB 6898 3 MBA Capstone for Analytics, Compliance & Cybersecurity.
Healthcare Specialization – 19 credit hours minimum

Total Minimum hours with this specialization: 33 hours
The healthcare specialization is designed to prepare graduates for roles in the business of medicine. Graduates will develop the necessary skills and problem-solving techniques that will permit them to manage healthcare practices and businesses. The specialization is meant for students enrolled in a Doctor of Medicine (M.D.) program, practicing physicians and healthcare professionals. Students select from the following electives, or other graduate course electives in Business, Medicine, or Public Health, taken with the approval of the MBA Academic Advisor.

Suggested Electives:
- ISM 6930 3 Special Topics: Healthcare Information Systems
- ISM 6930 3 Special Topics: Healthcare Management Science
- PHC 6102 3 Principles of Health Policy and Management
- PHC 6161 3 Health Care Finance and Costing
- PHC 6420 3 Health Care Law, Regulation and Ethics

In addition, students are required to take:
- GEB 6895 4 Integrated Business Applications

Thesis – 6 credit hours
Students may elect a six hour thesis in healthcare management subject to departmental approval. Thesis hours serve in lieu of elective hours.
- ISM 6971 6 Thesis

Pharmacy Specialization – 19 credit hours minimum

Total Minimum hours with this specialization: 33 hours
The pharmacy specialization is designed to prepare graduates for roles in managing a pharmacy business. The specialization is meant for students enrolled in the PharmD degree program, and pharmacy professionals. Students select from the following electives, or other graduate course electives in Business, Pharmacy, or Public Health, taken with the approval of the MBA Academic Advisor.

Suggested Electives:
- PHA 6261 3 Healthcare Administration and Economics
- PHA 6270 3 Healthcare and Medication Safety
- ISM 6930 3 Special Topics: Healthcare Information Systems
- ISM 6930 3 Special Topics: Healthcare Management Science
- PHC 6102 3 Principles of Health Policy and Management
- PHC 6161 3 Health Care Finance and Costing
- PHC 6420 3 Health Care Law, Regulation and Ethics
- PHA 7626 Advanced Pharmacy Practice Experiences (6 hours) could count for six credit hours of electives with the approval of the MBA Academic Advisor, when practice experiences involve significant exposure to the business of pharmacy.

In addition, students are required to take:
- GEB 6895 4 Integrated Business Applications

Pharmaceutical Nanotechnology – 19 credit hours minimum

Total Minimum hours with this specialization: 33 hours
The pharmaceutical nanotechnology specialization is designed for graduate students pursuing a M.S. in Pharmaceutical Nanotechnology who want to earn a MBA degree. Students select from the following electives, or other graduate courses in Business, Pharmacy or Public Health, taken with the approval of the MBA Academic Advisor.

Suggested Electives:
- PHA 6222 3 Pharmacy Practice Management
- EIN 6935 3 Technology Venture Strategies
PHC 7001 Graduate Program Internship in Pharmacy (6 hours) could count for six hours of electives with the approval of the MBA Academic Advisor, when practice experiences involve significant exposure to the business of pharmacy.

Students must have a minimum of 60 total combined graduate hours after the shared courses are applied for MBA and MS in pharmaceutical nanotechnology programs.

In addition, students are required to take:

**GEB 6895 4 Integrated Business Applications**

**Practicum Option - 3 hours**

The practicum option requires investigation of business issues. The project typically occurs in the student’s place of employment and is jointly supervised by a faculty member and a manager in the company. Three credits could be earned by taking one of the following: ACG 6905, FIN 6906, ISM 6905, GEB 6117, MAR 6907, or MAN 6905 as part of the practicum option. The practicum option would count for three hours of MBA electives.

**Thesis Option – 6 credit hours**

Students may elect a 6 hour thesis in any of the areas of the business disciplines subject to departmental approval. Thesis hours serve in lieu of elective hours.

**ISM 6971 2-6 Thesis**

**Comprehensive Exam**

The successful completion of GEB 6895 (or GEB 6898) capstone course – Integrated Business Applications serves in lieu of the Comp Exam.

Other Options:

**Concurrent Degrees**

Students in the Morsani College of Medicine M.D. Program and the Muma College of Business MBA Program may participate in a Concurrent Degree option whereby they may complete the requirements for both the MD and the MBA. No courses are shared, but students in the MD degree program may opt to complete the MBA with a healthcare specialization with approval from both majors.

**Suggested Schedule for M.D. students**

Students joining the M.D. program could earn an M.D. degree, an M.B.A. degree as well the Business Foundations Certificate in five years, if they successfully complete courses as per the following schedule.

<table>
<thead>
<tr>
<th>Year 1</th>
<th>M.D. Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer 1</td>
<td>Business Foundation Courses</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2</th>
<th>M.D. Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer 2</td>
<td>Business Foundation Courses; Earn Business Foundations Certificate</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3</th>
<th>M.D. Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer 3</td>
<td>– M.D. Courses</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 4</th>
<th>M.B.A. Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer 4</td>
<td>– M.B.A. Courses; Earn M.B.A. Degree</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 5</th>
<th>M.D. Courses; Earn M.D. Degree</th>
</tr>
</thead>
</table>

**Suggested Schedule for PharmD students**

Students admitted to the PharmD degree program could earn a PharmD, an M.B.A. degree as well the Business Foundations Certificate in four years, if they successfully complete courses as per the following schedule:

<table>
<thead>
<tr>
<th>Year 1</th>
<th>PharmD Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer 1</td>
<td>Business Foundation Courses</td>
</tr>
</tbody>
</table>
Year 2  PharmD. Courses
Summer 2  Business Foundation Courses; Earn Business Foundations Certificate
Year 3  PharmD Courses; students will complete two (2) M.B.A courses in lieu of PharmD elective courses
Summer 3  PharmD Courses
Year 4  PharmD Courses; Earn PharmD Degree
Summer 4  M.B.A. Courses
Year 5  M.B.A. Courses; Earn M.B.A. Degree

COURSES
See http://ugs.usf.edu/course-inventory
BUSINESS ADMINISTRATION: SPORT BUSINESS CONCENTRATION
SPORT AND ENTERTAINMENT MANAGEMENT

Concurrent Degrees:
Master of Business Administration (M.B.A.) and Master of Science (M.S.) Degree

DEGREE INFORMATION
Refer to individual Majors for deadlines
Minimum Total Hours: 33/36
Level: Masters
CIP Code: 52.0201/31.0504
Dept. Codes: DEA
Major/College Codes: BUS/BA, SEM/BA

CONTACT INFORMATION
College: Business
Contact Information: www.grad.usf.edu

MAJOR INFORMATION
The Concurrent Degree option prepares graduates to contribute to and take leadership positions in the global sport and entertainment industry.

ADMISSION INFORMATION
Must meet University requirements (see Graduate Admissions) as well as requirements for admission to each major. For admission to the MS in Sport and Entertainment Management, students must complete the coursework for an MBA with a concentration in Sport Business. Refer to individual major listings for specific requirements.

CURRICULUM REQUIREMENTS
Refer to individual major listings for specific requirements.

The Business Administration major with a Concentration in Sport Business is a 33 credit hour program comprising 18 hours of advanced tools and 15 hours of sport and entertainment-focused coursework. The MS in Sport and Entertainment Management is a 36 credit hour program. The two programs share the following courses:

SPB 6719 Sport and Entertainment Marketing Strategy 3
SPB 6406 Sport and Entertainment Law 3
SPB 6706 Sport Business Analytics 3

All 60 hours of coursework in both programs are required to earn both degrees; there are no electives.

Course sequence
Students must consult with the Graduate Program Director for advising on the required course sequence.

COURSES
See http://ugs.usf.edu/course-inventory
BUSINESS ADMINISTRATION

Doctor of Business Administration (D.B.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Spring: October 15
Spring admission only

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 72
Level: Doctoral
CIP Code: 52.0201
Dept. Code: DEA
Major/College Codes: BUD BA
Effective date: Summer 2014

CONTACT INFORMATION

College: Business
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The DBA degree program offered by the Muma College of Business provides its graduates with the skills needed to conduct rigorous research with the objective of applying the findings to real-world decision-making in industry and government. The Program provides for intellectual growth as students work closely with faculty in seminars, research projects, and other assignments that develop their research skills and ability to communicate their findings to a broad audience of both practitioners and researchers. It also offers students the opportunity to develop a portfolio of skills that, when combined with the extensive experience that they bring into the program, uniquely qualifies them to serve in clinical faculty positions.

The curriculum is designed to build upon the breadth of business understanding that they have previously achieved as successful executives. This is achieved by offering substantive coverage of a broad variety of qualitative and quantitative research techniques and by allowing students the flexibility to focus more deeply on their personal areas of interest during the dissertation phases of the program. The degree conferred is a Doctor of Business Administration (DBA), a terminal degree so-named to differentiate it from the Ph.D. degree that specifically focuses on preparing students for an academic research career within a specific discipline. Students will complete the 3-year program in a cohort with other executives. Classes are scheduled all day for two consecutive days approximately one weekend a month for six 5-month semesters. Each semester is divided into 2 quarters, with a one-month break between semesters. Face-to-face classes are heavily supplemented by online activities between face-to-face classes. The weekend format allows participants to continue carrying their careers while they master a range of applied research skills.

Accreditation:
Accredited by the AACSB International – The Association to Advance Collegiate Schools of Business.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- master’s degree or under exceptional circumstances, candidates with an undergraduate degree from a regionally accredited, or equivalent, institution with a minimum US GPA of 3.00 or equivalent. In some situations, additional preparatory course work may be required.
- at least 12 years of work experience, at least 5 of which must be at a senior managerial or executive level
- personal statement
- interview
CURRICULUM REQUIREMENTS

Minimum Hours: 72 hours post-bachelors

Core – 33 credit hours
Publication courses – 9 credit hours
Issue courses – 10 credit hours
Dissertational Proposal I- 4 credit hours
Dissertation or Doctoral Project – 16 credit hours

Core Requirements 33 Credits
These courses are offered during the first four semesters of the program and have a substantial distance-learning component between class meetings. They fall into three categories.

The first are designed to develop the student's quantitative and qualitative research skills, and to provide opportunities to practice these skills in real world contexts. These required courses consist of:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEB 7557</td>
<td>Research and Writing Skills for Doctoral Students</td>
<td>3</td>
</tr>
<tr>
<td>QMB 6375</td>
<td>Applied Linear Statistical Models</td>
<td>3</td>
</tr>
<tr>
<td>QMB 7565</td>
<td>Introduction to Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>QMB 7566</td>
<td>Applied Multivariate Statistical Methods</td>
<td>3</td>
</tr>
<tr>
<td>GEB 7911</td>
<td>Qualitative Research Methods in Business</td>
<td>3</td>
</tr>
</tbody>
</table>

The second category is intended to provide students with exposure to research in the multi-disciplinary topics that represent the current areas of focus of the Muma College of Business. These required courses consist of:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAN 6726</td>
<td>Strategic Business Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ISM 7406</td>
<td>Business Analytics</td>
<td>3</td>
</tr>
<tr>
<td>GEB 7298</td>
<td>Creativity and Innovation</td>
<td>3</td>
</tr>
<tr>
<td>GEB 6457</td>
<td>Ethics, Law and Sustainable Business Practices</td>
<td>3</td>
</tr>
</tbody>
</table>

The final category is proposed by faculty members based upon their areas of interest and expertise as well as student interests. Two of the following courses would be offered so as to provide exposure to a variety of research-related topics and activities.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACG 7936</td>
<td>Seminar on Special Topics in Accounting</td>
<td>3</td>
</tr>
<tr>
<td>FIN 7930</td>
<td>Selected Topics in Finance</td>
<td>3</td>
</tr>
<tr>
<td>ISM 7930</td>
<td>Selected Topics in MIS</td>
<td>3</td>
</tr>
<tr>
<td>MAN 6930</td>
<td>Selected Topics</td>
<td>3</td>
</tr>
<tr>
<td>MAR 7931</td>
<td>Seminar on Selected Marketing Topics</td>
<td>3</td>
</tr>
</tbody>
</table>

Publication Courses 9 Credits
These courses are offered during the first three semesters of the major and have a substantial distance learning and collaboration component between class meetings, with members of the cohort being required to peer review each other's work and make revisions. They represent an extension of previous courses, and require the students to create publishable documents, such as journal, conference and book chapter submissions. Depending upon the particular publication project, each course will have one of the following designations:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACG 6915</td>
<td>Directed Research</td>
<td>3</td>
</tr>
<tr>
<td>GEB 6930</td>
<td>Selected Topics</td>
<td>3</td>
</tr>
<tr>
<td>FIN 7915</td>
<td>Directed Research</td>
<td>3</td>
</tr>
<tr>
<td>ISM 7931</td>
<td>Directed Research</td>
<td>3</td>
</tr>
<tr>
<td>MAN 6911</td>
<td>Directed Research</td>
<td>3</td>
</tr>
<tr>
<td>MAR 6916</td>
<td>Directed Research</td>
<td>3</td>
</tr>
</tbody>
</table>

http://www.coba.usf.edu
Issues Courses  
These courses are offered starting in the fourth semester of the major, and are intended to run in parallel with proposal and dissertation activities. Although meeting according to the same schedule as regular courses, issues courses offer fewer credits than regular or publication courses, and therefore have commensurately reduced outside workloads to avoid interfering with the dissertation process. Members of the cohort select the topics from a list of proposals made by faculty members and other members of the cohort. Students may also elect to facilitate issues courses under the direction of a faculty supervisor, who acts as the instructor of record. Depending on the topic being taught, these courses may be any of the following:

- ACG 7939 Executive Issues in Accounting 2 credits
- FIN 7939 Executive Issues in Finance 2 credits
- GEB 7939 Executive Issues in Business 2 credits
- ISM 7939 Executive Issues in MIS 2 credits
- MAN 7939 Executive Issues in Management 2 credits
- MAR 7939 Executive Issues in Marketing 2 credits
- QMB 7939 Executive Issues in Operations Research and Operations Management 2 credits

With the approval of the DBA Major Committee, students may be permitted to substitute up to four (4) credits of independent study/directed research (e.g., ACG 7906, FIN 7906, GEB 7906, ISM 7931, MAN 7905, MAR 7910) for selected issues courses during their final year of the major.

Dissertation Proposal Course  
The proposal course is offered during the student’s fourth semester. It requires the student be matched to a four (4) person Dissertation Committee and submit a dissertation proposal for approval by the Committee. For the purpose of the DBA degree program, the course requirements for both dissertation and doctoral project proposals are the same. Prior to the proposal course, students will take the university-mandated qualifying exam, whose results will be assessed by the DBA Committee. Proposal courses are graded Pass/Fail, and must be passed.

- GEB 7981 Dissertation Preparation 4 credits

Qualifying Exam and Doctoral Candidacy  
Per University Policy, students must be enrolled in a minimum of 2 graduate credit hours in the semester of the exam. For DBA students, this requirement will be met as part of the normal course load. Before a student enrolled in the DBA degree program can be admitted to doctoral candidacy, the following University requirements must be met:

- appointment of a Dissertation Committee,
- attainment of an overall and degree program Grade Point Average (GPA) of 3.00 at USF at the time of candidacy. (All “I” and “M” grades, including “IF” and “MF”, must be cleared before candidacy may be finalized.)
- successful completion of a qualifying examination
- certification by the Dissertation Committee that the above qualifications have been successfully completed.

Dissertation/Doctoral Project  
Students are required to complete a dissertation or doctoral project, as approved by his or her committee.

Dissertation  
Dissertation courses are offered every quarter throughout the student’s last year, upon satisfactory completion of at least 44 course credits, four (4) proposal credits, and Admission to Doctoral Candidacy. These courses require the student to work towards the completion of the Dissertation approved by his or her committee.

Because the DBA degree is designed to be responsive to the needs of the Candidate, there is some flexibility in the form that the Dissertation can take—subject to approval by the Committee. University policy allows for two variations in the format:

1. A traditional research dissertation
2. Collection of articles/papers
The Candidate will meet with members of the Committee during each residency of the final year of the major, and will present his or her dissertation to the Committee in the final semester of the major. Upon successful completion of the dissertation defense presentation, the Dissertation Committee will then approve the awarding of the Degree, subject to all remaining curriculum program requirements being met, including submission of the Dissertation to the Office of Graduate Studies.

Dissertation courses are graded Pass/Fail, and must be passed. The sixteen (16) dissertation credits can be earned by taking one or more of the following courses:

- ACG 7980 Dissertation in Accounting
- FIN 7980 Dissertation
- GEB 7980 Dissertation
- ISM 7980 Dissertation
- MAN 7980 Dissertation
- MAR 7980 Dissertation

**Doctoral Project**

Or, a student may opt to complete a doctoral project in lieu of the Dissertation. Examples that could be approved might include:

1. a practice-focused book submitted for publication,
2. a write-up of a substantial work-related project in which the principles of evidence-based research were applied
3. a portfolio of related research products/activities that demonstrate knowledge creation or innovative application in a given area. Such a portfolio might include journal, book, magazine articles, conference papers and presentations.

Students completing the Doctoral Project earn their required 16 credit hours by taking courses specifically designated as doctoral project courses by the program. In the event such courses are not available in the catalog, special topics courses designated “Selected Topics: Doctoral Project” may be substituted. These courses are graded Pass/Fail, and must be passed. Confirmation of successful completion of the Doctoral Project must be submitted to the Office of Graduate Studies.

**External Activity Requirements**

In addition to the major’s course requirements, each student is required to participate in three external activities that involve meeting with academics and/or doctoral students from other institutions. Examples of such activities could include academic conferences, workshops, colloquiums, doctoral symposiums or academic association annual or regional meetings. At least one of these should include a substantial proportion of international attendees.

**Grading Requirements**

Proposal, Dissertation, and Directed Research courses are graded Pass/Fail, and must be passed. Students must complete all remaining courses with a grade of “B” or better. This is in addition to the University requirement for a 3.00 GPA overall and in the major. Should a student fail to pass or complete a course with the required grade, the DBA Degree Program Committee may offer an alternative activity as a substitute.

**Other Requirements**

As a result of the program’s cohort structure, normally all doctoral coursework must be completed at the University of South Florida within the DBA degree program. Students seeking to transfer from other majors should contact the DBA Academic Graduate Director prior to applying. All program requirements will normally be completed in three (3) years, as part of a cohort. In the event of unavoidable interruptions to a student’s progress, the student may petition the DBA Graduate Committee for an extension up to a maximum of five (5) years from the student’s original starting date. Any student not completing all program requirements within the five (5) year time period will be dropped from the program and the student would need to re-apply for admission to the major in the event he or she wishes to continue.

**COURSES**

See [http://ugs.usf.edu/course-inventory](http://ugs.usf.edu/course-inventory)
BUSINESS ADMINISTRATION

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: January 2
Fall admission only

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 90
Level: Doctoral
CIP Code: 52.0201
Dept. Code: DEA
Major/College Codes: BUD BA
Approved: 1986

Concentrations:
Accounting
Economics – being terminated
Finance
Information Systems
Marketing

CONTACT INFORMATION

College: Business
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Ph.D. degree program offered by the Muma College of Business provides its graduates with preparation for careers as college and university professors and as research and staff personnel in industry and government. The doctoral degree program provides for intellectual growth as students work closely with faculty in seminars, research projects, and other assignments which develop their teaching and research skills. The curriculum offers breadth of understanding of the integral components of business administration as well as depth of field specialization sufficient to permit the student to make a meaningful contribution to their discipline. The program is sufficiently flexible to allow each student to build upon his or her strengths and to accommodate students with various levels of preparation in a wide variety of fields, and in areas outside the college. However, the degree conferred is Ph.D. in Business with a concentration in one of the departmental areas.

Accreditation:
Accredited by AACSB International – The Association to Advance Collegiate Schools of Business.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- Competitive based on GPA, GMAT or GRE
- personal statement
- recommendations
- interview
- International applicants from non-English-speaking countries must also have a TOEFL score of 550 or higher on the written version, a minimum score of 213 on the computer-based test or a 79 on the internet-based test.
CURRICULUM REQUIREMENTS

Total Minimum Hours: 90

A minimum of 90 semester hours beyond the bachelor's degree is required. This includes 21 hours of dissertation. A minimum of 45 hours of coursework must be completed at the University of South Florida.

Foundation Courses
These courses are designed to develop an appreciation of the institution of business and to help students see how their areas of specialization fit into this general picture. With the approval of the student's major committee, a student may satisfy these requirements in any of the following ways:

A. By completing an undergraduate degree in business at an AACSB accredited institution, with an average of "B" or better in the last 60 hours, no more than 5 years prior to admission to the Ph.D. program.

B. By completing an M.B.A. degree at an AACSB accredited institution, no more than 5 years prior to admission to the Ph.D. program.

C. By completing one approved course with a grade of "B" or better in each of the functional areas: Accounting, Finance, Information Systems, Management, and Marketing. All graduate-level courses at the 6000 level or above, with the exception of specific "tool" courses (e.g. statistics), will count toward this requirement.

D. By successfully petitioning the doctoral Committee to accept previous academic work (e.g., specialized Masters programs in business, degrees granted more than 5 years ago, etc.) in fulfillment of all or part of this requirement. Such a petition must be initiated during the first semester of the major.

CORE REQUIREMENTS
The core courses are designed to provide a strong background in Economics and to develop the student's quantitative and statistical research skills. These courses are required of all students in the major. The College will waive a course only if the student has passed the same or equivalent course with a grade of "B" or better within the preceding five years.

The Economics requirement can be met by completing two graduate level economics courses that have been approved by the student's major committee.

Students are required to take a one credit hour research skills course, QMB 7555, Research and Writing Skills for Doctoral students, in the first semester of the Program. Following this introductory course, the quantitative and statistical coursework is to be determined by the student's program committee in consultation with the student. A three course series is required. An appropriate sequence should be chosen from the following:

ECO 6424  Econometrics I  3
ECO 6425  Econometrics II  3
ECO 7426  Econometrics III  3
ECO 7427  Econometrics IV  3
QMB 6375  Applied Linear Statistical Models  3
QMB 7565  Introduction to Research Methods  3
QMB 7566  Applied Multivariate Statistical Methods  3

Any substitution of appropriate mathematics, statistical and quantitative coursework must be approved by the Doctoral Program Committee, preferably at the time of acceptance, or definitely before the student takes a substitute course. In addition, students are required to take an additional research elective approved by their advisory committee. Should a student earn a grade of "C" or lower in the core courses, the case will be brought before the Doctoral Committee for review. After reviewing the case, the Committee will take one of the following steps:

a. Require the student to pass an examination that covers the material relevant to the subject. A student who fails the exam on the first attempt may retake it within one year. A student who fails the exam on the second attempt will be subject to dismissal.

b. Require the student to retake the course. If the student retakes the course and fails to receive a grade of "B" or better, the student is subject to dismissal.
Concentration Field
All students will take at least five (5) courses at the 6000 or 7000 graduate level in an area designated as the student's Concentration. Students are encouraged to identify courses in the concentration field that will provide experience in applying current research techniques to problems in that field. To accomplish this, the student may propose a combination of formal classroom courses and independent directed-research courses. This combination may include a year-long research seminar in which the groundwork is laid for the student’s dissertation. The specific agenda of courses will be determined by the student's program committee. The following fields are offered: Accounting, Economics, Finance, Information Systems, Management (inactive) and Marketing. Courses taken as part of the Foundation or Core sections may not be counted as part of the hours required for a concentration field.

Support Field (9 hours)
The support area will consist of a minimum of three graduate level courses (9 hours) from one or more of the fields listed under the concentration field, or elsewhere in the university. The support field and the concentration field cannot be taken in the same department. Courses within the support field can be selected to complement the concentration field and in special cases may include courses outside the Muma College of Business. The nature and number of the support area courses will be determined by the Student’s Program Committee in consultation with the Ph.D. coordinator of the support field department. Courses taken as part of the Foundation or Core courses may not be counted as part of the 9 hours required for support fields.

CONCENTRATIONS
Students select one of the following concentrations:

Accounting Concentration Requirements

The Accounting concentration emphasizes:
- The mastery of one or more specialized areas of accounting, such as accounting information systems, auditing, or financial accounting
- The development of requisite skills to engage in respected applied, practical and scholarly research
- The development of effective teaching skills

The concentration requires meeting the Muma College of Business foundation course requirements and completing 41 hours of coursework. The 41 hours of coursework include:
- 17 credit hours of core requirements related to economics and research methods
- 15 credit hours of accounting courses
- 9 credit hours in a support field

Economics Concentration – Being terminated.

Finance Concentration Requirements

In addition to the required core and foundation courses, the curriculum will normally include the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 6804</td>
<td>Theory of Finance</td>
<td>3</td>
</tr>
<tr>
<td>FIN 7808</td>
<td>Advanced Micro Finance</td>
<td>3</td>
</tr>
<tr>
<td>FIN 7817</td>
<td>Financial Markets</td>
<td>3</td>
</tr>
<tr>
<td>FIN 7930</td>
<td>Selected Topics in Finance</td>
<td>3, 3</td>
</tr>
<tr>
<td>FIN 7935</td>
<td>Finance Research Seminar</td>
<td>3</td>
</tr>
</tbody>
</table>

Courses taken as part of the Foundation or Core sections may not be counted as part of the hours required for the concentration.
Support Field (9 hours):
Those who elect Finance as a support field will establish their support field curriculum in consultation with their major advisors and a representative from the Finance department. Normally, a support field in Finance would require the following three courses:

- FIN 6804 Theory of Finance 3
- FIN 7817 Financial Markets 3
- FIN 7808 Advanced Micro Finance 3

Comprehensive Qualifying Exam:
Upon completion of all coursework, students must pass a comprehensive written examination. The student’s performance on this exam should reflect familiarity with the literature, current issues and problems related to these fields. A student who fails the field exam may retake it within one year. A second failure disqualifies the student from continuing in the Ph.D. degree program. If the degree is not conferred within 5 calendar years of the comprehensive qualifying examination, a second and different examination must be taken. Students passing the comprehensive qualifying examination are eligible for admission to candidacy for the Ph.D. degree program.

Dissertation:
21 credit hours of dissertation are required for the degree.

Residency Requirements:
Ph.D. students in the College are required to complete a minimum of 15 credit hours per calendar year. Failure to meet this requirement will result in the student being placed on conditional status.

Information Systems Concentration Requirements

ISM 6124 Advanced Systems Analysis and Design*
ISM 6218 Advanced Databases Management*
ISM 6225 Distributed Information Systems*
ISM 6930 Computational Methods in Business
ISM 7910 MIS Research Seminar I
ISM 7911 Seminar in Technical IS Research
ISM 7912 Seminar in MIS Organizational Research
One additional ISM course at the 6000 level or higher. **

*Note: This requirement can be waived if a student has taken these or equivalent graduate courses in a prior major and earned a B or higher. Waiver requests for any of the courses listed above should include a copy of the course syllabus and should be submitted to the department’s Ph.D. Coordinator.

**Note that any of the three courses taken to satisfy the foundational course requirement in Information Systems can also satisfy this requirement.

Support Field (9 hours):
Students take 3 graduate courses outside of the concentration area. Courses may be taken outside of the Muma College of Business, but should complement the concentration subject area.

Comprehensive Qualifying Exam:
Upon completion of all coursework, students must pass a comprehensive examination in the concentration area. The student’s performance on this exam should reflect familiarity with the literature, current issues, and problems related to these fields.

There are two parts to the comprehensive examinations following the completion of coursework:
- A written examination and
- An oral presentation and successful defense of the student’s “second year research paper.”

Students will be considered to have passed the comprehensive exam if they pass the written exam and successfully present and defend the “second year research paper.”
Marketing Concentration Requirements

Students will be required to successfully complete a minimum of 6 doctoral-level Marketing seminars. Typically, one doctoral seminar will be offered in the Fall semester and two seminars will be offered in the Spring semester. The six required courses may be selected from the following list:

- MAR 7555 Consumer Behavior Theory
- MAR 7635 Advanced Marketing Research: Design and Technique
- MAR 7667 Marketing Models and Strategy Applications
- MAR 7787 Marketing Theory and History
- MAR 7910 Independent Study in Marketing (S/U only)
- MAR 7930 Advanced Seminar in Marketing
- MAR 7931 Seminar in Selected Marketing Topics including:
  - Buyer-Seller Interaction
  - Marketing Channels, Logistics and Supply Chain Management
  - Marketing Management
  - Marketing Strategy
  - Readings in Marketing
  - Sales Management
- MAR 7980 Dissertation Research (S/U only)

In addition, students will complete a “Pro-Seminar” every Fall semester of the first year of the major. Note: The Professional Seminar does not count as one of the six required Ph. D. seminars.

Comprehensive Qualifying Examinations:
Upon completion of all coursework, students must pass the equivalent of a comprehensive examination in the concentration area. The student’s performance on these “exams” should reflect familiarity with the literature, as well as with current issues and problems related to these fields. A student who fails either of the exams may retake it within one year. A second failure disqualifies the student from continuing the Ph.D. degree program. If the degree is not conferred within 5 calendar years of the comprehensive qualifying examination, a second and different examination must be taken. Students passing the qualifying examination are eligible for admission to candidacy for the Ph.D. degree program.

The decision to administer a separate comprehensive exam for a support area will be made by the department in which the support area is taken. In the event that an interdisciplinary support area is selected, any department represented by six (6) or more semester hours may require a qualifying examination. In the event that no single department represents six semester hours or more, the student’s graduate committee will solicit input from the faculty teaching the courses in the support area. If a majority of those polled take the position that a separate comprehensive examination in the support area is not appropriate, the exam will not be administered. If a separate comprehensive examination is not administered in a support area, material from the support area will be integrated into the comprehensive exam in the concentration area.

Dissertation:
21 hours of dissertation are required for the degree.

Residency Requirement:
Ph.D. students in the College are required to complete a minimum of 15 hours per calendar year. Failure to meet this requirement will result in the student being placed on conditional status.

COURSES
See http://ugs.usf.edu/course-inventory
BUSINESS ADMINISTRATION (SATURDAY MBA)

Master of Business Administration (M.B.A.) Degree

DEGREE INFORMATION

Closed for new admissions
Minimum Total Hours: 48
Level: Masters
CIP Code: 52.0201
Dept. Code: DEA
Major/College Codes: MBS BA

Also offered as: See listing under MBA Program

CONTACT INFORMATION

College: Business
Contact Information: www.grad.usf.edu
Other Resources:

THIS PROGRAM IS BEING DISCONTINUED
BUSINESS ANALYTICS AND INFORMATION SYSTEMS

Master of Science (M.S.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: June 1
Spring: October 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 33
Level: Masters
CIP Code: 11.0501
Dept. Code: QMB
Major/College Codes: BAI BA
Approved: 2002

Concentrations:
Analytics and Business Intelligence (ABI)
Information Assurance (CIA)

Also offered as:
Track under Business Administration (Ph.D.) and application area in Business Administration (M.B.A.)

CONTACT INFORMATION

College: Business
Department: Information Systems/Decision Sciences (QMB)

Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Master of Science (M.S.) in Business Analytics and Information Systems (BAIS) meets the needs of the marketplace for expertise in analytics, information technology and management. Highly qualified individuals with motivation for leadership in information technology and analytics are encouraged to apply for admission to this program. The major meets the needs of organizations in information services, software development, management consulting, and other sectors where data analytics is used in industry. An Advisory Board consisting of senior business analytics and information systems executives works closely with the department to ensure that the program stays relevant and maintains high standards.

The major is offered in two forms – an on-campus option and a weekend executive option.

The on-campus option is designed for students who need flexibility in their course work. Students will work with faculty to design the most effective course sequence and optional thesis/practicum /independent studies to meet the major curriculum requirements and accomplish their career goals.

Alternately, the weekend executive option is intended for full-time working Information Technology/Information Systems/Business professionals who will pursue this degree while remaining employed. The weekend executive option is offered on a cohort basis with a pre-determined set of courses and independent study options selected by faculty based on market needs and student profiles. Students will benefit from an accelerated curriculum with a managerial and leadership approach. To get the full benefit, applicants are expected to have a minimum of 5 years of relevant work experience.

Accreditation
Accredited by the AACSBI International – The Association to Advance Collegiate Schools of Business.
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below. Students are admitted to the M.S./BAIS program based on the evaluation of their application in its entirety, including:

- bachelor’s degree with a 3.00 GPA,
- GMAT, GRE or other standardized scores for graduate programs (e.g. MCAT, LSAT).
  - For students with 5 years or more of relevant full-time work experience in Information Technology/Information Systems/Business Analytics in U.S., the requirement of standardized scores may be waived.
  - Students requesting such waivers should provide information justifying such waivers based on the above criteria. Additional documentation may be sought when deemed appropriate by the program.
- Language proficiency scores (for international students only) (e.g. TOEFL with a minimum score of 79) using TOEFL or IELTS or other standardized English tests as accepted by Graduate Admissions.
- letters of recommendations,
- statement of purpose, and
- relevant work experience.

CURRICULUM REQUIREMENTS

The major requires 33 hours of coursework and may be taken either full-time or part-time. Full-time students with appropriate prerequisites may be able to complete the major in one full year (3 semesters) of study. Part-time students and full-time students who need prerequisites will typically need from 1 ½ to 3 years to complete the degree.

Prerequisites
Incoming students are expected to have the following as prerequisites:

1) One semester of a high-level, object oriented programming language (e.g., C#, C++, Java) or substantial programming experience;
2) One semester of Information Systems Analysis and Design or equivalent experience;
3) One semester of Database Systems or equivalent experience;
4) A course in Statistics or equivalent professional qualification or experiences
5) A course in economics, or equivalent professional qualification or experiences and
6) A course in financial accounting.

These required prerequisite courses may be taken concurrently with courses in the M.S./BAIS major. Prerequisite courses do not count toward the 33 credit hours of course requirements in the M.S./BAIS major.

Students have the choice of two options:

On-Campus Option:
Designed for students who need flexibility in their course work, students will work early in the first semester with their major advisor to complete a formal Major Curriculum of Study meeting the Major Curriculum Requirements that will define a coherent sequence of courses to accomplish the student’s objectives. Students have choice of electives as well as the option to complete a master's thesis or practicum project, depending upon the availability and approval of a faculty sponsor.

Executive Weekend Option:
Intended for full-time working Information Technology/Information Systems/Business professionals who will pursue this degree while remaining employed. Offered on a cohort basis, students will meet the Major Curriculum Requirements through a pre-determined set of courses, electives, and independent study options selected by faculty and noted on the formal Major Curriculum of Study, based on market needs and student profiles. Students will benefit from an accelerated curriculum with a managerial and leadership approach. To get the full benefit, applicants are expected to have a minimum of 5 years of relevant work experience.

Total Minimum Hours: 33 credits
Core – 12 credits
Capstone – 3 credits
Concentration or Electives – 18 credits

Technical Core – 12 credits
The following four courses provide an understanding of the state-of-the-art in research and practice in technical areas of Information Systems Management.

ISM 6124 3 Advanced Systems Analysis and Design
ISM 6218 3 Advanced Database Management
ISM 6225 3 Distributed Information Systems
ISM 6436 3 Operations and Supply Chain Processes

Capstone Course - 3 credits
ISM 6155 3 Enterprise Information Systems Management
This course is considered to be the capstone of the M.S./BAIS major and as such it must be taken during one of the last two semesters of the student’s major.

CONCENTRATION OPTIONS:
Students select from the following concentrations or complete 18 hours of electives.

ANALYTICS & BUSINESS INTELLIGENCE CONCENTRATION – 18 hours
In addition to the Technical Core and Capstone courses, students must complete the following:

Required courses – 12 credits
Students will have to complete four out of the following seven courses:
ISM 6136 3 Data Mining*
ISM 6218 3 Advanced Database Management
ISM 6208 3 Data Warehousing
ISM 6137 3 Statistical Data Mining*
QMB 7566 3 Applied Multivariate Statistical Methods
ISM 6930 3 Statistical Programming for Business Analytics*
ISM 6930 3 Big Data and Ecommerce

In addition, graduate students who take the required four courses for this concentration and earn an average GPA of 3.00 or higher in these courses, will receive a SAS approved Certificate in Analytics and Business Intelligence, when they use a SAS analytics package as part of some of these courses.

Specifically, graduate students will need to use, among other tools, SAS Enterprise Miner or an equivalent SAS analytics package in the Data Mining, Statistical Data Mining and Statistical programming for Business Analytics courses. If students take at least one of the courses marked with a * as part of the analytics and business intelligence concentration, they will receive a SAS approved Certificate in Analytics and Business Intelligence.

Electives – 6 credits
To complete the Analytics and Business Intelligence concentration, students will need to meet the 33 credit hour requirement for the MS in BAIS degree program by taking graduate level electives for the program. Other electives from across the campus may also be taken to meet the 33 credit hour requirement with prior approval of the academic advisor of the program.

INFORMATION ASSURANCE CONCENTRATION – 18 hours
In addition to the Technical Core and Capstone courses, students must complete the following:

Required courses – 6 credit hours
ISM 6328 3 Information Security & Risk Management
ISM 6930 3 Selected Topics: Decision Analysis for Business Continuity and Disaster Recovery
Electives – 6 credits
Any two elective courses from the set of courses listed below
ISM 6145 3 Seminar on Software Testing
ISM 6316 3 Project Management
ISM 6124 3 Advanced Systems Analysis and Design
ISM 6218 3 Advanced Database Management
ISM 6266 3 Software Architecture

Electives – 6 credits
To complete the Information Assurance concentration, students will need to meet the 33 credit hour requirement for the MS in BAIS degree by taking graduate level electives for the major. Other electives from across the campus may also be taken to meet the 33 credit hour requirement with prior approval of the academic advisor of the program.

Electives - 18 credits
Up to eighteen graduate level credits may be selected from additional Information Systems courses or (with prior approval by the academic advisor) other areas of specialization such as areas of Management, Decision Sciences, Computer Science, Logistics, etc. Existing Course Offerings:

ISM 6124 3 Advanced Systems Analysis and Design
ISM 6266 3 Software Architecture
ISM 6145 3 Seminar on Software Testing
ISM 6155 3 Enterprise Information Systems Management
ISM 6218 3 Advanced Database Management
ISM 6225 3 Distributed Information Systems
ISM 6305 3 Managing the Information System Function
ISM 6442 3 International Aspects of Information Science
ISM 6405 3 Information and Business Intelligence
ISM 6485 3 Electronic Commerce
ISM 6905 1-6 Independent Study
ISM 6930 1-6 Selected Topics in Management Information Systems
ISM 6316 3 Project Management
ISM 6136 3 Data Mining
ISM 6208 3 Data Warehousing
ISM 6056 3 Web Application Development
ISM 6156 3 Enterprise Resource Planning & Business Process Management
ISM 6328 3 Information Security and Risk Management

In addition, the following Special Topics are being offered:

ISM 6930 Selected Topics: Multimedia Applications
ISM 6930 Selected Topics: Mainframe Technologies
ISM 6137 Statistical Data Mining

Thesis Option - 6 hours
The master’s thesis option requires six credits of ISM 6971, which count as six of the 18 BAIS elective credits. The thesis must make a well-defined contribution to the research and development in an area of Information Systems.
ISM 6971 2-6 Thesis: Masters

Practicum Option – 1-6 hours
The practicum option requires an investigation of a new information technology artifact. The project typically occurs in the student’s place of employment and is jointly supervised by a faculty member and a manager in the company. One credit of ISM 6905 would be taken for each semester that the student works on a project. The practicum would count for one to six hours of the 18 hours of BAIS electives.

Research/Project Option – 1-3 hours
The research/ project option requires working on an BAIS related project that involves research or community engagement. The project is supervised by a faculty member. One to two credits of ISM 6905 would be taken for each semester that the student works on a project. The research/ project option would count for one to three hours of the 18 hours of BAIS electives.
Comprehensive Exam
In lieu of a comprehensive exam, assessments comprising the capstone course (ISM 6155) fulfill the requirements for the comprehensive assessment in the program.

Graduate Certificate Options
Note that students in the Program can also obtain graduate certificates in (1) Compliance, Risk and Anti-Money Laundering and/or (2) Information Assurance by selecting elective courses suitably.

COURSES
See http://ugs.usf.edu/course-inventory
Accelerated B.S./M.S.

The goal of the USF Muma College of Business integrated undergraduate-graduate program in BAIS is to provide outstanding undergraduate students an option to complete the B.S. undergraduate degree in BAIS and the M.S. graduate degree in BAIS in five years (141 total hours).

The integrated B.S./M.S. program is a 141-hour undergraduate-graduate option that allows eligible students to work towards the M.S. in BAIS degree requirements while completing their undergraduate B.S. degree. Students interested in this option will work closely with an advisor and a faculty member to develop an integrated plan of study.

General Guidelines

- **Time of admission to the accelerated program:** Students will be eligible for admission to the accelerated major at the beginning of their Senior year in BAIS. Students must apply for admission consideration during their Junior year. Students will start taking courses in the graduate program in their Senior year.

- **Joint admission:** Students must apply to and meet admission requirements of the M.S. in BAIS graduate major.

- **Plan of study:** In consultation with an advisor and a faculty member, students will be required to prepare a *Graduate Degree Action Plan*. The plan will cover the entire time period of the major and it will be periodically reviewed with an advisor.

- **Advising:** Students will present their portfolio (see below for details and a plan of study in person to the integrated program committee prior to being admitted to the major.

- **Tuition charges:** Students will be required to pay graduate tuition rates when taking graduate courses.

Admission Requirements

1. Students with at least a Junior standing in their undergraduate degree program may apply for admission consideration into the integrated B.S./M.S. undergraduate/graduate major. Students will submit an *Accelerated Program Interest Form* that must be signed by the Graduate Director.

2. Students must have a minimum 3.25 GPA.

3. Interested students will be required to present a “portfolio” of the following credentials:
   a. Three letters of recommendation, at least two from faculty
   b. Statement of intent—a personal statement about why the student wishes to apply for the integrated program.
   c. Undergraduate transcripts.
   d. Other supporting documents (e.g., projects and papers, software, work experience, internships, etc.) should be included where possible.

4. The GMAT or GRE should be taken sometime before or during the Fall semester of the Junior year of study.

5. All applicants will need to meet *any other admission requirements established* for the M.S. in BAIS program.

6. The application to the accelerated program will be considered as a complete package and therefore obtaining a high undergraduate GPA is not a guarantee of admission. Grades in the undergraduate BAIS core courses will be taken in consideration and will have a significant impact on the M.S./BAIS acceptance decision.

Degree Requirements

5-Year Plan of Study for Accelerated B.S./M.S. Undergraduate-Graduate Major:

With appropriate planning, a total of 12 hours of graduate credit may be taken that can be applied to both the B.S. and M.S. degrees. This will reduce the minimum total credits required for both programs from 153 (120 for B.S., 33 for M.S.) to 141 credits. Specifically:

- 9 hours of graduate credit can be taken in place of the 9 hours of elective undergraduate credits. The student must earn a minimum grade of B in each graduate course that is to be counted for both degrees.
- The graduate level Operations and Supply Chain Processes course ISM 6436 can be taken in place of the comparable undergraduate course ISM 3431.
A comprehensive plan of study to complete the integrated B.S./M.S. program will be developed with the guidance of an advisor and a faculty member. A possible plan of study could be as follows. Summer sessions may also be included in the study plan.

**First and Second Year**
Courses and credits as designated for Freshman and Sophomore years.

**Third Year (Apply for Admission to Integrated B.S./M.S. Program)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISM 3232</td>
<td>3</td>
</tr>
<tr>
<td>ISM 3113</td>
<td>3</td>
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<tr>
<td>Additional UG Courses</td>
<td>9</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISM 4212</td>
<td>3</td>
</tr>
<tr>
<td>ISM 4220</td>
<td>3</td>
</tr>
<tr>
<td>Additional UG Courses</td>
<td>9</td>
</tr>
</tbody>
</table>

**Fourth Year (Student accepted in M.S./BAIS Program)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISM 6436</td>
<td>3</td>
</tr>
<tr>
<td>UG Courses</td>
<td>12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISM 4300 (B.S. Capstone)</td>
<td>3</td>
</tr>
<tr>
<td>ISM 6124</td>
<td>3</td>
</tr>
<tr>
<td>UG Courses or Graduate Electives</td>
<td>6 hours</td>
</tr>
</tbody>
</table>

**Fifth Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISM 6225</td>
<td>3</td>
</tr>
<tr>
<td>ISM 6218</td>
<td>3</td>
</tr>
<tr>
<td>Graduate Electives</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISM 6155 (M.S. Capstone)</td>
<td>3</td>
</tr>
<tr>
<td>Graduate Electives</td>
<td>12</td>
</tr>
</tbody>
</table>

The following courses are suggested specialization elective courses, cross-listed between the graduate and undergraduate catalog:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISM 6145/4930</td>
<td>Software Testing</td>
</tr>
<tr>
<td>ISM 6156/4153</td>
<td>Enterprise Resource Planning</td>
</tr>
<tr>
<td>ISM 6328/4323</td>
<td>Information Security and Risk Management</td>
</tr>
<tr>
<td>ISM 6930/4930</td>
<td>Mainframe Technologies</td>
</tr>
</tbody>
</table>

**COURSES**
See [http://ugs.usf.edu/course-inventory](http://ugs.usf.edu/course-inventory)
ENTREPRENEURSHIP IN APPLIED TECHNOLOGIES

Master of Science (M.S.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: June 1
Spring: October 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 30
Level: Masters
CIP Code: 52.0701
Dept. Code: MAN
Major/College Codes: EAT BA
Approved: 2005

CONTACT INFORMATION

College: Business
Department: Marketing (MKT)

Contact Information: www.grad.usf.edu
Other Resources:
www.entrepreneurship.usf.edu
entrepreneurship@usf.edu

MAJOR INFORMATION

The Center for Entrepreneurship at the University of South Florida, in partnership with the Colleges of Business and Engineering, Morsani College of Medicine and the Patel College of Global Sustainability, has established a novel, innovative, and unique major in interdisciplinary Entrepreneurship in Applied Technologies. The Master’s of Science Degree Program in Entrepreneurship in Applied Technologies is a 30 credit-hour major and consists of courses that will consolidate the Entrepreneurship education and training for successful opportunity recognition and development, technology and market assessment, technology commercialization, new venture formation, and new venture financing into a single interdisciplinary program curriculum utilizing faculty and courses in the Colleges of Business, Engineering, Medicine, and Global Sustainability.

The major is designed such that a student may complete it in a concentrated 12-month period of study or in an 18-month period. In addition, the Masters of Science Degree in Entrepreneurship is designed so that it can be completed as part of a concurrent degree in with a traditional M.A., M.S., M.B.A., M.D., or Ph.D. program. Concurrent degrees include the following: Master in Business Administration (MBA), Biotechnology (M.S.), Information Systems (M.S.), Public Health (MPH), Global Sustainability (M.S.) Environmental Science (M.S.), Civil Engineering (M.S.and Ph.D.), Industrial Engineering (M.S.), Medicine (M.D.), and Biomedical Engineering (M.S. B.E. & Ph.D). The concurrent degrees must be completed by the student within a 5-year period following initiation.

Accreditation:
Accredited by the Association to Advance Collegiate Schools of Business
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- Bachelor’s degree or equivalent from a regionally accredited university
- "B" (3.0 on a 4.0 scale) average in all upper division work
- Two (2) letters of recommendation
- Letter of interest
- Statement of purpose
- Personal interview
- GRE, GMAT may be required on individual basis; MCAT or LSAT may be substituted
- Competence in Statistics, Accounting, and Finance must be demonstrated

CURRICULUM REQUIREMENTS

Total Minimum Hours: 30 credit hours

Core requirements – 15 credits
Electives – 15 credits

Program of Study
Course Requirements – Graduation will require successful completion of the 30 hour curriculum, with a minimum GPA of 3.00 (no grades below “C”), within a five (5) year period.

Stipends – N/A

Core Requirements - 15 hours
Must complete all five courses. *Crosslisted course, choose 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENT 6016</td>
<td>New Venture Formation</td>
<td>(3)</td>
</tr>
<tr>
<td>ENT 6116</td>
<td>Business Plan Development</td>
<td>(3)</td>
</tr>
<tr>
<td>ENT 6126</td>
<td>Strategic Entrepreneurship</td>
<td>(3)</td>
</tr>
<tr>
<td>ENT 6186</td>
<td>Strategic Market Assessment</td>
<td>(3)</td>
</tr>
<tr>
<td>ENT 6415</td>
<td>Venture Capital &amp; Private Equity</td>
<td>(3)</td>
</tr>
</tbody>
</table>

Electives -15 hours
Select five (3hr) courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENT 6606</td>
<td>Product Development</td>
<td>(3)</td>
</tr>
<tr>
<td>ENT 6930</td>
<td>Special Topics Entrepreneurship</td>
<td>(3)</td>
</tr>
<tr>
<td>ENT 6947</td>
<td>Advanced Topics in Entrepreneurship</td>
<td>(3)</td>
</tr>
<tr>
<td>MAN 6930</td>
<td>Global Entrepreneurship</td>
<td>(3)</td>
</tr>
<tr>
<td>EIN 5201</td>
<td>Creativity in Technology</td>
<td>(3)</td>
</tr>
<tr>
<td>EIN 6430</td>
<td>Overview of Regulated Industries</td>
<td>(3)</td>
</tr>
<tr>
<td>GEB 6457</td>
<td>Ethics, Law &amp; Sustainable Business Practices</td>
<td>(3)</td>
</tr>
<tr>
<td>GMS 6095</td>
<td>Principles of Intellectual Property</td>
<td>(3)</td>
</tr>
<tr>
<td>GMS 6436</td>
<td>Introduction to Biotechnology</td>
<td>(3)</td>
</tr>
<tr>
<td>GMS 6873</td>
<td>Biomedical Ethics</td>
<td>(3)</td>
</tr>
<tr>
<td>GMS 7930</td>
<td>Principles of Biochemistry and Genetics</td>
<td>(3)</td>
</tr>
<tr>
<td>MAN 6456</td>
<td>Improvisation in Organizations</td>
<td>(3)</td>
</tr>
<tr>
<td>ENT 6155</td>
<td>Mergers and Acquisitions: An Entrepreneurial Perspective</td>
<td>(3)</td>
</tr>
</tbody>
</table>

Or other graduate courses which may be approved by the Graduate Director

COURSES
See [http://ugs.usf.edu/course-inventory](http://ugs.usf.edu/course-inventory) or [http://ce.usf.edu](http://ce.usf.edu) or [http://www.entrepreneurship.usf.edu](http://www.entrepreneurship.usf.edu)
ENTREPRENEURSHIP IN APPLIED TECHNOLOGIES
AND BIOMEDICAL ENGINEERING

Concurrent Degrees:
Master of Science (M.S.) and Master of Science in Biomedical Engineering (M.S.B.E.)

DEGREE INFORMATION

Refer to individual majors for deadlines
Minimum Total Hours: 33/30
Program Level: Masters
CIP Code: 14.0501 / 52.0701
Dept. Codes: ECH / MAN
Program (Major/College): EBI EN / EAT BA

CONTACT INFORMATION

Colleges: Engineering and Business
Departments: Chemical Engineering Center for Entrepreneurship
Contact Information: www.grad.usf.edu
Other Resources: www.entrepreneurship.usf.edu entrepreneurships@usf.edu

MAJOR INFORMATION

The M.S. Biomedical Engineering (BME) And M.S. Entrepreneurship In Applied Technologies (EAT) Concurrent Degrees is designed to prepare students who can effectively function in the complex world of Biotechnology companies (“Biotechs”). The program’s objectives are to provide a strong Biomedical foundation for technical product development and research and development along with the skill set to effectively participate in the entrepreneurship, venture capital, business, and financial aspects of Biotechs. Students will pursue appropriate coursework within both The College of Engineering and The Center For Entrepreneurship, double counting a total of nine credit hours.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for each major. Students must satisfy the requirements for the two degrees separately. No Letters Of Recommendation are required. Refer to the individual majors for the specific requirements for each degree.

CURRICULUM REQUIREMENTS

Course requirements:

Common Courses (counted towards both the BME and EAT degrees)
BME 6000 Biomedical Engineering (3)
GMS 7930 Principles of Intellectual Property (3)
EIN 6934 New Product Development (3)
9 hrs total
Biomedical Engineering (30 hrs required)
GMS 7930 Anatomy & Physiology for Bioengineers (3)
PHC 6051 Biostatistics II (3)
ECH 6971 Master’s Thesis (6)
Approved BME electives (9)
Common BME/EAT courses (9)
30 hours total

Entrepreneurship in Applied Technologies (30 hrs required)
EIN 6154 Technical Entrepreneurship (3)
EIN 6934 Technology Venture Strategies (3)
EIN 6935 Strategic Marketing Assessments (3)
EIN 6936 Venture Cap & Private Equity (3)
GMS 7930 Bio Medical Ethics (3)
EIN 6430 Overview of Regulated Industries (3)
EIN 6936 Strategies in Entrep Technology (3)
Common BME/EAT courses (9)
30 hrs total

COURSES
See http://ugs.usf.edu/course-inventory or http://ce.usf.edu or http://www.entrepreneurship.usf.edu
ENTREPRENEURSHIP IN APPLIED TECHNOLOGIES 
AND BIOTECHNOLOGY

Concurrent Degrees:
Master of Science (M.S.) Degree and Master of Science in Biotechnology (M.S.)

DEGREE INFORMATION
Refer to individual majors for deadlines
 Minimum Total Hours: 33/30
Level: Masters
CIP Code: 14.0501 / 52.0701
Dept. Codes: ECH / MAN
Major/College: EBI EN / EAT BA

CONTACT INFORMATION
Colleges: Medicine and Business
Department: Biotechnology
Center for Entrepreneurship
Contact Information: www.grad.usf.edu
Other Resources: www.entrepreneurship.usf.edu
entrepreneurship@usf.edu

MAJOR INFORMATION
Contact Department for information

ADMISSION INFORMATION
Must meet University requirements (see Graduate Admissions) as well as requirements for each major. Students must satisfy the requirements for the two degrees separately. Refer to the individual major listings for the specific requirements for each degree.

CURRICULUM REQUIREMENTS
Refer to the individual major listings for the specific requirements for each degree.

COURSES
See http://ugs.usf.edu/course-inventory or http://ce.usf.edu or http://www.entrepreneurship.usf.edu
ENTREPRENEURSHIP IN APPLIED TECHNOLOGIES AND GLOBAL SUSTAINABILITY

Concurrent Degrees:
Master of Arts in Global Sustainability (M.A.) Degree and Master of Science in Entrepreneurship in Applied Technologies (M.S.)

DEGREE INFORMATION

Refer to individual Majors for deadlines

<table>
<thead>
<tr>
<th>Minimum Total Hours:</th>
<th>30/30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Level:</td>
<td>Masters</td>
</tr>
<tr>
<td>CIP Code:</td>
<td>30.3301/52.0701</td>
</tr>
<tr>
<td>Dept Codes:</td>
<td>GRS &amp; MAN</td>
</tr>
<tr>
<td>Program (Major/College):</td>
<td>GBS/CS &amp; EAT/BA</td>
</tr>
</tbody>
</table>

CONTACT INFORMATION

Colleges: Business and Global Sustainability

Departments: Center for Entrepreneurship and School of Sustainability

Contact Information: [www.grad.usf.edu](http://www.grad.usf.edu)

Other Resources: [www.patel.usf.edu](http://www.patel.usf.edu)
[patel@usf.edu](mailto:patel@usf.edu)
[www.entrepreneurship.usf.edu](http://www.entrepreneurship.usf.edu)
[entrepreneurship@usf.edu](mailto:entrepreneurship@usf.edu)

The Concurrent Degrees in Global Sustainability and Entrepreneurship combines two existing majors which allows students to attain two Master’s degrees simultaneously rather than in a sequential effort. The time commitment will be about three years with a total of 51 credit hours between the two majors (9 hours are shared). The combination of a Master’s in Global Sustainability with a Master’s in Entrepreneurship provides students with a comprehensive understanding of concepts, tools, and skills of sustainability, and students will be able to apply these areas in a problem solving context. Students shall have the opportunity to focus on the areas of green technology and development, transport, energy, and sustainable enterprise.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for each major. Students must satisfy the requirements for the two degrees separately. Refer to the individual major listings for the specific requirements for each degree.

CURRICULUM REQUIREMENTS

Listed below are the 9 hours of shared courses. Please refer to the specific major listings for full requirements. All graduation requirements of the individual majors apply.

**Common Courses** (9 credits may be counted toward both the GS and EAT degrees)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENT 6016</td>
<td>New Venture Formation</td>
<td>3</td>
</tr>
<tr>
<td>ENT 6116</td>
<td>Business Plan Development</td>
<td>3</td>
</tr>
<tr>
<td>GMS 6095</td>
<td>Principles of Intellectual Property</td>
<td>3</td>
</tr>
<tr>
<td>ENT 6186</td>
<td>Strategic Market Assessment</td>
<td>3</td>
</tr>
<tr>
<td>ENT 6947</td>
<td>Applied Topics in Entrepreneurship</td>
<td>3</td>
</tr>
<tr>
<td>ENT 6606</td>
<td>Product Development</td>
<td>3</td>
</tr>
<tr>
<td>ENT 6415</td>
<td>Venture Capital and Private Equity</td>
<td>3</td>
</tr>
</tbody>
</table>

All Dual Master’s in Global Sustainability and Entrepreneurship students must complete ENT 6016 (New Venture Formation), ENT 6186 (Strategic Market Assessment) and ENT 6947 (Applied Topics in Entrepreneurship).

**Internship**

All Concurrent Degree Global Sustainability and Entrepreneurship students must complete a six (6) credit hour internship.

COURSES   See [http://ugs.usf.edu/course-inventory](http://ugs.usf.edu/course-inventory)
EXECUTIVE M.B.A. PROGRAM

Master of Business Administration (M.B.A.) Degree

DEGREE INFORMATION

<table>
<thead>
<tr>
<th>Priority Admission Application Deadlines:</th>
<th>CONTACT INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall: June 1</td>
<td>College: Business</td>
</tr>
</tbody>
</table>

Minimum Total Hours: 48
Level: Masters
CIP Code: 52.0201
Dept. Code: DEA
Major/College Codes: MBA BA
Approved: 1982
Application tracks: Management
Finance
Also offered as: Business Administration (M.B.A.)

CONTACT INFORMATION

College: Business
Contact Information: www.grad.usf.edu
Other Resources:

MAJOR INFORMATION

The weekend Executive M.B.A. is a lock-step, 20-month, AACSB accredited program designed to meet the unique needs of both mid-career managers who have demonstrated the potential to reach senior management positions, and senior managers who desire to significantly increase their personal and organizational effectiveness. The major provides an opportunity to broaden and enrich management skills, to extend knowledge of modern business techniques, and to further develop understanding of the social, political, and economic forces that shape the business environment and influence decision making. Classes are scheduled all day on two Saturdays and one Friday a month for four semesters. The weekend format allows participants to continue carrying their careers while they master a range of managerial skills.

Accreditation:
AACSB International —The Association to Advance Collegiate Schools of Business.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below. The weekend Executive MBA requires the submission of a preliminary application and personal interview prior to official graduate studies application. Please see the website for application forms or contact the Exec MBA office.

- Must have a 3.00 upper-level GPA
- GMAT (may be waived)
- 5 years of management/professional experience
- Interview
- Statement of corporate approval
- International applicants from non-English-speaking countries must also have a TOEFL score of 550 or higher on the written version, a minimum score of 213 on the computer-based test or a 79 on the internet-based test.

www.coba.usf.edu
CURRICULUM REQUIREMENTS

Total Minimum Hours: 48

Executive MBA Curriculum *

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACG 6026</td>
<td>Accounting Concepts for Managers</td>
<td>3</td>
</tr>
<tr>
<td>MAN 6055</td>
<td>Organizational Behavior &amp; Leadership</td>
<td>2</td>
</tr>
<tr>
<td>GEB 6445</td>
<td>Social, Ethical, Legal Systems</td>
<td>2</td>
</tr>
<tr>
<td>QMB 6305</td>
<td>Managerial Decision Analysis</td>
<td>2</td>
</tr>
<tr>
<td>ECO 6005</td>
<td>Introduction to Economic Concepts</td>
<td>3</td>
</tr>
<tr>
<td>FIN 6406</td>
<td>Financial Management</td>
<td>2</td>
</tr>
<tr>
<td>MAR 6158</td>
<td>International Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MAR 6815</td>
<td>Marketing Management</td>
<td>2</td>
</tr>
<tr>
<td>MAN 6911</td>
<td>Direct Research</td>
<td>2</td>
</tr>
<tr>
<td>FIN 6605</td>
<td>International Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>GEB 6930</td>
<td>Electives (chosen by program)</td>
<td>1-3 varies</td>
</tr>
<tr>
<td>MAN 6448</td>
<td>Negotiating Agreement and Resolving Conflict</td>
<td>3</td>
</tr>
<tr>
<td>QMB 6603</td>
<td>Operations Management</td>
<td>2</td>
</tr>
<tr>
<td>ISM 6021</td>
<td>Management Information Systems</td>
<td>2</td>
</tr>
<tr>
<td>FIN 6515</td>
<td>Investments</td>
<td>3</td>
</tr>
<tr>
<td>GEB6865</td>
<td>Business Problems Analysis</td>
<td>3</td>
</tr>
<tr>
<td>MAN 6305</td>
<td>Human Resource Management</td>
<td>3</td>
</tr>
<tr>
<td>MAN 6774</td>
<td>Executive Leadership</td>
<td>3</td>
</tr>
</tbody>
</table>

*Specific courses subject to change

During the interim summer session, each student participates in the annual ten-day Overseas Study Module, which involves on-site study of international business practices. A different country/region is selected each year. Past modules have included visits to such cities as Moscow, London, Zurich, Geneva, Brussels, Tokyo, Beijing, Shanghai, Mexico City, Buenos Aires, Rio de Janeiro, Hong Kong, Milan, and Paris.

COURSES

See [http://ugs.usf.edu/course-inventory](http://ugs.usf.edu/course-inventory)
FINANCE

Master of Science (M.S.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
- Fall: June 1
- Spring: October 15
- Summer: February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 30
Level: Masters
CIP Code: 52.0801
Dept. Code: FIN
Major/College Codes: FIN BA
Approved: 2006

CONTACT INFORMATION

College: Business
Department: Finance (FIN)
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The M.S. in Finance offers a curriculum that concentrates on both finance and economics concepts. Students who complete the M.S. in Finance will be better prepared to succeed in careers in the financial world, especially in positions that require specialized knowledge about various finance topics.

Accreditation - AACSB International - The Association to Advance Collegiate Schools of Business.

Major Research Areas: Finance

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- GMAT score of 550 or higher (or equivalent GRE score)
- Undergraduate upper-level GPA of 3.00 or higher
- International applicants from non-English-speaking countries must also have a TOEFL score of 550 or higher on the written version, a minimum score of 213 on the computer-based test or a 79 on the internet-based test.
- Applicants with lower GMAT (GRE) scores may be admitted if the application as a whole convinces the committee that the applicant warrants an admission to the major.

CURRICULUM REQUIREMENTS

A student who does not have an undergraduate degree in business must complete the following tools before taking courses for which they are prerequisites.

Pre-requisite Tools Courses - 10 hours
- ACG 6026  3*  Accounting Concepts for Managers
- ECO 6005  3*  Introduction to Economics Concepts for Managers
- FIN 6406  2  Financial Management
- QMB 6305  2  Managerial Decision Analysis

http://www.coba.usf.edu

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Students must successfully (a grade of A or B) complete equivalent courses in each of these areas prior to taking MSF courses. Tools course can be waived, with the permission of the program director, if the student earned an A or B in these courses or equivalent courses at an AACSB accredited institution within five years of entering the MSF major.

Total Minimum Hours 30 hours

Core Finance - 15 hours
FIN 6416  3  Advanced Financial Mgmt
FIN 6465  3  Financial Statement Analysis
FIN 6515  3  Investments
FIN 6455  3  Financial Modeling and Analytics
FIN 6425  3  Financial Policy
(FIN 6445 must be taken at the end of the program after the other core courses are completed.)

Core finance courses may be waived for students who graduated with finance majors from AACSB accredited programs within five years of entering the M.S. in Finance major. Only courses with the same content as the core finance courses can be used to satisfy the M.S. in Finance course requirements, and students must have earned grades of A or B to have such courses waived. Advanced finance courses must be substituted for waived courses.

Advanced Finance Electives - 15 hours
To satisfy the 15 hours of electives, students can complete any of the graduate courses offered in the Department of Finance or approved graduate courses offered in the Economics Department or other Departments at Muma College of Business (a list of approved courses will be posted each year). Students can satisfy up to six credit hours of electives by taking graduate courses offered in other departments and colleges as long as the courses are approved in advance.

Comprehensive Exam

Additional Information Regarding Curriculum
Leadership, teamwork, communication skills and organizational change are emphasized. Much of the curriculum is delivered through case studies, class discussion, exercises, group projects, video taped role-playing, simulations, and prominent guest speakers from the local business and non-profit community. Emphasis is placed on student participation and teamwork. All courses include writing, presentation, and critical thinking skills.

COURSES
See http://ugs.usf.edu/course-inventory
MANAGEMENT

Master of Science (M.S.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall Deadline: June 1
Spring Deadline: October 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 30
Level: Masters
CIP Code: 52.0101
Dept. Code: QMB
Major/College Codes: MAN BA
Approved: 1970

Concentrations: p
Human Resource (HRM)
Project Management (PMT)

CONTACT INFORMATION

College: Business
Department: Information Systems and Decision Sciences
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

Contemporary organizations widely recognize the strategic impact of project management. Project Management provides a system for aligning strategic and business goals that focus on meeting client expectations and producing desired outcomes. The foundation of this program is project management theory, project applications, manager skills and methods, and the tools required to successfully manage and navigate organization projects.

The purpose of this major is to provide management leaders with principles of project management; leadership and strategic analysis; creativity and analytics; organizational behavior, decision making, design and change; collaboration; agile development and scrum methodology. The major specifically focuses on project management leadership requirements, such as facilitating teamwork in diverse groups; empowering others; recognize and adapt to the constraints and opportunities of a global economy, and develop centers of excellence.

This dynamic, well-focused, progressive program provides a broad range of project management concepts and skills. Much of the curriculum is delivered through case studies, class discussion, exercise, group project, videotaped role-playing, simulations, and prominent guest speakers from local and national business and non-profit organizations. Emphasis is placed on student participation and teamwork. All courses include writing, presentations, critical thinking, analytics and creativity.

Accreditation: AACSB International -The Association to Advance Collegiate Schools of Business.

http://www.coba.usf.edu
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

The MS in Management admission committee uses a portfolio approach: the strength of each applicant is determined based on the entire application. The committee will consider the following:

- Prior college-level academic performance (bachelor’s degree from a regionally accredited institution required);
- GMAT, (preferred), GRE, MCAT, LSAT, and PCAT (submitted scores must be within five (5) years of the term of entry);
  - Applicants with a USF-Tampa Bachelor’s degree and a cumulative GPA of 3.50 or greater may request waiver of GMAT;
  - Applicants with three (3) or more years of managerial or professional experience may request a GMAT/GRE waiver;
- A statement of purpose,
- Recommendation letters,
- Resume,
- Relevant professional work experience
- Any additional information that helps to ensure the potential success of the applicant in the major
- For applicants whose native language is not English, English proficiency must be demonstrated as detailed in the USF Graduate Catalog.

CURRICULUM REQUIREMENTS

Total Minimum Hours - 30 credit hours

Common Core Courses - 14 hours
Concentration or Electives - 12 hours
Additional Electives - 4 hours minimum
Optional Practicum - 1-3 hours

The major requires a minimum of 30 hours of coursework and may be taken either full-time or part-time. Early in the first semester, a student and the program advisor will work together to complete a formal Program of Study that will define a coherent sequence of courses to satisfy the students objectives. Students may choose the concentration or the general path with completion of electives.

Common Core Courses - 14 credit hours

Core - 11 credit hours
The following four courses provide a solid understanding of state-of-the-art research and practice covering the primary areas in the domain of Management.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAN 6055</td>
<td>Organizational Behavior and Leadership</td>
<td>2</td>
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<tr>
<td>MAN 6289</td>
<td>Organizational Change and Development</td>
<td>3</td>
</tr>
<tr>
<td>MAN 6380</td>
<td>People Analytics</td>
<td>3</td>
</tr>
<tr>
<td>ISM 6316</td>
<td>Project Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Core Capstone Course - 3 credit hours
This course is considered to be the capstone of the M.S. in Management program and as such it must be taken during one of the last two semesters of the student’s program. It integrates the topics covered in the four other core courses.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAN 6950</td>
<td>Capstone Experience in Leading Organizations</td>
<td>3</td>
</tr>
</tbody>
</table>

Concentrations
Students may select from one of the following Concentrations:
Project Management Concentration (12 credit hours)
Select from the following:
MAN 6448 3 Negotiating Agreement and Resolving Conflict
MAN 6607 3 Managing International Cultural Differences
MAN 6340 3 Managing Creative Projects
MAN 6160 3 Principles of Collaboration
MAN 6570 3 Contract Management
ACG 6026 3 Accounting Concepts for Managers

Human Resources Concentration (12 credit hours)
MAN 6305 3 Human Resource Management
And three of the following courses:
MAN 6448 3 Negotiating Agreement and Resolving Conflict
MAN 6601 3 International Management
MAN 6607 3 Managing International Cultural Differences
MAN 6149 3 Leadership and Teams
MAN 6204 3 Organization Design and Structure

Electives– 4 credit hours minimum
Elective courses may be selected from additional management courses or (with prior approval by the academic advisor) other areas of specialization such as sociology, information systems, psychology, or communication. The following courses are potential electives, depending on semester and offerings.
ACG 6026 3 Accounting Concepts for Managers
FIN 6406 3 Financial Management
GEB 6445 2 Social, Ethical, Legal Systems
GEB 6457 3 Ethics, Law, and Sustainable Business Practices
ISM 6156 3 Enterprise Resource Planning & Business Processs Management
ISM 6328 3 Information Security and Risk Management
ISM 6436 3 Operations and Supply Chain Processes
MAN 6147 2 Leadership/ManagementConcepts
MAN 6149 3 Leadership and Teams
MAN 6160 3 Principles of Collaboration
MAN 6204 3 Organization Design and Structure
MAN 6256 3 Politics and Control in Organization
MAN 6305 3 Human Resource Management
MAN 6340 3 Managing Creative Projects
MAN 6448 3 Negotiating Agreement and Resolving Conflict
MAN 6570 3 Contract Management
MAN 6601 3 International Management
MAN 6607 3 Managing International Cultural Differences
MAN 6726 3 Strategic Business Analysis
MAN 6905 3 Independent Study
MAN 6905 1-3 Independent Study
MAR 6216 3 Logistics and Physical Distribution Management
MAR 6936 3 Selected Topics: Logistics Systems & Analytics
QMB 6305 3 Managerial Decision Analysis

Practicum Option (1 to 3 hours.)
The practicum option requires students to work on an applied project related to management / project management. Typically this can occur at the student’s place of employment and is jointly supervised by a faculty member and a manager in the company. One credit of MAN 6905 would be taken for each semester to a maximum of three credits over three semesters. The practicum would count for 1-3 hours of electives.

Comprehensive Exam

COURSES
See http://ugs.usf.edu/course-inventory/
MARKETING

Master of Science in Marketing (M.S.M.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: June 1
Spring: October 15

Minimum Total Hours: 33
Level: Masters
CIP Code: 52.1401
Dept. Code: MKT
Major/College Codes: MKT BA
Approved: 2007

Also offered as:
Concentration under Business Administration (Ph.D.)

CONTACT INFORMATION

College: Business
Department: Marketing (MKT)
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

Contact department for information

Accreditation
Accredited by AACSB - The Association to Advance Collegiate Schools of Business.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below. The MS in Marketing admission committee uses a portfolio approach: the strength of each applicant is determined based on the entire application. The admission committee will consider the following:

- Prior college-level academic performance (bachelor’s degree from a regionally accredited institution required);
- GMAT (preferred), GRE, MCAT, LSAT, and PCAT (submitted scores must be within five (5) years of the term of entry);
  - Applicants with a USF-Tampa Bachelor’s degree and accumulative GPA of 3.50 or greater may request waiver of GMAT;
  - Applicants with Three (3) or more years of managerial or professional experience may request a GMAT/GRE waiver;
- A statement of purpose;
- Recommendation letters;
- Relevant professional work experience;
- Any additional information that helps to ensure the potential success of the applicant in the major
- For applicants whose native language is not English, English proficiency must be demonstrated as detailed in the USF Graduate Catalog.
CURRICULUM REQUIREMENTS

Total Minimum Hours: 30 credit hours

Core classes – 15 hours
Specialization – 9 hours
Electives – 6 hours

Prerequisites
During the first year of the major, students who are unable to waive the prerequisites will be required to take:

- MAR 6815 2 Marketing Management
- QMB 6305 2 Managerial Decision Analysis

These courses may be waived if taken within the last five years from an AACSB accredited program.

Core Course Requirements (15 hours)
- MAR 6936 3 Selected Topics: Creativity in Marketing
- MAR 6936 3 Selected Topics: Marketing Analytics
- MAR 6936 3 Selected Topics: Consumer Behavior Insights
- MAR 6936 3 Selected Topics: Digital Marketing
- MAR 6816 3 Marketing Strategy

Specialization in the MS (9 Hours)
Take three courses in any area of specialization:

Marketing Analytics
- MAR 6646 3 Research for Marketing Managers
- MAR 6936 3 Selected Topics: Data Visualization
- MAR 6936 3 Selected Topics: Logistical System Analytics
- ISM 6217 3 Database Administration
- ISM 6316 3 Project Management
- SPB 6706 3 Sports Business Analytics

Digital Marketing and Brand Management
- MAR 6936 3 Selected Topics: Digital Media and E-Commerce
- MAR 6936 3 Selected Topics: Brand Management
- MAR 6336 3 Promotion Management
- MAR 6936 3 Selected Topics: Digital Marketing
- MAR 6936 3 Selected Topics: New Product Development
- MAR 6936 3 Selected Topics: Innovations in Marketing

Supply Chain Management
- MAR 6216 3 Logistics & Physical Distribution Management
- MAR 6936 3 Selected Topics: Supply Chain Management
- MAR 6936 3 Selected Topics: Logistical Systems and Analytics

Two electives from the following list or from any of the specializations above:
- MAR 6936 3 Marketing Selected Topics
- GEB 6527 3 Lean Six Sigma
- ISM 6217 3 Database Administration
- ISM 6156 3 Enterprise Resource Planning & Business Process Management
- MAN 6448 3 Negotiating Agreement & Resolving Conflict
- ESI 6324 3 Engineering the Supply Chain
Electives (6 hours)
Electives will be chosen based on mutual agreement by the Director and the student. These courses may be a combination of COB courses and courses outside the College. Electives to be considered include:
- GEB 6527 3 Lean Six Sigma
- GEB 6224 3 Improvisation in Business Organizations
- MAR 6936 3 Selected Topics: Sales Force Management
- MAR 6936 3 Selected Topics courses offered periodically

Courses from other specializations
Outside electives – any 6000 level graduate course for 3 hours (e.g., appropriate courses from Anthropology, Psychology, etc.)

Practicum

Comprehensive Exam
MAR 6816, Marketing Strategy course, is the capstone course in the MS program. Students will be required to do one or more comprehensive case analyses in this course that will test their ability to integrate and synthesize various facets of marketing.

Other Requirements
To be granted an M.S. in Marketing degree, a student must have completed all of the required and elective courses with a GPA of 3.00 or higher.

COURSES
See http://ups.usf.edu/course-inventory
REAL ESTATE

Master of Science in Real Estate (M.S.R.E.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
This Degree Program is Currently Suspended for Admissions - Effective Fall 2014

Minimum Total Hours: 34
Level: Masters
CIP Code: 52.1501
Dept. Code: FIN
Major/College Codes: RST BA
Approved: 2009

CONTACT INFORMATION

College: Business
Department: Finance (FIN)
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

Contact department for information.

Accreditation
Accredited by AACSB International - The Association to Advance Collegiate Schools of Business.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major.

CURRICULUM REQUIREMENTS

Total Minimum Hours: 34

Prerequisites/Tools Courses 12 hours

A student who does not have an undergraduate degree in business will have to complete the following courses before taking courses in the MSRE major (semester credit hours are in parentheses):

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACG 6025</td>
<td>Financial Accounting</td>
<td>2</td>
</tr>
<tr>
<td>ACG 6075</td>
<td>Managerial Accounting and Control</td>
<td>2</td>
</tr>
<tr>
<td>ECP 6702</td>
<td>Managerial Economics</td>
<td>2</td>
</tr>
<tr>
<td>ECO 6708</td>
<td>Global Economic Environment of Business</td>
<td>2</td>
</tr>
<tr>
<td>FIN 6406</td>
<td>Financial Management</td>
<td>2</td>
</tr>
<tr>
<td>QMB 6305</td>
<td>Managerial Decision Analysis</td>
<td>2</td>
</tr>
</tbody>
</table>

Students must successfully (a grade of A or B) complete equivalent courses in each of these areas prior to taking M.S.R.E. courses. These courses should have been completed in an AACSB accredited program within five years of entering the M.S.R.E. major.
### Required Core/Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 6416</td>
<td>Advanced Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>REE 6045*</td>
<td>Real Estate Decisions</td>
<td>2</td>
</tr>
<tr>
<td>REE 6207*</td>
<td>Real Estate Finance</td>
<td>2</td>
</tr>
<tr>
<td>REE 6737*</td>
<td>Real Estate Development</td>
<td>3</td>
</tr>
<tr>
<td>REE 6305</td>
<td>Real Estate Investment</td>
<td>2</td>
</tr>
<tr>
<td>GIS 5049</td>
<td>GIS for Non-Majors</td>
<td>3</td>
</tr>
<tr>
<td>CGN 6933</td>
<td>Green Infrastructure and Sustainable Community</td>
<td>3</td>
</tr>
<tr>
<td>URP 6232</td>
<td>Research Methods for Urban &amp; Regional Planning</td>
<td>3</td>
</tr>
<tr>
<td>ARC 5931</td>
<td>The City</td>
<td>3</td>
</tr>
</tbody>
</table>

Core finance and real estate courses may be waived for students who graduated from AACSB accredited programs within five years of entering the M.S.R.E. major and took courses with substantively the same content. Only courses with the same content as the core finance courses can be used to satisfy the M.S.R.E. course requirements, and students must have earned a grade of A or B to have such courses waived. Advanced finance elective courses with the same total credit hours must be substituted for waived courses.

### Advance Elective Courses

Students can select any three (a minimum of nine hours) of the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 6515</td>
<td>Investments</td>
<td>3</td>
</tr>
<tr>
<td>FIN 6246</td>
<td>Advanced Money and Capital Markets</td>
<td>3</td>
</tr>
<tr>
<td>FIN 6418</td>
<td>Working Capital Management</td>
<td>3</td>
</tr>
<tr>
<td>FIN 6605</td>
<td>International Finance</td>
<td>3</td>
</tr>
<tr>
<td>REE 6938</td>
<td>Selected Topics in Real Estate</td>
<td>2-4</td>
</tr>
<tr>
<td>ECP 6614</td>
<td>Urban Economics</td>
<td>3</td>
</tr>
<tr>
<td>CGN 6933</td>
<td>Global Warming</td>
<td>1-4</td>
</tr>
<tr>
<td>TTE 5501</td>
<td>Transportation Planning and Economics</td>
<td>3</td>
</tr>
<tr>
<td>PAD 6336</td>
<td>Community Development Programs</td>
<td>3</td>
</tr>
<tr>
<td>GEO 6627</td>
<td>Site Feasibility Analysis</td>
<td>3</td>
</tr>
<tr>
<td>GEO 6605</td>
<td>Contemporary Urban Issues</td>
<td>3</td>
</tr>
<tr>
<td>EVR 6934</td>
<td>Management of Florida Landforms</td>
<td>3</td>
</tr>
<tr>
<td>GEO 6116</td>
<td>Perspectives of Environmental Thought</td>
<td>3</td>
</tr>
<tr>
<td>GEO 6209C</td>
<td>Global Sustainability Development</td>
<td>3</td>
</tr>
<tr>
<td>ARC 6397</td>
<td>Introduction to Urban Design Theory, Methods &amp; Processes</td>
<td>3</td>
</tr>
<tr>
<td>ARC 5931</td>
<td>Special Studies in Architecture</td>
<td>1-5</td>
</tr>
</tbody>
</table>

Total program: 34 hours

**COURSES**

See [http://ugs.usf.edu/course-inventory](http://ugs.usf.edu/course-inventory)
SPORT AND ENTERTAINMENT MANAGEMENT

Master of Science (M.S.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: June 1
Fall Admission Only

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 36
Level: Masters
CIP Code: 31.0504
Dept. Code: MKT
Major/College Codes: SMG/BA
Approved: 2014

CONTACT INFORMATION

College: Business
Department: Marketing
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

Accreditation
Accredited by the Association to Advance Collegiate Schools of Business (AACSB)

Major Research Areas
Sport Management, Entertainment, Sport Business Analytics, Sport Marketing, Sport and Social Issues, American Sport Industry, Global Sport Industry, Sport Law, Sport and Entertainment Finance

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- Personal Interview with a committee of program faculty
- Personal Statement addressing career focus and aspirations
- Admission to and completion of the USF MBA or other MBA with a Concentration in Sport Business
- Minimum of 3.00/4.00 average for all graduate work completed

CURRICULUM REQUIREMENTS

Total Minimum Hours - 36

Course Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPB 6719</td>
<td>Sport and Entertainment Marketing Strategy*</td>
<td>3</td>
</tr>
<tr>
<td>SPB 6406</td>
<td>Sport and Entertainment Law*</td>
<td>3</td>
</tr>
<tr>
<td>SPB 6706</td>
<td>Sport Business Analytics*</td>
<td>3</td>
</tr>
<tr>
<td>SPB 6605</td>
<td>Sport and Social Issues</td>
<td>3</td>
</tr>
<tr>
<td>SPB 6116</td>
<td>Sport and Entertainment Finance</td>
<td>3</td>
</tr>
<tr>
<td>SPB 6735</td>
<td>Global Environment of Sport</td>
<td>3</td>
</tr>
<tr>
<td>SPB 6807</td>
<td>Social Media in Sport</td>
<td>3</td>
</tr>
<tr>
<td>SPB 6608</td>
<td>Issues in the American Sport Industry</td>
<td>3</td>
</tr>
<tr>
<td>SPB 6715</td>
<td>Sales and Fundraising in the Sport Industry</td>
<td>3</td>
</tr>
<tr>
<td>SPB 6930</td>
<td>Sport Business Project I</td>
<td>3</td>
</tr>
</tbody>
</table>
Students complete the three courses indicated with an asterisk as part of the requirements for the MBA with a Concentration in Sport Business. Because these nine hours of coursework are “shared” by the two majors, the 36 credit-hour MS in Sport and Entertainment Management requires an additional 24 hours to complete.

**Comprehensive Exam**

**Internship - 6**
- SPB 6946 Internship in Sport and Entertainment Management II
- SPB 6946 Internship in Sport and Entertainment Management III
Option to complete thesis in lieu of internship.

**Sequence**
Students should consult with the Graduate Director for advising on course sequencing requirements.

**Concurrent Degree Option**
This major is also offered as a concurrent degree option with the MBA in Business Administration with a concentration in Sport Business. Refer to the Concurrent Degree listing for information on the requirements.

**COURSES**
See [http://ugs.usf.edu/course-inventory](http://ugs.usf.edu/course-inventory)
Changes to Note

The USF Graduate Council approved the following on the date noted.

Majors

All Majors

All

Remove language for course-by-course-transcript evaluation

4/3/2017

Autism Spectrum Disorder and Intellectual Disabilities

M.A.

Change curriculum

5/1/2017

Curriculum and Instruction

M.Ed.

Change Instructional Technology Conc - Online Delivery Approval

9/26/16

Curriculum and Instruction

M.Ed.

Change Instructional Tech Conc Deadlines - remove summer admission

5/15/17

Curriculum and Instruction

Ph.D.

Change Special Ed Concentration

3/6/2017

Curriculum and Instruction

Ph.D.

Reactivate Early Childhood Ed (DNK) concentration for admissions

5/1/2017

Curriculum and Instruction

Ph.D.

Reactivate Ed Psych concentration; change to regular admissions

5/1/2017

Educational Program Dev.

Ed.D.

Close Adult Education Concentration (EAE) for Admissions

3/6/2017

Elementary Education

M.A.T.

Change Deadlines - to: Fall: June 1, Spring: Oct 15, Summer: Feb 15

3/6/2017

English Education

M.A.T.

Change Deadlines - to: Fall: June 1, Spring: Oct 15, Summer: Feb 15

3/6/2017

Exceptional Student Education

M.A.T.

Change Deadlines - to: Fall: June 1, Spring: Oct 15, Summer: Feb 15

3/6/2017

Foreign Language Education

M.A.T.

Change Deadlines - to: Fall: June 1, Spring: Oct 15, Summer: Feb 15

3/6/2017

Mathematics Education

M.A.T.

Change Deadlines - to: Fall: June 1, Spring: Oct 15, Summer: Feb 15

3/6/2017

Middle Grades Math Ed

M.A.T.

Change Deadlines - to: Fall: June 1, Spring: Oct 15, Summer: Feb 15

3/6/2017

School Psychology

Ed.S.

Change Admissions from Direct Receipt to Regular Admissions

4/3/2017

School Psychology

Ph.D.

Change Admissions from Direct Receipt to Regular Admissions

4/3/2017

Science Education

M.A.T.

Change Deadlines - to: Fall: June 1, Spring: Oct 15, Summer: Feb 15

3/6/2017

Social Science Education

M.A.T.

Change Deadlines - to: Fall: June 1, Spring: Oct 15, Summer: Feb 15

3/6/2017

Certificates

Cybersecurity Education and Awareness

New Certificate

5/1/2017

Exceptional Student Education

New Certificate

5/1/2017

Qualitative Research

New Certificate

5/1/2017
University of South Florida  
College of Education  
4202 E. Fowler Ave, EDU162  
Tampa, FL 33620  

Web address: [http://www.usf.edu/education](http://www.usf.edu/education)  
Phone: 813-974-3406  
Fax: 813-974-3391  

**Interim College Dean:** Roger Brindley, Ed.D.  
**Associate Dean:** Ann Cranston-Gingras, Ph.D.  

**Accreditation:**  
The College is accredited by the National Council for the Accreditation of Teacher Education (NCATE) for the preparation of P-12 educators. Its initial certification programs are approved by the Florida Department of Education.

**Vision/Mission Statement:**  
The USF College of Education envisions itself as a leader in regional, national and international education. Leadership in Education encompasses:  
1) academic excellence,  
2) research, scholarship and inquiry that renews the educational process,  
3) collaboration that serves communities, institutions and individuals,  
4) educator preparation that builds on academic excellence, scholarship, and clinical practice, and  
5) collaboration that contributes to a just and productive society.

The College of Education fulfills this vision by: offering challenging learning opportunities in a supportive and diverse environment; creating and supporting research, scholarship, and inquiry in education; preparing the next generation of educators, scholars, and leaders for P-12 and the professoriate through exemplary undergraduate and graduate degree programs; serving the community through collaborative relationships; and, working with schools, agencies, and communities to offer educator preparation programs that prepare professionals who work competently, collaboratively, and ethically to improve educational outcomes for all.

Many concentrations are offered under the umbrella of the “Curriculum and Instruction” Major. Graduate Certificates are also offered in a number of areas. For information about the different majors refer to individual sections of the Graduate Catalog. Students seeking initial certification must be admitted to one of the degree programs offered in the College. Individuals seeking additional information should contact the College of Education Graduate Support Office at 813-974-3406, or [http://www.coedu.usf.edu/main/sas/sas_graduate.html](http://www.coedu.usf.edu/main/sas/sas_graduate.html). Students who have identified a major should contact directly the advisor for that major. Please be advised that major curriculum and/or course requirements are subject to change per state legislative mandates, Florida State Department of Education program approval standards, and accreditation criteria. In instances where college or major requirements exceed university minimum requirements, students must meet the highest order of requirements presented. Always check with the advisor in your major of interest to determine whether or not there are programmatic variations. Please note also that COEDU college and major curriculum requirements are stated always as minimum requirements.
Degree, Majors, Concentrations:

**Master of Arts (M.A.)**
- Adult Education (AAE)
- Human Resource Development (HRD)
- Autism Spectrum Disorder and Intellectual Disabilities (ASD)
- Career and Technical Education (ACT)
- Counselor Education (AGC)
  - Career Counseling (CRC)
  - Clinical Mental Health Counseling (CMH)
  - School Counseling (SCL)
- Elementary Education (AEE)
  - Early Childhood (MEA)
  - Elementary Curriculum (MEL)
  - Language Arts (MLG)
  - Science & Mathematics (MSM)
- Exceptional Student Education (AVE)
- Foreign Language Education (FLE)
  - French (AFF)
  - German (AFG)
  - Spanish (AFS)
- Mathematics Education (AMA)
- Music Education (offered through the College of The Arts)
- Physical Education (APH)
- Reading Education (ARD)
- School Psychology (ASP) *M.A. only available when combined with the Ed.S. or Ph.D. degree*
- Science Education (SCE)
  - Biology (ASB)
  - Chemistry (ASC)
  - Physics (ASY)
- Special Education, Gifted Education (AGI)
- Special Education, Motor Disabilities (AMD)

**Master of Arts in Teaching (M.A.T.)**
- Elementary Education (TEE)
- English Education (TEN)
- Exceptional Student Education (TVE)
- Foreign Language Education (TFL)
  - General Education (GNE)
  - Chinese (CHN)
  - French (AFF)
  - German (AFG)
  - Italian (ITA)
  - Japanese (JPN)
  - Latin (LAT)
  - Russian (BFR)
  - Spanish (AFS)
- Mathematics Education (6-12) (TSM)
- Middle Grades Math (TMA)
- Science Education (TSC)
  - Biology (ASB)
  - Chemistry (ASC)
Earth & Space Science (AES)
Physics (ASY)
Social Science Education (TSS)

Master of Education (M.Ed.)
- Curriculum and Instruction (CUR)
- College Student Affairs (CSA)
- Early Childhood Education (CNK)
- Educational Studies (CST)
- Instructional Technology (SIT)
- Measurement and Evaluation (CME)
- Secondary Education: Biology (CBI)
- Secondary Education: Chemistry (CCH)
- Secondary Education: English (CEN)
- Secondary Education: Foreign Language (CFE)
- Secondary Education: Mathematics (CMA)
- Secondary Education: Physics (CPY)
- Secondary Education: Social Science (CSO)
- Secondary Education: TESOL (CTL)
- Educational Leadership (CAS)

Master of Science (M.S.)
- Exercise Science (EDP)
- Health and Wellness (EHW)
- Strength and Conditioning (EST)

Educational Specialist (Ed.S.)
- Curriculum & Instruction (CUR)
- Adult Education (SAE)
- Counselor Education (SGC)
- Early Childhood Education (SNK)
- Elementary Education (SEE)
- Higher Education, Administration (SHA)
- Higher Education, Community College Teaching (SCT)
- Instructional Technology (SIT)
- Interdisciplinary Education (SIE)
- Mathematics Education (SMA)
- Measurement and Evaluation (SME)
- Reading-Language Arts Education (SRD)
- School Psychology (SSP)
- Science Education (SSC)
- Special Education (SSE)
- Vocational Education (SVO)
- Educational Leadership (EAS)

Doctor of Education (Ed.D.)
- Educational Program Development (EPD)
- Administration of Special Education (ESE)
- Adult Education (EAE)
- Educational Innovation (EIN)
- Elementary Education (EIN)
- Vocational Education (EVO)

http://www.usf.edu/education/
Doctor of Philosophy (Ph.D.)
Curriculum and Instruction (CUR)
  Adult Education (DAE)
  Career and Workforce Education (DVO)
  Counselor Education (DGC)
  Early Childhood Education (DNK)
  Educational Psychology (EPC)
  Elementary Education (DEE)
  English Education (DCE)
  Higher Education
  Instructional Technology (DIT)
  Interdisciplinary Education (DIE)
  Literacy Studies (DRD)
  Mathematics Education (DMA)
  Measurement and Evaluation (DME)
  Science Education (DSC)
  Social Science (DSO)
  Special Education (DSE)
  Teacher Education (TED)
  Educational Leadership (EAS)
  School Psychology (DSG)
  Technology in Education and Second Language Acquisition (TLD)

Accelerated Majors
B.A./B.S. to M.A.T. (Inactive)
  Foreign Languages – French, Latin, Spanish
  Interdisciplinary Natural Sciences
  Interdisciplinary Social Sciences – History/Geography, History/Politics, History/Psychology,
  Geography/Politics, Geography/Psychology, Social Science

B.A./B.S. to M.A.T. (Active)
  Chemistry B.S. / Science Education M.A.T.
  Biomedical Sciences B.S. / Science Education M.A.T.
  Environmental Biology B.S. / Science Education M.A.T.
  Environmental Microbiology B.S. / Science Education M.A.T.
  Integrative Biology B.S. / Science Education M.A.T.
  Interdisciplinary Natural Science B.S. / Science Education M.A.T.
  Marine Biology B.S. / Science Education M.A.T.
  Physics B.A. / Science Education M.A.T.

Graduate Certificates Offered:
  Academic Advising
  Autism Spectrum Disorder (XAU)
  Career Counseling* (XCC)
  College Teaching* (SCT)
  Cybersecurity Education and Awareness
  Disabilities Education: Severe and/or Profound (XDI)
  Diversity in Education (XDV)
  eLearning Design and Development
  ESOL** (XES)
  Evaluation
  Exceptional Student Education
Foreign Language Education: Culture and Content (XFL)
Foreign Language Education: Professional (XFP)
Instructional Technology: Distance Education** (XDD)
Instructional Technology: Florida Digital Educator (XFD)
Instructional Technology: Instructional Design* (XID)
Instructional Technology: Multimedia Design (XMM)
Instructional Technology: Web Design** (XWD)
Integrated STEM Ed Grades 6-9
Leadership in Developing Human Resources* (XHR)
Mental Health Counseling (XMH)
Post-Master’s Educational Leadership (K-12) (XEL)
Post-Master’s in Higher Education Leadership
Qualitative Research
Reading Certificate and Endorsement Program (XRC)
School Counseling Post-Masters (XSO)
Teacher Leadership for Student Learning
Web Design
*Partially online curriculum
**Fully online curriculum

For all certificates; access www.usf.edu; click on Academics; click on Graduate Certificates; click on Education.

College of Education Minimum Requirements

All degree requirements are stated below as college minimums. Please consult the listing for the individual major for additional requirements.

Master’s Degree Programs and Requirements

The master’s degree programs offered in the College of Education lead to a Master of Arts degree (M.A.), a Master of Arts in Teaching degree (M.A.T.), a Master of Education (M.Ed.) degree, or a Master of Science (M.S.) degree. Students pursuing a Master’s degree must have an earned baccalaureate degree from a regionally accredited institution, or the equivalent bachelors and/or graduate degrees from a foreign institution. Most majors offer through their M.A.T. degrees, a plan of study that leads to initial teacher certification for holders of a non-education baccalaureate degree. The M.A. degree is primarily designed to increase competence in a teaching specialization or to provide professional preparation in one of the service areas of education. For most majors, two plans of study are available depending on the student’s background and professional goals.

The College of Education standard admission requirements for international transcripts are:

For the masters degree - The undergraduate degree must be equivalent to a 4-year US degree from a regionally accredited university. The transcripts must state the overall GPA or overall marks based on the native scale and the discipline or major the applicant is graduating in. If the degree was delivered in the English language (must be from anglophone country or stated on transcript that the means of delivery was English) then the iELTS/TOEFL score will not be necessary. An unofficial transcript (either scan or copy) is acceptable at the time of application; however, an official transcript by enrollment is required.

Unofficial transcripts (either scan or copy) from both the graduate and undergraduate institutions are acceptable at the time of application; however official transcripts required by enrollment.
**College of Education Requirements for the Master of Arts (M.A.) Degree**

A minimum of 30 graduate semester hours is required for the master’s degree, at least 16 hours of which must be at the 6000 level. Courses at the 7000 level are advanced graduate level courses and thus are not approved to be part of the master’s degree program.

**The M.A., Plan I**

Program of graduate study is for those with a degree or appropriate initial teacher certification in the area of concentration who desire to increase their competence in a subject specialization or to receive additional professional preparation in an educational service area. The Plan I option is not available in all concentration areas. Contact the desired degree program for information.

**Plan I Degree Requirements**

Plan I students must take a minimum of one of the following Process Core (Foundation) courses. Additional requirements are described under the Major descriptions.

**Process Core 3 hours minimum**
- EDF 6211, Psychological Foundations of Ed. OR EDF 6215, Learning Principles Applied to Instruction
- EDF 6481, Foundations of Educational Research
- EDF 6432, Foundations of Measurement

- EDF 6517, Historical Foundations of American Education, or EDF 6606, Socio-Economic Foundations of American Education

**Current Trends in Teaching Specialization – 3 hours**

**Concentration - 18 hours**

Comprehensive Examination – Students must be registered for at least 2 graduate hours in the semester during which this exam is taken.

Thesis (Some majors have a Thesis option available)

**Note: Check with the major of interest for curriculum variations.**

**The M.A., Plan III (not available in all areas)**

This is a major of graduate study for the holder of a non-education baccalaureate degree who does not desire to meet initial certification requirements in the State of Florida. This plan is not available in all concentration areas. Please contact the major for information.

**Plan III Minimum Curriculum Requirements:**

Undergraduate Pre-requisites as necessary

**Process Core 12 hours**
- EDF 6432, Foundations of Measurement
- EDF 6481, Foundations of Educational Research
- EDF 6211, Psychological Foundations of Education or EDF 6215, Learning Principles Applied to Instruction

- EDF 6517, Historical Foundations of American Education or EDF 6606, Socio-Economic Foundations of American Education

**Current Trends Course in Teaching Specialization – 3 hrs.**

**Concentration- 18 graduate hrs. Minimum**

Comprehensive Examination

**Note: Check with the major of interest for curriculum variations.**
M.A.T. Degree
The M.A.T. degree is designed for holders of a non-education baccalaureate degree who desire to meet initial teacher certification requirements as part of a graduate major. The baccalaureate degree must be appropriate (as deemed by the graduate faculty) for the teaching field in which certification is sought. Hours in the M.A.T. degree vary by discipline. Reference the major section of the Graduate Catalog for specific M.A.T. curriculum requirements.

Note that all M.A.T. degree programs include as an admission requirement the passing of all sections of the General Knowledge Test (GKT). Applicants who can document they lived outside the state or country and did not have access to take the GKT before the application deadline may submit passing Praxis scores or GRE scores to be considered for admission. Whether admitted with passing Praxis scores or acceptable GRE scores, the applicant must submit passing scores on the GKT before the last day of classes of the semester of first enrollment, or admission to the College of Education will be revoked.

M.Ed. Degree
The M.Ed. degree is designed for individuals who have a minimum of two years of relevant educational or professional experience in the concentration selected, as judged and with written academic justification by the graduate faculty. This degree option is offered to students pursuing graduate study in educational leadership or curriculum and instruction with an associated specialization/concentration.

College of Education Requirements for the Master of Education degree (M.Ed.)
Two degree programs are offered.

1. Educational Leadership The M.Ed. in Educational Leadership is designed to improve performance in K-12 school leadership. The degree provides coursework that meets Florida Educational Leadership Core Curriculum requirements in public school curriculum and instruction, organizational management and development, human resource management and development, leadership skills, communication skills, technology, educational law, and educational finance. Successful completion of the major fulfills degree and core curriculum requirements for Florida certification in Level I, K-12 Educational Leadership-Administrative Class. The M.Ed. degree in Educational Leadership requires a minimum of 36 graduate semester hours with 60 percent or more of the courses at the 6000 level. Courses at the 7000 level are advanced graduate level courses and thus are not approved to be part of the master’s degree program.

2. Curriculum and Instruction The M.Ed. degree in Curriculum and Instruction, with a concentration (specialization) area – This degree is designed for the individual who has a minimum of two years of relevant educational or professional experience (as judged by the graduate faculty) in a specialization area who wishes to pursue advanced study in that area. The primary objective is to prepare instructional leaders through courses in curriculum, methods, supervision, learning principles, human interaction, and areas of concentration/ specialization. The foundation areas (professional studies) receive greater emphasis in the M.Ed. degree programs than the M.A. degree programs. Coursework in the concentration/specialization may include courses in colleges other than the College of Education.

The M.Ed. degree in Curriculum and Instruction requires a minimum of 33 graduate semester hours with 60 percent or more of the courses at the 6000 level. Courses at the 7000 level are advanced graduate level courses and thus are not approved to be part of the master’s degree program.
Master of Education (M.Ed.) Degree Requirements:

Program of Study
Foundations and Curriculum Core 9 hours minimum
EDF 6432 Foundations of Measurement 3
Or
EDF 6481 Foundations of Educational Research 3
EDG 6627 Foundations of Curriculum & Instruction 3

Psychological/Social Foundations (Choice from list below) 3
EDF 6211 Psychological Foundations of Education 3
EDF 6215 Learning Principles Applied to Instruction 4
EDF 6217 Behavior Theory and Classroom Learning 4
EDF 6354 Human Development and Personality Theories 4
EDF 6165 Group Processes 1-3
(available only to students in the College Student Affairs Concentration)
EDF 6517 Historical Foundations of American Education
EDF 6606 Socio-Economic Foundations of American Education

Concentration 18 hours minimum
See Curriculum and Instruction Major listing and specific individual concentration areas for specific requirements.

Electives 6 hours

Comprehensive Examination

Total 33 hours minimum

Note: More credit hours may be required for a concentration in the Foundations & Curriculum Core, which may be substituted for electives or concentration hours. Foundations and Curriculum core for the College Student Affairs concentration is 6 hours minimum (EDF 6481 and EDF 6165), additional hours in the concentration required.

See individual major descriptions and contact the major of interest for curriculum variations within the concentration area.

Advanced Graduate Degree Programs

The advanced graduate degree programs lead to the Education Specialist (Ed.S.) degree, the Doctor of Education (Ed.D.) degree, and the Doctor of Philosophy (Ph.D.) degree. To be considered for admission to any advanced graduate degree program, students must have earned degrees from regionally accredited institutions, or the equivalent bachelors and/or graduate degrees from a foreign institution, meet the major and/or college-specified minimum GRE and/or GPA-requirements and be favorably recommended also by the graduate faculty or a graduate admissions committee. Additionally, students must comply with any other college or major requirements specified for the prospective degree program. Note: Please check with the major of interest for programmatic variations. The Ed.S. and Ph.D. degrees in Curriculum and Instruction with a concentration in Interdisciplinary Education are administered by the Interdisciplinary Education Graduate Coordinator.
Education Specialist Degree Program (Ed.S.)

This degree is offered in the areas of Educational Leadership and in Curriculum and Instruction with a concentration area.

College of Education Requirements for the Education Specialist Degree (Ed. S.)
The Ed.S. degree consists of a minimum of 36 graduate hours beyond the master’s degree and is flexible in its requirements. The degree is designed to provide professional educators with an opportunity to develop competencies in areas of special needs and interests. Consequently, the degree program has few required courses, and each student’s major is individually planned in consultation with a faculty graduate committee. Courses at the 5000 level are inappropriate; and a minimum of 15 hours should be taken at the 7000 level.

Program of Study
Concentration coursework - 27 hours minimum.
Thesis (Project) - 9 hours minimum: Thesis EDG 6971 or Project EDG 6970
Comprehensive Examination (oral and/or written)
Oral defense of the project/thesis

Thesis/Project – Ed.S. Degree. The student is required to plan and successfully complete an individual thesis or project. The purpose is to provide an opportunity for the student to apply knowledge gained in the major to the resolution of significant needs arising from professional practice. A minimum of 9 semester hours of thesis enrollment is required in the Ed.S. degree program. Students are required to enroll for a minimum of 2 semester hours in the 6971 thesis course or EDG 6970 project course each semester while working on the Ed.S. thesis/project and for 2 graduate semester thesis hours in the semester during which the student plans to graduate. Students who have not completed the thesis/project after enrolling in the required 9 hours must continue to enroll in a minimum of 2 graduate credit hours each semester, including the semester in which the thesis/project is submitted to the College Associate Dean for Academic Affairs (project) or the University Office of Graduate Studies (Thesis; School Psychology students). Students must have an oral defense of the project/thesis with their project/thesis supervisory committee.

The College of Education standard admission requirements for international transcripts are:
For the doctoral degree- If the applicant has a masters from a regionally accredited U.S. university then while we require that UG transcripts from the accredited international university, the College of Education will not require a course-by-course evaluation of the UG credential. If the applicant completed an undergraduate and graduate degree abroad, both degrees must be equivalent to a 4-year US undergraduate degree and a U.S. masters degree, respectively, and both degrees must be from regionally accredited universities. If the applicant has completed at least four years of English language delivery of their degrees, then the iELTS/TOEFL score will not be necessary. Both transcripts must state the overall GPA or overall marks based on the native scale, and the discipline or major the applicant is graduating in.

Unofficial transcripts (either scan or copy) from both the graduate and undergraduate institutions are acceptable at the time of application; however official transcripts required by enrollment.

Doctor of Education Degree Program (Ed. D.)

The Doctor of Education degree is available in Educational Leadership and in Educational Program Development with concentrations/ specializations in Adult Education, Educational Innovation, Educational Leadership (K-12 and College Leadership), Elementary Education, and Special Education Administration and Supervision. The focus of this degree program is on the improvement of educational practice. Although research skills are recognized as being the basis of any doctoral program, the Ed.D. is considered more a
practitioner’s than a research degree. Currently, the degree in Special Education with a concentration in Administration and Supervision is closed to new admissions.

College of Education Minimum Requirements for the Doctor of Education Degree (Ed. D.)
Program of Study
The Ed. D. requires a minimum of 54 hours beyond the master’s degree.
Core Course Requirement – 3 hours minimum
Concentration - 15 hours minimum
Electives Supporting Concentration – 15 hours minimum
Statistics/Measurement/ Research Design/Applied Research - 9 hours minimum
Psychological and Social Foundations- 3 hours minimum
Dissertation - 9 hours min.

Dissertation
Beginning with the semester immediately following admission to candidacy, students must be enrolled continuously for a minimum of 2 credit hours of dissertation per semester including summers until degree completion. Exceptions to the continuous enrollment policy may be approved if the major professor writes a letter of petition to the Associate Dean for Academic Affairs, indicating specifically the nature and duration of the exception and the justification. Unless an exception has been approved, failure to enroll as specified may result in dismissal of the student from the major. Failure to enroll as specified for three consecutive semesters results in the student being placed on inactive status, and the student must apply for readmission and be readmitted. To be readmitted, the student must secure permission from the major professor and write a letter of request, co-signed by the major professor, to the Associate Dean for Academic Affairs, outlining in detail a timeline for completing the dissertation. The Associate Dean for Academic Affairs will approve or deny the request. This process will be independent of, and will not replace, any procedures required for readmission by the University Office of Graduate Studies, or the Department.

Residency
There is no residency requirement for doctoral students in the College of Education.

Doctoral Qualifying Examination
Students must demonstrate satisfactory performance on the Doctoral Qualifying Examination, and have completed all required coursework with satisfactory grades prior to admission to candidacy.

Doctor of Philosophy Degree Program (Ph.D.)

College of Education Minimum Requirements for the Doctor of Philosophy Degree Program (Ph.D.) in Curriculum and Instruction.
The Curriculum and Instruction major is only offered in conjunction with a concentration area. Please see the area of concentration listed alphabetically under the major entry in the catalog) to determine whether or not the Curriculum and Instruction major is available in the area of interest.

Refer to the Major listing for the Ph.D. in Curriculum and Instruction and to the specific Concentration for information.

Refer to the major sections for Ph.D. requirements for Teaching in Education and Second Language Acquisition (TLD)

Program of Study

Common Core
EDG 7067 Philosophies of Inquiry 3

Research Methods & Tools – Refer to the concentration for minimum hours and specific requirements

Concentration – Refer to the concentration for minimum hours and specific requirements
Subspecialty within Concentration – optional requirement in some concentrations
Cognate – optional requirement in some concentrations
Interdisciplinary Focus – optional requirement in some concentrations

Dissertation
Refer to the concentration for specific minimum hours required

Residency
There is no residency requirement for doctoral students in the College of Education.

Doctoral Qualifying Examination
Students must demonstrate satisfactory performance on the Doctoral Qualifying Examination, and have completed all required coursework with satisfactory grades prior to admission to candidacy.

EDG 7067 Philosophies of Inquiry

International Students
All applicants whose native language is other than English or who have earned a degree from an institution outside the United States must meet the University requirements relative to international graduate admission, (e.g. TOEFL scores, etc.). In addition to these university requirements, applicants to the College of Education must provide the following:

- A social security number in degree programs requiring practica or internships;
- Other information as required by the major of interest, (e.g. Graduate Record Exam scores, etc.).
ADULT EDUCATION

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines
Fall: February 15
Spring: October 15
Summer: February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 36
Level: Masters
CIP Code: 13.1201
Dept. Code: LEA
Major/College Codes: AAE ED
Approved: 1962

Concentrations:
Human Resource Development (HRD)

CONTACT INFORMATION

College: Education
Department: Leadership, Counseling, Adult, Career, and Higher Education (L-CACHE)

Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Adult Education major provides professional development opportunities to individuals concerned with the learning of adults. It includes courses and experiences for persons employed in or intending to enter the field of adult education. This degree is intended to help individuals work with adult learners in a wide variety of school and non-school settings. It is intended for holders of a non-education baccalaureate degree who do not wish to meet teacher certification requirements in the State of Florida. This Adult Education major is a Plan III, non-certification option.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

Admission to the M.A. in Adult Education is based on a holistic evaluation of the applicants’ demonstrated potential to complete successfully all of the course and research requirements specific to the major. Applications are considered on a continuous basis throughout the year. Success in the major requires excellent presentation and high quality writing skills, scholarship, and a commitment to systematic inquiry. The admissions committee will consider each applicant in light of his or her qualifications and likelihood of success. The faculty takes into account all of the information, and balances previous grade point averages, test scores, previous success in graduate course work, recommendations, and professional goals.

Admission Process
For consideration for admission, students must submit the following:

- A clear and detailed statement of professional and personal goals describing the reasons that earning the degree is important to those goals;
- Two letters of recommendation, preferably at least one from a current or former professor who will attest to the applicant’s likelihood of success in a graduate major;
• A grade point average while classified as an upper division student in a baccalaureate degree at a regionally accredited university of 3.00 on a 4.00 scale; or a Master’s degree in a related field from a regionally accredited institution with an overall GPA of at least 3.50 on a 4.00 scale; or if the upper division undergraduate GPA is less than 3.00, the applicant must also have GRE Scores;
• have proof of educational or professional experience;
• obtain favorable recommendations for admission at the department and college levels; and
• satisfy any additional academic requirements or prerequisites identified by the major.

In exceptional cases, students not meeting the above criteria may be considered for admission by successfully completing at least 6 graduate semester hours of coursework taught by an adult education major faculty member. Students may additionally submit documentation of their potential for success with inclusion of the following:

• Successful professional experiences related to the academic major and professional goals of the applicant;
• Demonstrated commitment to personal and professional growth and development and to the completion of the coursework and project demands of the major; and
• Excellent communication skills.

International Students:
All applicants whose native language is other than English or who have earned a degree from an institution outside the United States must meet the University requirements relative to international graduate admission, (e.g. TOEFL scores, etc.). In addition to these university requirements, applicants to the College of Education must provide the following:

• the equivalent bachelors and/or graduate degrees from a foreign institution
• A social security number in majors requiring practica or internships; and
• Other information as required by the major of interest, (e.g. GRE scores, etc.)

CURRICULUM REQUIREMENTS

A minimum of 36 graduate semester hours is required for the master’s degree, at least 16 hours of which must be at the 6000 level. Courses at the 7000 level are advanced graduate level courses and thus are inappropriate for the master’s degree program. This major is available as a Plan III non-certification option.

<table>
<thead>
<tr>
<th>Total Minimum Hours (non-thesis option)</th>
<th>36 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Requirements</td>
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<tr>
<td>EDF6481 Foundations of Educational Research</td>
<td>3</td>
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<tr>
<td>or EDF6432 Foundations of Measurement</td>
<td>3</td>
</tr>
<tr>
<td>and one approved Psychological or Social Foundations course</td>
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<tr>
<td>General Adult Education Requirements</td>
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<td>ADE 6080: Foundations of Adult Education</td>
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<tr>
<td>ADE 6385: The Adult Learner</td>
<td>3</td>
</tr>
<tr>
<td>ADE 6966: Final Master’s Seminar (prior approval needed)</td>
<td>4</td>
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<tr>
<td>Concentration Requirements</td>
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</table>
HUMAN RESOURCE DEVELOPMENT (HRD)
Offered from the Department of Educational Measurement and Research.

Description
The Adult Education major provides professional development opportunities to individuals concerned with the learning of adults. It includes courses and experiences for persons employed in or intending to enter adult education as a field of study. This degree is intended to help individuals work with adult learners in a wide variety of school and non-school settings. It is intended for holders of a non-education baccalaureate degree who do not wish to meet teacher certification requirements in the State of Florida. This Adult Education degree is a Plan III, non-certification option. A concentration in Human Resource Development (HRD) is available to currently enrolled students in the Master of Arts Adult Education degree. The HRD concentration specializes in Business and Industry learning and organizational development.

Concentration Requirements –13 hours minimum
In addition to the Major requirements, students must complete the following concentration requirements:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADE6160</td>
<td>Program Management in Adult Education</td>
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</tr>
<tr>
<td>ADE6197</td>
<td>Adult Basic Education</td>
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<tr>
<td>ADE6280</td>
<td>Administration in Local Adult Education Programs</td>
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</tr>
<tr>
<td>ADE6287</td>
<td>Supervision of Local Adult Education Programs</td>
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<tr>
<td>ADE6370</td>
<td>Human Resource Development</td>
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<tr>
<td>ADE6946</td>
<td>Practicum in Adult Education</td>
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<tr>
<td>ADE6161</td>
<td>Curriculum Construction in Adult Education</td>
<td>4</td>
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<td>ADE6360</td>
<td>Methods of Teaching Adult Education</td>
<td>3</td>
</tr>
<tr>
<td>ADE6906</td>
<td>Independent Study</td>
<td>2-19</td>
</tr>
<tr>
<td>ADE6198</td>
<td>Effective Continuing Education for Professional Groups</td>
<td>3</td>
</tr>
</tbody>
</table>

Requirements Outside the Concentration (12 hours)
At least one graduate level course (3 credits minimum) must be taken outside the Leadership, Counseling, Adult, Career, and Higher Education (L-CACHE) department. Other courses may be selected as part of the remaining hours needed for degree completion based upon the student’s selection and major advisor’s approval, and may be selected from coursework throughout the university.

Comprehensive Examination
Written Exam Required

Please be advised that major and/or course requirements are subject to change, per state legislative mandates, Florida State Department of Education program approval standards and accreditation criteria.

COURSES
See [http://ugs.usf.edu/course-inventory](http://ugs.usf.edu/course-inventory)
AUTISM SPECTRUM DISORDER AND INTELLECTUAL DISABILITIES

Master of Arts (M.A.) Degree

**DEGREE INFORMATION**

<table>
<thead>
<tr>
<th>Priority Admission Application Deadlines</th>
<th>CONTACT INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring Cohort: October 15</td>
<td>College: Education</td>
</tr>
<tr>
<td>International applicant deadlines:</td>
<td>Department: Teaching and Learning</td>
</tr>
<tr>
<td><a href="http://www.grad.usf.edu/majors">http://www.grad.usf.edu/majors</a></td>
<td>Contact Information: <a href="http://www.grad.usf.edu">www.grad.usf.edu</a></td>
</tr>
</tbody>
</table>

Minimum Total Hours: 33
Level: Masters
CIP Code: 13.1013
Dept. Code: EDS
Major/College Codes: ASD/ED
Approved: 2011

**MAJOR INFORMATION**

Major Description
The purpose of this online major is to prepare teachers to be highly qualified and provide access to the general curriculum in least restrictive school environments to students with Autism Spectrum Disorder (ASD) and Intellectual Disabilities (InD).

Accreditation:
The Master of Arts in ASD and InD meets the accreditation standards required by the College of Education, University of South Florida. The curriculum in the major is aligned with the conceptual framework of the College of Education and meets the specific standards of the National Council for the Accreditation of Teacher Education (NCATE).

Major Research Areas
The major benefits the university, local community and the state can be summarized in two ways. In a quantitative way, the major meets the need of preparing effective teachers to work with the growing number of students in general and special education who are identified as having ASD and/or InD labels. This is demonstrated through the critical shortage of data at a national and state level and also in the surveys of local school districts to USF. In a qualitative way, the major meets the need to prepare effective teachers to work with this group of students that represents a paradigmatic shift in where and how these students learn. Students with ASD and/or InD labels need meaningful access to general education curriculum and their typically developing peers and this major meets this need.

**ADMISSION INFORMATION**

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- An earned baccalaureate degree in education or a related field that has a relationship with autism and/or intellectual disabilities from a regionally accredited college of university or the equivalent bachelors and/or graduate degrees from a international institution.

- Scholastic evidence to successfully perform in the academic major, as indicated by one of the following:
  - An earned graduate degree from a regionally accredited college or university, or
  - An undergraduate GPA of 3.00 or higher in all work attempted while registered as an upper division student working for a baccalaureate degree, or

http://www.usf.edu/education/
A preferred GRE Verbal score of 520 or higher and Quantitative score of 480 or higher, and an Analytical Writing score of 3.5 or higher, or
- Completion of 9 hours of specified graduate course work in special education with a GPA of 3.00 or higher, and the endorsement of a Special Education faculty member.
- A letter of application that addresses why the candidate desires to pursue a master’s degree in ASD and InD.
- At least two (2) letters of recommendation from persons who have seen the candidate teach and/or work with children and youth who have labels of ASD and/or InD.

**Graduation Requirements: Portfolio System**
The Master’s Portfolio System is a means through which each master’s level student demonstrates his/her competency in the “best practices” of special education. Commensurate with the belief that the merging of research and practice is desirable and beneficial; the Department of Teaching and Learning has identified eight areas in which students are required to demonstrate their competency:
- Professional and personal self-awareness
- Assessment of exception students
- Behavior management
- Classroom instruction
- Collaboration
- Knowledge of the professional literature
- Research in critical areas such as child development, learning and teaching
- Professional development

The department has also developed a list of suggested artifacts through which students can document their competency in each area.

Students should meet with their advisor to discuss and plan their individualized portfolio. A copy of the Master’s Portfolio System complete with policies and procedures, as well as suggested artifacts, is available with the Graduate Coordinator.

Each student will be required to present his/her individualized portfolio to the Portfolio Review Committee in the Department of Teaching and Learning upon completion of their major. This presentation will be the master’s comprehensive exam. A comprehensive exam is required of all master’s level students in the College of Education.

**CURRICULUM REQUIREMENTS**

**Total Minimum Hours - 33 hours**

**Required Courses:**

- **Process Core Requirement – 9 hours**
  - EDF 6481 3  Foundations of Educational Research
  - EEX 6732 3  Consultation and Collaboration in Special Education
  - EEX 5752 3  Working with Families: A Pluralistic Perspective

- **Content Specialization* - 24 hours minimum**
  (*Note: Field Experience (15-25 hours) is to be included as part of the Content Specialization coursework.)*
  - EBD 6246 3  Educating Students with Autism
  - EEX 6619 3  Positive Behavior Support Low Incid. Intellectual Disab. & ASD
  - EEX 6767 3  Assistive Technology For Students With Low Incidence
  - EEX 6234 3  Identification & Assessment of Individuals with Low Incidence Intellectual Disabilities and ASD
  - EEX 6065 3  Collaborative Transition and Career Planning for Students with Low Incidence Disabilities
  - EEX 6476 3  Curriculum & Instruction for Students with Low Incidence Disabilities
  - EEX 6939 3  Advanced Seminar: Paradigms, Practices, and Policies in Special Education
  - EEX 6943 3  Practicum in Exceptional Student Education

**Additional requirements for Plan III (individuals who do not hold a degree in education)**
Co/Prerequisites (0-14 hours depending on previous coursework):
EEX 6025 3 Trends and Issues in Special Education
EDF 6432 3 Foundations of Measurement

One of the following:
EDF 6211 3 Psychological Foundations of Education
EDF 6215 4 Learning Principles Applied to Instruction

One of the following:
EDF 6606 4 Socio-Economic Foundations of American Education
EDF 6517 4 Historical Foundations of American Education

Thesis
This is a non-thesis major

Comprehensive Exam
A portfolio project is required to fulfill the comprehensive examination requirement and is completed in the final semester of matriculation in the major

COURSES
See http://www.ugs.usf.edu/course-inventory/
CAREER AND TECHNICAL EDUCATION

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines
Fall: February 15
Fall admission only

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 30
Level: Masters
CIP Code: 13.1320
Dept. Code: LEA
Major/College Codes: ACT ED
Approved: 2010

CONTACT INFORMATION

College: Education
Department: Leadership, Counseling, Adult, Career, and Higher Education (L-CACHE)
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

Contact department for information.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) and College requirements, as well as requirements for admission to the major, listed below.

Faculty in the CTE major use a process for consideration of admission that encompasses the following items:

- B.A. from an regionally-accredited institution or the equivalent bachelors and/or graduate degrees from a foreign institution
- Relevant experience in the field of Career & Technical Education (or closely related field):
- Certification in a Career and Technical Education major area or closely related area (a statement of current certification status in letter of application is sufficient documentation). Certification is not required for admission to Plan III;
- A grade point average in upper division undergraduate coursework from a regionally accredited university (or international equivalent) of 3.00 on a 4.00 scale:
- In exceptional cases, a student with an upper-level undergraduate GPA of 2.50-2.99 may be considered for admission (based on age of the degree, discipline, institution and other considerations). In each of those cases, the student must earn a 3.5 GPA in the first two courses in the major to be permitted to continue:
- A letter of application containing a statement of professional goals
- A current resume or vita.

Special Instructions for International Students:
All applicants whose native language is other than English or who have earned a degree from an institution outside the United States must meet the University requirements relative to international graduate admission, (e.g. TOEFL scores, etc.). In addition to these university requirements, applicants to the College of Education must provide the following:

- A social security number in degree programs requiring practica or internships; and
- Other information as required by the major of interest, (e.g. Graduate Record Exam scores, etc.).
CURRICULUM REQUIREMENTS

(Plan I, 30 hours minimum; Plan III, 30 hours minimum)

Core Requirements:

Plan I: Psychological or Social Foundations course – 3 hrs. min. from the College’s approved course listing or ADE 6385

Plan III: Psychological or Social Foundations courses – 6 hrs. min. from the college’s approved course listing or ADE 6385. (Selection may also include MHS 6340 Career Development)
Research – Improving CTE Programs, ECT 6767 or EDF 6481 Foundations of Educational Research – 3 hours

Concentration Requirements: 18 SH in Career & Technical Education (15 SH for those holding National Board Certification)
Proof of National Board Certification must be provided.

Students must select concentration coursework from the courses below.
ECT 5386 Preparation & Development for Teaching 4
ECT 6661 Trends and Issues in CTE, 3 SH Trends 3
EVT 6665 School & Community Relations (formerly 6664) -
ECT 6197 Enhancing CTE Curriculum 3
ECW 6264 Administration of Vocational Programs -
ECW 6696 Equity and Access in the New Economy 3
ECW 6265 Supervision of Vocational Programs -
ECT 6948 Practicum 3-6
ADE 6360 Methods of Teaching Adult Education 3

Electives: Graduate level electives may be substituted for selected concentration courses with the advisor’s approval.

Field Experience: 3 hours minimum
ECT6766 Emerging Workplace Competencies 3
Another course may be considered for substitution if the student has recent experience in their occupational field. The substitution requires approvals at the major and the college levels.

Comprehensive Examination:
Students will maintain a comprehensive portfolio and submit it at the end their major.

Thesis: there is no thesis option in this major.

COURSES
See http://www.ugs.usf.edu/course-inventory/
COUNSELOR EDUCATION

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines
Fall: January 7
Fall admission only

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 52
Level: Masters
CIP Code: 13.1101
Dept. Code: EDF
Major/College Codes: AGC ED
Approved: 1965

Concentrations:
Career Counseling (CRC)
Clinical Mental Health Counseling (CMH)
School Counseling (SCL)

CONTACT INFORMATION

College: Education
Department: Educational and Psychological Studies
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

This is a limited access major with internal deadlines. Please check with he major prior to applying. The Counselor Education major provides students with the general counseling skills needed to become professional counselors. Graduates are trained to assess problems, counsel clients, select appropriate intervention strategies and consult with other professionals and administrators. All students complete a common core of courses plus additional courses appropriate to their chosen major. Included are courses in communication skills, counseling theory, research, practicum, and internship. In addition to the Master’s degree, the Educational Specialist degree, and the Doctoral degree, the major offers Graduate Certificates in Career Counseling, Mental Health Counseling, Play Therapy, and School Counseling (post masters). The major offers three plans for a Master of Arts degree.

School Counseling (Plan II)
A concentration in School Counseling is available to currently enrolled students in the Master of Arts Counselor Education major. The School Counseling concentration is CACREP-accredited, and offers specialized coursework in school counseling. Graduate students pursuing a concentration in School Counseling must take the core course requirements of their graduate major.

Plan III--Community Counseling
Plan III is for students who prefer to work in community based counseling positions rather than in elementary or secondary schools. There are two Plan III options: (a) Mental Health Counseling and (b) Career Counseling.

Clinical Mental Health Counseling
A concentration in Clinical Mental Health Counseling is available to currently enrolled students in the Master of Arts Counselor Education major. The Clinical Mental Health Counseling concentration is CACREP-accredited, and offers specialized coursework in mental health counseling. Graduate students pursuing a concentration in Clinical Mental Health Counseling must take the core course requirements of their graduate major.

A concentration in Career Counseling is available to currently enrolled students in the Master of Arts in Counselor Education major. The Career Counseling concentration is CACREP-accredited, and it specializes in career counseling with a cognate in...
student affairs. Graduate students pursuing a concentration in Career Counseling must take the core course requirements of their graduate major.

Accreditation:
Accredited by the Council for the Accreditation of Counseling and Other Educational Related Programs (CACREP).

Major Research Areas:
Multicultural counseling and development, career development, play therapy, cognitive-behavioral interventions, community mental health, and counselor education and supervision

ADMISSIONS INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

Requirements also include:
• Graduate Record Examination (GRE) Score is required with a preferred score of at least the 50th percentile Verbal and the 50th percentile Quantitative (writing not required) Or A Miller’s Analogy Test (MAT) score of at least 50
• GPA of at least 3.00 on a 4.00 scale for work done while an upper division student in a Baccalaureate degree. Students who have GRE subtest scores of less than the 50th percentile or MAT scores of less than 50 must have GPAs above 3.2 in order to be considered for admission.
• CLAST/GKT Required (School Track only)
• Proof of educational or professional experience
• Three Letters of recommendation
• Personal Statement
• Interview
• Resume

International Students
All applicants whose native language is other than English or who have earned a degree from an institution outside the United States must meet the University requirements relative to international graduate admission, (e.g. TOEFL scores, etc.). In addition to these university requirements, applicants to the College of Education must provide the following:
• A social security number in majors requiring practica or internships;
• Other information as required by the major of interest, (e.g. GRE scores, etc.)

CURRICULUM REQUIREMENTS

Contact the department for detailed information prior to applying.

Total Minimum Hours:
52 hours minimum

Core Requirements
7 hours minimum
EDF6354 Human Development and Personality Theories
EDF6481 Foundations of Educational Research
### Other Core Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>MHS6006</td>
<td>Trends and Principles of the Counseling Profession</td>
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<tr>
<td>MHS6420</td>
<td>Multicultural Counseling with Diverse Populations</td>
<td>3</td>
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<tr>
<td>MHS6200</td>
<td>Assessment and Appraisal Procedures</td>
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<td>MHS6340</td>
<td>Career Development</td>
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<td>MHS6400</td>
<td>Counseling Theories and Practices</td>
<td>4</td>
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<tr>
<td>MHS6311</td>
<td>Online Services in Counseling and Helping Professions</td>
<td>3</td>
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<tr>
<td>MHS6509</td>
<td>Group Counseling Theories and Practices</td>
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<tr>
<td>MHS6700</td>
<td>Legal and Ethical Issues in the Counseling Profession</td>
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**29 hours minimum**

### CONCENTRATION REQUIREMENTS

#### CAREER COUNSELING CONCENTRATION

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<th>Hours</th>
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<tbody>
<tr>
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<td>Practicum in Counseling Adolescents and Adults</td>
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<tr>
<td>MHS6601</td>
<td>Consultation for the Counseling Profession</td>
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<tr>
<td>MHS6341</td>
<td>Career Program Design and Evaluation</td>
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<tr>
<td>MHS6887</td>
<td>Internship in Career and College Counseling</td>
<td>6</td>
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</table>

**16 hours minimum**

Students must successfully pass a comprehensive examination prior to graduation.

#### SCHOOL COUNSELING CONCENTRATION (PLAN II)

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>EDF6217</td>
<td>Behavior Theory and Classroom Learning</td>
<td>4</td>
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<tr>
<td>MHS6450</td>
<td>Counseling Substance Abuse in School and Community</td>
<td>4</td>
</tr>
<tr>
<td>MHC6470</td>
<td>Human Sexuality Issues for Counselors</td>
<td>4</td>
</tr>
<tr>
<td>MHS6800</td>
<td>Practicum in Counseling Adolescents and Adults</td>
<td>4</td>
</tr>
<tr>
<td>SDS6801</td>
<td>Practicum in Counseling Children</td>
<td>4</td>
</tr>
<tr>
<td>MHS6413</td>
<td>School Counseling Accountability</td>
<td>3</td>
</tr>
<tr>
<td>MHS6601</td>
<td>Consultation for the Counseling Profession</td>
<td>3</td>
</tr>
<tr>
<td>MHS6417</td>
<td>Human Sexuality Issues</td>
<td>4</td>
</tr>
<tr>
<td>EDG6931</td>
<td>Reading and Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>EDF6217</td>
<td>Behavior Theory and Classroom Learning</td>
<td>3</td>
</tr>
<tr>
<td>SDS6820</td>
<td>Internship in School Counseling</td>
<td>6</td>
</tr>
<tr>
<td>RED6786</td>
<td>Research &amp; Methods in Reading</td>
<td>3</td>
</tr>
<tr>
<td>TSL6700</td>
<td>ESOL for School Counselors and Psychologists</td>
<td>3</td>
</tr>
</tbody>
</table>

**38 hours minimum**

Students must successfully pass a comprehensive examination prior to graduation.

Students must also present official passing scores on the following examinations prior to graduation:

- Florida Professional Education Exam
- Florida Subject Area Examination in Guidance and Counseling

#### CLINICAL MENTAL HEALTH COUNSELING CONCENTRATION

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS6800</td>
<td>Practicum in Counseling Adolescents and Adults</td>
<td>4</td>
</tr>
<tr>
<td>MHS6620</td>
<td>Counseling in Community Setting</td>
<td>3</td>
</tr>
<tr>
<td>MHS6070</td>
<td>Study of Mental Disorders for Counselors</td>
<td>3</td>
</tr>
<tr>
<td>MHS6450</td>
<td>Counseling Substance Abuse in School and Community</td>
<td>3</td>
</tr>
<tr>
<td>MHS6470</td>
<td>Human Sexuality Issues for Counselors</td>
<td>3</td>
</tr>
<tr>
<td>MHS6885</td>
<td>Internship in Community Agency Counseling</td>
<td>9</td>
</tr>
</tbody>
</table>

**25 hours minimum**

Students must successfully pass a comprehensive examination prior to graduation.
OTHER INFORMATION
Please be advised that major and/or course requirements are subject to change, per state legislative mandates, Florida Department of Education program approval standards, and accreditation criteria. Graduate Certificates are also available in several areas.

COURSES
See http://www.ups.usf.edu/course-inventory/
CURRICULUM AND INSTRUCTION

Master of Education (M.Ed.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines
Fall          February 15
Spring        October 15
Summer        February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 33
CIP Code: 13.0301
Dept. Code: CNI
Major/College Codes: CUR ED
Approved: 1974

Concentrations:
College Student Affairs (CSA)
Early Childhood Education (CNK)
Educational Studies (CST)
Instructional Technology (CCO)
Measurement & Evaluation (CME)
Secondary Education (CES)
Secondary Education: Biology (CBI)
Secondary Education: Chemistry (CCH)
Secondary Education: English (CEN)
Secondary Education: Foreign Language (CFE)
Secondary Education: Mathematics (CMA)
Secondary Education: Physics (CPY)
Secondary Education: Social Science (CSO)
Secondary Education: TESOL (CTL)

Note – not all concentrations are available every semester.
Prior to submitting the admission application, check with the Graduate Director to confirm if the concentration of interest is available.

CONTACT INFORMATION

College: Education
Departments:
- Leadership, Counseling, Adult, Career, and Higher Education
- Teaching and Learning
- Educational and Psychological Studies

Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Curriculum and Instruction degree is only offered in conjunction with a concentration area. Please see the area of concentration (listed alphabetically in the catalog) to determine whether or not the Curriculum and Instruction degree is available in your area of interest.

This degree is designed for the professional educator who wishes to pursue advanced study. The primary objective is to prepare instructional leaders through courses in curriculum, methods, supervision, learning principles, human interaction, and areas of specialization. The foundation areas (professional studies) receive greater emphasis in the M.Ed. degree programs than the
M.A. degree programs. Coursework in the concentration may include courses in colleges other than the College of Education. The Curriculum and Instruction major is offered with concentration areas. General major requirements are listed below. For specific specialization requirements, contact the appropriate department.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

For International applicants
Applicants whose native language is not English or who have not earned a degree in the U.S. must, according to university policy, submit a TOEFL test score (minimum of 550 paper-based, 213 computer-based, or 80 internet-based). See http://www.usf.edu/admissions/international/graduate/requirements-deadlines/english-proficiency.aspx for further clarification and possible exemptions. Please check with the major regarding the policy on evaluation of transcripts.

For more information, please visit http://admissions.grad.usf.edu/international.html

CURRICULUM REQUIREMENTS

College of Education Curriculum Requirements for the Master of Education degree (M.Ed.).

The M.Ed. degree in Curriculum and Instruction normally requires a minimum of 33 graduate level semester hours with 60 percent or more of the courses at the 6000 level. Courses at the 7000 level are advanced graduate level courses and thus are not approved to be part of the master’s degree program.

Total Minimum Hours - 33 hours minimum

CORE REQUIREMENTS

Program of Study- 9 hours minimum

EDF 6432 3 Foundations of Measurement

OR

EDF 6481 3 Foundations of Educational Research

And

EDG 6627 3 Foundations of Curriculum & Instruction

Psychological/Social Foundations - Choose from list below (See Notes)

EDF 6211 3 Psychological Foundations of Educations
EDF 6215 3 Learning Principles Applied to Instruction
EDF 6217 3 Behavior Theory and Classroom Learning
EDF 6534 3 Human Development and Personality Theory
EDF 6165 3 Group Processes (Available only to students in College Student Affairs)
EDF 6517 3 Historical Foundations of American Education
EDF 6606 3 Socio Economic Foundations of American Education

CONCENTRATION REQUIREMENTS - 18 hours minimum

Refer to specific concentration for requirements

ELECTIVES - 6 hours minimum

5000 or 6000 level coursework subject to area advisor approval. These courses are intended to complement the specialization. (Note: Secondary Education: Social Science (CSO) requires 15 hours of electives minimum)
COMPREHENSIVE EXAM
Comprehensive exam required. Refer to specific concentration for requirements

Notes:
- More credit hours may be required for a concentration in the Foundations & Curriculum Core, which may be substituted for electives or concentration hours
- Foundations and Curriculum core for the College Student Affairs concentration is 6 hours minimum (EDF 6481 and EDF 6165), additional hours in the concentration required.

CONCENTRATION REQUIREMENTS
In addition to completing the required Major Requirements, students select one of the following concentrations. Minimum hours noted are for the concentration requirements only and do not reflect the total major hours that result.
COLLEGE STUDENT AFFAIRS (CSA)

Offered from the Leadership, Counseling, Adult, Career, and Higher Education

The CSA Concentration at the University of South Florida prepares practitioners to work in Student Affairs positions. The learning outcomes for all graduates include: specialized learning in the field, engaging diverse perspectives, strong communication skills, and understanding the complexity of the higher education system. The major is compliant with requirements of the Council for the Advancement of Standards in Higher Education. The curriculum includes theories of human growth and development, environmental influences, and research applied to student affairs practice. The instructional method of relating theory-to-practice is accomplished by involving students in rigorous classroom activity along with internships in specialized areas of student affairs work.

Total Major requirements with this concentration: 42 hours minimum

In addition to the nine hours or core requirements for the Major, students must complete:

Major Core – 9 hours
Concentration Requirements – 30 hours
Electives – 3 hours
Total:

Concentration Requirements - 30 hours minimum
SDS 6042  3  Introduction to Higher Education Student Affairs
SDS 6624  3  Campus Environments
SDS 6645  3  Student Development Theory
SDS 6701  3  Diversity in Higher Education
SDS 6703  3  The Law & Student Affairs
SDS 6030  3  Advising and Helping Skills in Student Affairs
SDS 6260  3  Assessment in Student Affairs
EDF 6938  3  Organization and Administration of Student Affairs
SDS 6990  3  Trends and Issues in Higher Education and Student Affairs

EDF 6944  3  Field Experience (Practicum)

Electives - 3 hours minimum

Comprehensive Exam
**EARLY CHILDHOOD EDUCATION (CNK)**

**Offered from the Department of Teaching and Learning**
The M.Ed. Degree in Curriculum and Instruction with a concentration in Early Childhood Education is designed for those students who hold a degree in early childhood education or a related field and wish to improve their skills in teaching young children, and prepare to take leadership roles in the field of early childhood education. When previous academic preparation is not in the field of early childhood education, prospective students will be expected to complete undergraduate courses as determined through conference with a faculty advisor upon admission to the major. These undergraduate courses do not apply to the minimum graduate hours required for the major. This major is not a teacher certification preparation major.

**Total Major requirements with this concentration:** 33 hours minimum

**Concentration Course Requirements - 9 hours minimum**
- EEC 6415  3  EC: Diversity in Home and School
- EEC 6626  3  EC Play and Learning
- EEC 6678  3  Research Seminar: Issues, Trends and Advocacy in EC

**Electives – 15 hours minimum**
Select a focus in Reading, Teachers Leadership, Positive Behavior Support, or Interdisciplinary Studies and choose four electives:

**Reading Focus**
- RED 4749  3  History and Foundations of Reading: Prevention and Intervention of Reading Difficulties
- RED 6544  3  Cognition, Comprehension, and Content Area Reading
- RED 6545  3  Vocabulary and Word Study
- RED 6540  3  Assessment in Literacy
- RED 6846  3  Practicum in Reading

**Teacher Leadership Focus**
- EDE 6076  3  Teacher Leadership for Student Learning
- EDE 6486  3  Teacher Research for Student Learning
- EDE 6556  3  Coaching for Student Learning
- EDE 6366  3  Professional Development for Student Learning

**Positive Behavior Support Focus**
- MHS 6410  3  Intensive Individualized Positive Behavior Support
- MHS 6900  3  Consultation and Collaboration
- MHS 6608  3  School-Wide Positive Behavior Support
- MHS 6605  3  Addressing Behavior Challenges in Young Children

**Interdisciplinary Focus**
- EDF 6407  4  Statistical Analysis for Educational Research I
- EEC 6055  3  Advocacy and Leadership in ECE
- EEC 6205  3  EC: Curriculum and Authentic Assessment
- EEC 6525  3  EC Program Development and Administration
- EEC 6265  3  EC Programs and Adv Curriculum

In addition, select one other electives taken in COED at the 6000 level (3 hours)

**Comprehensive Exam**
Students must apply to take their comprehensive exam. Students must be enrolled at least two credit hours during the semester of their comprehensive exam.
EDUCATIONAL STUDIES (CST)
Offered from the Leadership, Counseling, Adult, Career, and Higher Education
The interdisciplinary study of education using social science and humanities perspectives.

Concentration Admission Requirements:
- Undergraduate GPA of at least 3.00
- A record of consistent success in humanities and social science courses taken as an undergraduate or (if the applicant has prior graduate-school experience) at the graduate level.
- GRE required with preferred scores of at least V-60%, Q – 50%, and AW – 50%. Only current scores (within the past 5 years).
- Names of and contact information for two full-time faculty at a regionally-accredited college or university familiar with the applicant’s undergraduate or graduate work and who are willing to serve as references, and the completion by the references of a standardized online reference form.
- A 300-word statement describing the applicant’s intellectual interests in the major

Total Major requirements with this concentration - 33 hours minimum

In addition to the 9 hours of Major Core Requirements:

Concentration Course Requirements – 18 hours minimum
EDF 6407 4 Statistical Analysis of Education I
EDF 6517 4 Historical Foundations of American Education
EDF 6883 4 Issues in Multicultural Education

In addition, a minimum of six hours from the following courses:
EDF 5607 3 Trends in Education Politics
EDF 6531 3 History of Childhood, Disability, and Deviance
EDF 6606 4 Socio-Economic Foundations of American Education
EDF 6705 4 Gender and the Educational Process
EDF 6736 3 Education, Communication, and Change
EDF 6765 4 Schools and the Future

Electives – 6 hours minimum
Selected, either from the list below or upon advisor’s approval:
EDF 5607 3 Trends in Education Politics.
EDF 6531 3 History of Childhood
EDF 6606 4 Socio-Economic Foundations of American Education
EDF 6705 3 Gender and the Educational Process
EDF 6736 3 Education, Communication, and Change
EDF 6765 4 Schools and the Future
EDF 6906 1-6 Independent Study: Educational Foundations
EDF 6938 Selected Topics

Comprehensive Exam
The Comprehensive exam will be a portfolio of work from courses taken for the degree, including a capstone paper written over a 4-week period in response to a specific prompt

Other information – All course grades must be a “B” or above. Concentration course credits must be earned at USF Tampa.

http://www.usf.edu/education/
INSTRUCTIONAL TECHNOLOGY (SIT)

Offered from the Department of Educational and Psychological Studies

The Concentration in Instructional Technology is intended for students interested in working as instructional designers/developers in industry or academic environments. Accredited by the National Association for the Accreditation of Teacher Education.

Total Major requirements with this concentration: 33 hours minimum

Concentration Requirements - 18 hours minimum
18 hours in the area of emphasis, to include:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EME 6055</td>
<td>Current Trends in Instructional Technology</td>
<td>3</td>
</tr>
<tr>
<td>EME 6208</td>
<td>Interactive Media</td>
<td>3</td>
</tr>
<tr>
<td>EDF 6284</td>
<td>Problems in Instructional Design for Computers</td>
<td>3</td>
</tr>
<tr>
<td>EME 6930</td>
<td>Programming languages for Education</td>
<td>3</td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EME 6207</td>
<td>Web Design</td>
<td>3</td>
</tr>
<tr>
<td>EME 6458</td>
<td>Distance Learning</td>
<td>3</td>
</tr>
<tr>
<td>EME 6631</td>
<td>Development of Technology-Based Instruction</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives - 6 hours minimum
Selected with advisor from the following list or other graduate course approved by the Graduate Director:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EME 5403</td>
<td>Computers in Education</td>
<td>3</td>
</tr>
<tr>
<td>EME 6053</td>
<td>Internet in Education</td>
<td>3</td>
</tr>
<tr>
<td>EME 6207</td>
<td>Web Design</td>
<td>3</td>
</tr>
<tr>
<td>EME 6215</td>
<td>Instructional Graphics</td>
<td>3</td>
</tr>
<tr>
<td>EME 6209</td>
<td>Digital Video</td>
<td>3</td>
</tr>
<tr>
<td>EME 6235</td>
<td>Technology Project Management</td>
<td>3</td>
</tr>
<tr>
<td>EME 6480</td>
<td>Digital Citizenship and Internet Safety</td>
<td>3</td>
</tr>
<tr>
<td>EME 6680</td>
<td>Game Design and Development for Learning</td>
<td>3</td>
</tr>
<tr>
<td>EME 6681</td>
<td>Game Analytics for Learning</td>
<td>3</td>
</tr>
<tr>
<td>EME 6271</td>
<td>Technology Leadership in Education</td>
<td>3</td>
</tr>
<tr>
<td>EME 6936</td>
<td>Internship in E-Learning Development</td>
<td>3</td>
</tr>
</tbody>
</table>
MEASUREMENT AND EVALUATION (CME)

Offered from the Department of Educational and Psychological Studies

This degree program is designed to prepare mid-level testing and evaluation personnel for employment in school districts, government agencies, commercial test development companies, and program research and evaluation enterprises. The major prepares personnel with specialized skills in test construction, data analysis, major evaluation, and research design.

Total Major requirements with this concentration  -37 hours minimum

Major Core – see Curriculum Requirements above
Students are required to take both EDF 6481 and EDF 6432 from the Major Core

Concentration Requirements
Note: Both EDF 6432 and EDF 6481 from the Major Core must be taken, one of which fulfills a Core requirement and the other fulfills a Concentration requirement.

EDF 6461 Foundations of Applied Evaluation 3
EDF 6407 Statistical Analysis for Educational Research I 4
EDF 7408 Statistical Analysis for Educational Research II 4
EDF 6491 Practicum in Measurement, Evaluation and Research 3
EDF 7488 Problems in Educational Data Analysis 2
EDG 6931 Special Topics: Introduction to Qualitative Methods 3

Elective in Instructional Technology selected from the following:
EME 6613 Development of Technology-Based Instruction 3
EDF 6284 Problems in Instructional Design for Computers 3
EME 6930 PLE: Web Programming 3
EME 6207 Web Page Design 3
OR a course recommended by the academic advisor

Electives – see Curriculum Requirements above 6 minimum

Comprehensive Exam: Students must perform satisfactorily on a written comprehensive examination taken on completion of coursework or during the last semester of enrollment in the major. Students must be enrolled for a minimum of two graduate hours during the semester in which this examination is taken.
SECONDARY EDUCATION (CES) Not open for admissions
Offered from the Department of Teaching and Learning
This concentration is intended for experienced/certified educators (broadly defined to include not only teachers but all those working in educational agencies, educational publishing, supervision and administration, technology agencies, and so forth) as well as individuals, who hold an undergraduate degree in some field relevant to the area of specialization, interested in advanced study of education but who are not seeking teacher certification. The aim is to provide advanced preparation for professional educators who are willing to apply what they learn to the creation, implementation, and evaluation of effective instructional programs. Accredited by NCATE.

Total Major requirements with this concentration: 33 hours minimum

Concentration Requirements - 18 hours minimum
18 hours in the area of emphasis, to include courses in the content and/or teaching of this content

SECONDARY EDUCATION: BIOLOGY (CBI)
Offered from the Department of Teaching and Learning
This concentration is intended for experienced/certified educators (broadly defined to include not only teachers but all those working in educational agencies, educational publishing, supervision and administration, technology agencies, and so forth) as well as individuals, who hold an undergraduate degree in some field relevant to the area of specialization, interested in advanced study of education but who are not seeking teacher certification. The aim is to provide advanced preparation for professional educators who are willing to apply what they learn to the creation, implementation, and evaluation of effective instructional programs. Accredited by NCATE.

Total Major requirements with this concentration: 33 hours minimum

Concentration Requirements - 18 hours minimum
18 hours in the area of emphasis, to include courses in content and/or the teaching of this content one of which must be:
SCE 6634 Current Trends in Secondary Science 3

SECONDARY EDUCATION: CHEMISTRY (CCH)
Offered from the Department of Teaching and Learning
This concentration is intended for experienced/certified educators (broadly defined to include not only teachers but all those working in educational agencies, educational publishing, supervision and administration, technology agencies, and so forth) as well as individuals, who hold an undergraduate degree in some field relevant to the area of specialization, interested in advanced study of education but who are not seeking teacher certification. The aim is to provide advanced preparation for professional educators who are willing to apply what they learn to the creation, implementation, and evaluation of effective instructional programs. Accredited by NCATE.

Total Major requirements with this concentration: 33 hours minimum

Concentration Requirements 18 hours minimum
18 hours in the area of emphasis, to include courses in content and/or the teaching of this content one of which must be:
SCE 6634 Current Trends in Secondary Science 3
SECONDARY EDUCATION: ENGLISH (CEN)
Offered from the Department of Teaching and Learning
This concentration is intended for experienced/certified educators (broadly defined to include not only teachers but all those working in educational agencies, educational publishing, supervision and administration, technology agencies, and so forth) as well as individuals, who hold an undergraduate degree in some field relevant to the area of specialization, interested in advanced study of education but who are not seeking teacher certification. The aim is to provide advanced preparation for professional educators who are willing to apply what they learn to the creation, implementation, and evaluation of effective instructional programs. Accredited by NCATE.

Total Major requirements with this concentration: 33 hours minimum

Concentration Requirements - 18 hours minimum
18 hours in the area of emphasis, to include courses in content and/or the teaching of this content one of which must be:
LAE 6637 Current Trends in Secondary English Ed 3

SECONDARY EDUCATION: FOREIGN LANGUAGE (CFE)
Offered from the Department of Teaching and Learning
This concentration is intended for experienced/certified educators (broadly defined to include not only teachers but all those working in educational agencies, educational publishing, supervision and administration, technology agencies, and so forth) as well as individuals, who hold an undergraduate degree in some field relevant to the area of specialization, interested in advanced study of education but who are not seeking teacher certification. The aim is to provide advanced preparation for professional educators who are willing to apply what they learn to the creation, implementation, and evaluation of effective instructional programs. Accredited by NCATE.

Total Major requirements with this concentration: 33 hours minimum

Concentration Requirements - 18 hours minimum
18 hours in the area of emphasis, to include courses in content and/or the teaching of this content one of which must be:
FLE 6665 Current Trends in Foreign Language Ed 3

SECONDARY EDUCATION: MATHEMATICS (CMA)
Offered from the Department of Teaching and Learning
The Concentration in Secondary Education in Mathematics Education is a flexible major intended to improve the skills of the classroom teacher. The major will be planned with the student’s advisor. At least 60 percent of the major hours must be at the 6000 level. Accredited by NCATE.

Total Major requirements with this concentration: 33 hours minimum

Concentration Requirements - 18 hours minimum
18 hours in the area of emphasis, to include courses in content and/or the teaching of this content one of which must be:
MAE 6136 Current Trends in Secondary Mathematics Education 3

SECONDARY EDUCATION: PHYSICS (CPY)
Offered from the Department of Teaching and Learning
The Concentration in Secondary Education in Physics is a flexible major intended to improve the skills of the classroom teacher. The major will be planned with the student’s advisor. At least 60 percent of the major hours must be at the 6000 level.

Total Major requirements with this concentration: 33 hours minimum

Concentration Requirements - 18 hours minimum
18 hours in the area of emphasis, to include courses in content and/or the teaching of this content one of which must be:
SCE 6634 Current Trends in Secondary Science Ed 3
SECONDARY EDUCATION: SOCIAL SCIENCE (CSO)
Offered from the Department of Teaching and Learning
This Concentration does not include teaching certification. Individuals interested in certification should consult the Master of Arts in Teaching in Social Science Education. This concentration is designed for educators who have at least two years of relevant experience in the field, typically, teachers certified in social science education with a baccalaureate degree from a College of Education. The aim is to provide advanced preparation in the theories and practices of social studies educators. Accredited by NCATE.

Total Major requirements with this concentration: 36 hours minimum
Concentration Requirements - 21 hours minimum
SSE 5946 Practicum Social Science Education 3
SSE 6932 Selected Topics 3
SSE 6932 Selected Topics 3
SSE 6636 Trends in Social Science Education 3
Electives:
Taken in COEDU and/or CAS at the 5000 or 6000 level 15

Comprehensive Exam
The Comprehensive exam is taken while enrolled in SSE 6636 Trends and Issues. Consult the Major website, http://www.coedu.usf.edu/main/departments/seced/SSE/SSE_HomePage.html, or the major’s coordinator for specific requirements.

SECONDARY EDUCATION: TESOL (CTL)
Offered from the Department of Teaching and Learning
This concentration is designed for professionals who have at least two years of relevant experience in the field, typically, teachers certified in social science education with a baccalaureate degree from a College of Education. Within the M.Ed. framework, the degree is an individually planned major based on the student’s background and professional goals.

Concentration Admission Requirements
Requirements for all applicants include:
- Minimum GPA of 3.0 upper division undergraduate coursework
- Proof of 2 years of relevant educational or professional experience as judged by major faculty
- Proof of teaching certification

Total Major requirements with this concentration: 33 hours minimum
Concentration Requirements - 18 hours minimum
18 hours in the area of emphasis, to include courses in content and/or the teaching of this content

Comprehensive Exam
A comprehensive exam must be taken in the College of Education at the completion

COURSES
See http://www.ugs.usf.edu/course-inventory/
CURRICULUM AND INSTRUCTION

Education Specialist (Ed.S.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines

<table>
<thead>
<tr>
<th>Semester</th>
<th>Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>February 15</td>
</tr>
<tr>
<td>Spring</td>
<td>October 15</td>
</tr>
<tr>
<td>Summer</td>
<td>February 15</td>
</tr>
</tbody>
</table>

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 36
Level: Specialist
CIP Code: 13.0301
Dept. Code: CNI

Major/College Codes: CUR ED
Approved 1971

Concentrations:
Adult Education (SAE)
Counselor Education (SGC)
Early Childhood Education (SNK)
Elementary Education (SEE)
Higher Education, Administration (SHA)
Higher Education, Community College Teaching (SCT)
Instructional Technology (SIT)
Interdisciplinary Education (SIE)
Mathematics Education (SMA)
Measurement and Evaluation (SME)
Reading-Language Arts Education (SRD)
School Psychology (SSP)
Science Education (SSC)
Special Education (SSE)*
Vocational Education (SVO)

Note – not all concentrations are available every semester.
Prior to submitting the admission application, check with the Graduate Director to confirm if the concentration of interest is available.

CONTACT INFORMATION

College: Education
Departments:
Leadership, Counseling, Adult, Career, and Higher Education (L-CACHE)
Educational and Psychological Studies
Teaching and Learning
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Curriculum and Instruction major is only offered in conjunction with a concentration area. Please see the area of concentration (listed alphabetically in the catalog) to determine whether the your area of interest is available.

The Ed.S. degree consists of a minimum of 36 graduate level hours beyond the master’s degree and is flexible in its requirements. The degree is designed to provide professional educators with an opportunity to develop competencies in areas of special needs and interests. Consequently, the major has few required courses, and each student’s program of study is
individually planned in consultation with a graduate faculty committee. Courses at the 5000 level are inappropriate; and a minimum of 15 hours should be taken at the 7000 level.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

For International applicants
Applicants whose native language is not English or who have not earned a degree in the U.S. must, according to university policy, submit a TOEFL test score (minimum of 550 paper-based, 213 computer-based, or 80 internet-based). See http://www.usf.edu/admissions/international/graduate/requirements-deadlines/english-proficiency.aspx for further clarification and possible exemptions. Please check with major regarding the policy on evaluation of transcripts. For more information, please visit http://admissions.grad.usf.edu/international.html.

CURRICULUM REQUIREMENTS

Minimums 36 hours minimum

CORE REQUIREMENTS

Concentration Requirements 27 hours minimum

See concentrations below

Comprehensive Exam (Oral and/or written)

Thesis/Project 9 hours minimum
EDG 6971 – Thesis
EDG 6975 – Project: Master’s Specialist

The student is required to plan and successfully complete an individual thesis or project. The purpose is to provide an opportunity for the student to apply knowledge gained in the major to the resolution of significant needs arising from professional practice. A minimum of nine (9) semester hours of thesis enrollment is required in the Ed.S. degree program. Students are required to enroll for a minimum of 2 semester hours in the thesis or project course each semester while working on the Ed.S. thesis or project and for 2 semester hours in the semester in which the student plans to graduate. Students who have not completed the project after enrolling in the required 9 hours must continue to enroll in a minimum of two (2) credit hours of Thesis or Project each semester, including the semester in which the thesis or project is submitted to the College Associate Dean for Academic Affairs or the Office of Graduate Studies (School Psychology students). Students must have an oral defense of the project/thesis with their project/thesis supervisory committee. Individual areas of specialization may have additional requirements. For information contact the department offering the major/concentration.

Oral defense of the thesis/project

CONCENTRATION REQUIREMENTS 27 hours minimum
ADULT EDUCATION (SAE) – 36 HOURS
Offered from the Department of Leadership, Counseling, Adult, Career, and Higher Education (L-CACHE)
This concentration prepares practitioners and teachers for the broad field of Adult Education. This includes public and proprietary schools, and non-school based settings such as business and industry, the professional associations, community agencies, and governmental units.

Concentration Requirements
- ADE7388 Adult Development and Learning 3
- ADE7947 Advanced Internship 2-4
- ADE7910 Directed Research 1-4
- ADE7076 Continuing Education in the Community College and Higher Education 3
- ADE7281 Organization and Management of Adult and Continuing Education and HRD 3
- ADE7169 Instructional Development using Adult Education Principles and Practices (If not used for the Curriculum Course Requirement) 4
- ADE7261 Leadership in Adult and Continuing Education and HRD 3
- ADE7676 HRD Policy Seminar 3
- ADE7931 Issues and Trends: Critical Race Theory 3
- ADE6931 Adult Learning and Cognitive Styles 3
- ADE6931 Learning and Change 3
- ADE6906 Independent Study 1-19 (Varies)
- ADE6931 Participatory Action Research for Educators 3
- ADE6931 International Adult Education 3
- ADE6198 Effective Continuing Education for Professional Groups 3

Elective Courses
9 hours
Graduate level elective courses (9) are chosen based upon the student's individual needs and are approved by the graduate advisor.

COUNSELOR EDUCATION (SGC) – 39 HOURS
Offered from the Leadership, Counseling, Adult, Career, and Higher Education
Description:
The Ed.S. Degree in Curriculum and Instruction with concentration in Guidance and Counseling is designed to provide professional counselors with an opportunity to develop competencies in areas of special needs and interests. Consequently, each student’s program is individually planned in consultation with a faculty advisor.

Concentration Requirements
18 hours minimum
- MHS 7401 Adv. Counseling Theories 4
- MHS 7610 Consultation and Supervision Theory 4
- MHS 7930 Advanced Seminar in Counseling 4
- EDG 7931 Adv. Practicum in Counseling 4
- SDS 7830 Adv. Internship in Counseling 3 minimum
- EDG 7931 Cognitive Behavioral Res. Seminar 3
- EDF 6407 Statistical Analysis I 4
- EDF 7408 Statistical Analysis II 4

EARLY CHILDHOOD EDUCATION (SNK)
Offered from the Department of Childhood Education and Literacy Studies

http://www.usf.edu/education/
**ELEMENTARY EDUCATION (SEE) – 36 HOURS**  
Offered from the Department of Childhood Education and Literacy Studies  
Prepares in-school leaders with expertise in instruction and program development in a variety of educational settings.

**Concentration Requirements** – 27 hours minimum

**HIGHER EDUCATION, ADMINISTRATION (SHA)**  
Offered from the Department of Leadership, Counseling, Adult, Career, and Higher Education (L-CACHE)

**HIGHER EDUCATION, COMMUNITY COLLEGE TEACHING (SCT) – 36 HOURS**  
Offered from the Department of Leadership, Counseling, Adult, Career, and Higher Education (L-CACHE)

**INSTRUCTIONAL TECHNOLOGY (SIT) – 36 HOURS**  
Offered from the Department of Teaching and Learning  
This concentration is designed to prepare students for leadership in technology related positions.  Courses include an array of topics including instructional design, distance learning, authoring, instructional graphics, and project management.

**Concentration Requirements** – 27 hours minimum

- EDF 6284 - Problems in Instructional Design for Computers 3
- EME 7631 - Research in Technology Project Management 3
- EME 6613 - Development of Technology-Based Instruction 3
- EME 7938 - Computer-Augmented Instructional Paradigms in Education 3
- EME 7910 - Independent Study 3
- EME 7458 - Research in Distance Education 3

**Electives**: (9 appropriate hours)

From among
- CGS 6210 - Computer Hardware 3
- EME 6930 - PLE: Flash 3
- EME 6930 - PLE: Web Programming 1 3
- EME 6930 - PLE: Web Programming 2 3
- EME 6208 - ACET: Interactive Media 3
- EME 6207 - ACET: Web Design 3
- EME 6215 - ACET: Instructional Graphics 3
- EME 6209 - Digital Video 3
- EME 6055 Current Trends in Instructional Technology 3

Other appropriate course(s) as approved by the student’s graduate committee

**INTERDISCIPLINARY EDUCATION (SIE) – 36 HOURS**  
Offered from the College of Education  
The purpose of the Interdisciplinary track in the Ph.D. degree program is to provide a framework to support innovative, boundary-crossing inquiry among students and faculty across campus. Designed to foster research that approaches problems in education from interdisciplinary perspectives, the major allows students who have academic backgrounds and interests that span multiple disciplines to construct an individualized program of study grounded in at least two fields, one of which may be outside the College of Education. Students who have the ability and desire to integrate study and research between at least two disciplines/fields to address questions in education broadly defined are encouraged to apply to the Interdisciplinary track.

**Concentration Requirements** – 18 hours minimum

At least 15 graduate semester hours must be at the 7000 level, or 6000 level courses requiring advanced graduate standing. 5000 level courses are not acceptable. Note: Due to the variability of goals in the Interdisciplinary Education major, students should select their coursework in consultation with the major professor.
MATHEMATICS EDUCATION (SMA) – 36 HOURS
Offered from the Department of Teaching and Learning
The Ed.S. Degree in Curriculum and Instruction with concentration in Mathematics Education prepares specialists for classroom instruction or leadership/supervisory roles.

Concentration Requirements – 18 hours minimum

MEASUREMENT AND EVALUATION (SME) – 36 HOURS
Offered from the Department of Teaching and Learning, Counseling, Adult, Career, and Higher Education (L-CACHE)
This concentration prepares practitioners and teachers for the broad field of Adult Education. This includes public and proprietary schools, and non-school based settings such as business and industry, the professional associations, community agencies, and governmental units.

Concentration Requirements – 27 hours minimum
The Concentration is individually planned with an advisor to include coursework in systematic planning, test development, program evaluation, research design, and statistical analysis

READING-LANGUAGE ARTS EDUCATION (SRD) – 36 HOURS
Offered from the Department of Teaching and Learning, Counseling, Adult, Career, and Higher Education (L-CACHE)
This concentration prepares leaders in the field of literacy. The curriculum is designed to promote expertise in literacy research, theory, and practice. An Ed.S. Degree in Curriculum and Instruction with a Concentration in Reading/Language Arts emphasizes a critical analysis of reading policy and the need for applied, community-based research. The concentration extends students’ research and analysis skills so they may conduct program evaluations to guide classroom practice and school-based reform.

Concentration Admission Requirements:
• A 35th percentile GRE score in the verbal and quantitative sections; at least a 3 on analytic writing
• Minimum GPA of 3.5 Masters
• Proof of educational or professional experience
• Proof of initial certification
• Letters of recommendation
• Interview
• Concept Paper or goal statement

The Ed.S. in Curriculum and Instruction with a Concentration in Reading-Language Arts Education (SRD) requires a minimum of 36 hours beyond the Master’s degree, including coursework, written comprehensive examination, and a project. The Ed.S. program is separate from the Ph.D. It is individually planned with an advisor to include coursework in areas such as reading, elementary education, literacy, and research.

Concentration Requirements - 27 hours minimum
Thesis – 9 hours
Comprehensive Exam Required
SCHOOL PSYCHOLOGY (SSP) – 82 HOURS  
**Offered from the Department of Educational and Psychological Studies**

Concentration Requirements  
18 hours minimum
School Psychology is offered as a concentration under the Ed.S. Curriculum and Instruction degree program. The Educational Specialist (Ed.S.) degree consists of approximately 82 graduate semester hours beyond the bachelor’s degree, and includes two years of practica experiences and a full year, 1,500 clock hour internship, and a thesis or research project. Completion of the Ed.S. degree requires three 3 years of full-time study, including summer semesters beyond the bachelor’s degree. A Master of Arts (M.A.) degree is earned by most students during the first year of their Ed.S. degree program. However, the M.A. is not considered a terminal degree and is not sufficient for state certification in school psychology.

- SPS 6700 Psychoed Interventions I 4
- SPS 6701 Psychoed Interventions I 4
- SPS 6702 Psychoed Interventions III 4
- SPS 6940 Psychoed Interv Pract I 2
- SPS 6941 Psychoed Interv Pract II 2
- SPS 6196 Personality Assessment 4
- EDF 6213 Biological Bases 3
- EDF 6938 Social Psych Applied to Education 3
- SPS 6101 Behavior Disorders in Child 3
- EDF 6883 Multicultural Education 4
- TSL 6700 ESOL for School Psychologists and Guidance Counselors 3
- SPS 6947 Internship 12

Note: Students may be required to take additional hours depending on the course of study and or academic deficiencies.

SCIENCE EDUCATION (SSC)  
**Offered from the Department of Teaching and Learning**

SPECIAL EDUCATION (SSE)  
**Offered from the Department of Leadership, Counseling, Adult, Career, and Higher Education (L-CACHE)**

VOCATIONAL EDUCATION (SVO) – 36 HOURS  
**Offered from the Department of Leadership, Counseling, Adult, Career, and Higher Education (L-CACHE)**

Students are considered for this degree on a case-by-case basis. Please contact the Graduate Coordinator prior to applying.

**COURSES**  
See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
CURRICULUM AND INSTRUCTION
Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines

<table>
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<tr>
<th>Semester</th>
<th>Deadline</th>
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<tr>
<td>Fall</td>
<td>February 15</td>
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<tr>
<td>Spring</td>
<td>October 15</td>
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<tr>
<td>Summer</td>
<td>February 15</td>
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International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 59* post-masters

*minimum hours vary with each concentration

Level: Doctoral

CIP Code: 13.0301

Dept. Code: CNI

Major/College Codes: CUR ED

Approved: 1970

Concentrations:
- Adult Education (DAE)
- Career and Workforce Education (DVO)
- Counselor Education (DGC)
- Early Childhood Education (DNK)
- Educational Psychology (EPC)
- Elementary Education (DEE)
- English Education (DCE)
- Higher Education, Administration (DHA)
- Instructional Technology (DIT)
- Interdisciplinary Education (DIE)
- Literacy Studies (DRD)
- Mathematics Education (DMA)
- Measurement & Evaluation (DME)
- Science Education (DSC)
- Social Science (DSO)
- Special Education (DSE)
- Teacher Education (TED)

Note – not all concentrations are available every semester. Prior to submitting the admission application, check with the Graduate Director to confirm if the concentration of interest is available.

CONTACT INFORMATION

College: Education

Departments:
- Leadership, Counseling, Adult, Career, and Higher Education (L-CACHE)
- Teaching and Learning
- Educational and Psychological Studies

Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Curriculum and Instruction major is only offered in conjunction with a concentration area. Please see the area of concentration (listed alphabetically) to determine whether the Curriculum and Instruction degree is available in your area of interest.

http://www.usf.edu/education/
Major Research Area
Information available by accessing the concentration areas, listed alphabetically in the catalog.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

CURRICULUM REQUIREMENTS

Total Minimum Hours: 59 credit hours

Major Common Core – 3 credit hours
EDG 7067 3 Philosophies of Inquiry

Research Methods & Tools (refer to the concentration for specific requirements)

Concentration
Subspecialty within Concentration (Optional requirements in some Concentrations)
Cognate (Optional requirement in some Concentrations)
Interdisciplinary Focus (Optional requirement in some Concentrations)

Note: Effective Fall 2011, all concentrations must take EDG 7067 and may be used as a substitute for one of the courses in Psychological & Social Foundations for those concentrations requiring foundations courses.

Dissertation
Refer to the concentration area for specific dissertation requirements.

Doctoral Qualifying Examination
Students must demonstrate satisfactory performance on the Doctoral Qualifying Examination before admission to candidacy.
(See current College of Education Graduate Handbook, www.coedu.usf.edu, click on information; also consult Faculty Graduate contact).

Individual areas of concentration may have variations in the requirements. For information contact the department offering the major and specialization of interest. Please be advised that major and/or course requirements are subject to change, per state legislative mandates, Florida State Department of Education program approval standards, and accreditation criteria.

CONCENTRATIONS
Students select one of the following concentrations. Concentration requirements are listed on the subsequent pages, in alphabetical order
ADULT EDUCATION (DAE)
Offered from the Department of Leadership, Counseling, Adult, Career, and Higher Education (L-CACHE)
Prepares leaders, researchers, university faculty, and related personnel to serve in the broad field of adult education.

Total Major requirements with this concentration: 64 hours minimum

Core Requirement:
EDG 7067 Philosophies of Inquiry 3
Note: students who enter without a master’s in adult education must take ADE 6080.

Research Methods and Tools 15 hours minimum
EDF6407 Statistical Analysis for Educational Research I 4
EDF7408 Statistical Analysis for Educational Research 4
EDF7410 Design of Systematic Studies in Education 4
PHC 6706 Focus Group Research Strategies 3
EDF 7477 Qualitative Research in Education 4
EDF 7478 Qualitative Research II 4
Or other approved course by major professor and/or major committee

Concentration Requirements 18 hours minimum

Required Adult Education Concentration Courses: 10 hours minimum
ADE 7388 Adult Development and Learning 3
ADE 7930 Beginning Doctoral Seminar 4
ADE 7937 Final Doctoral Seminar 3

Electives within specialization 15 hours minimum
Students may select from the following course options but are not limited to these. Selection of course options should be made in consultation with the doctoral committee:
ADE 7947 Advanced Internship 2-4
ADE 7910 Directed Research 1-4
ADE 7076 Continuing Education in the Community College and Higher Ed 3
ADE 7269 Organization and Administration of Adult and Continuing Ed HRD 3
ADE 7169 Instructional Development using Adult Ed Principles and Practices 3
ADE 7268 Leadership in Adult Continuing Education and HRD 3
ADE 7676 HRD Policy Seminar 3
ADE 7677 Emerging Trends in Adult Ed: Critical Race Theory 3
ADE6389 Adult Learning and Cognitive Styles 3
ADE7931 Learning and Change 3
ADE6070 International Adult Education 3
ADE6198 Effective Continuing Education for Professional Groups 3
ADE6197 Adult Basic Education 4
ADE 6370 Human Resource Development 3

Interdisciplinary Focus 3-4 hours minimum
1 or more courses/experiences that foster interdisciplinary collaboration selected depending on individual student interest in consultation with the doctoral committee:
EDF 7145 Cognitive Issues in Instruction 4
EDF 6883 Issues in Multicultural Education 4
EDF 7359 Resilience / Human development 4
EDH 7225 Curriculum Development in Higher Education 3
EDF 6705 Gender and the Education Process 3
EDF 7357 Application of Developmental Theories 4
CURRICULUM AND INSTRUCTION (Ph.D.)

Dissertation Requirement:

ADE 7980 Dissertation

18 hours minimum

Please be advised that programs of study are designed by the graduate faculty in concert with each individual student and the major and/or course requirements are subject to change, per state legislative mandates, Florida State Department of Education program approval standards, and accreditation criteria.

CAREER AND WORKFORCE EDUCATION (DVO)
Offered from the Department of Leadership, Counseling, Adult, Career, and Higher Education (L-CACHE)
Prepares leaders, researchers, university faculty and related personnel to serve in the broad field of Career and Workforce Education.

Concentration Admission requirements

- GRE scores on verbal and quantitative reasoning required. If a score in one area is below the 33rd percentile, the other should be considerably higher. Students not meeting this criterion may submit additional or alternative documentation of their potential for success in doctoral level studies. In such cases, graduate faculty will evaluate GRE scores in light of all available evidence to make a recommendation for admission. GRE scores may be waived in exceptional cases for applicants who have graduated from a master's degree program in the Adult, Career, and Higher Education Department at USF with a GPA of 3.90 or higher on a scale of 4.00 and received excellent ratings from graduate faculty (i.e. recommendation forms).

- Official transcripts from previous education institutions. Applicants should have completed a master’s degree from a regionally accredited university or the equivalent bachelor's and/or graduate degrees from a foreign institution with a 3.50 or higher graduate grade point average (GPA) on a 4.00 scale.

- International students whose native language is not English, in addition to meeting standard language proficiency requirements, must take the Internet-based TOEFL (iBT) and score at least 26 on the spoken portion of or a 50 on the SPEAK test administered through INTO-USF. Meeting this additional requirement will allow international students to participate in teaching engagement opportunities expected of all students in the major.

- In addition, the following application materials must be submitted directly to the graduate coordinator:
  - Current professional vita or resume.
  - A cover letter including a statement of professional and personal goals, and reasons that earning the doctorate is important to those goals.
  - Three Recommendation Forms (available for downloading at major website) completed by former professors or supervisors rating the applicant’s likelihood of success in the doctoral major.

The application materials should provide evidence of:

a) significant successful professional experiences supporting the fit between professional background, goals, and the applicant’s potential doctoral program of study;

b) commitment to personal and professional growth and development and to the completion of the rigorous course and research demands of the Ph.D. major; and

c) excellent academic, analytical and communication skills. To this end, an on campus or phone interview should be arranged with the major coordinator as an opportunity for both prospective students and faculty to gauge the fit with the major.

Applicants should be aware that meeting admissions requirements does not guarantee admission to the major. In some cases applicants meeting or exceeding admission requirements may not be accepted for the requested starting date. To this end, applicants are strongly encouraged to apply early to the Major.

Total Major requirements with this Concentration - 70 hours minimum
Core Requirement – 3 credit hours
EDG 7067  3  Philosophies of Inquiry

Research Methods and Tools – 25 credit hours

Research Methods (19 hours minimum)
EDF 6407  4  Statistical Analysis for Educational Research I
EDF 7408  4  Statistical Analysis for Educational Research II
EDF 7410  4  Design of Systematic Studies in Education
EDG 6931  3  Selected Topics: Introduction to Qualitative Research
TBD  3  Specialized Research Method Course

Tools and Applications (6 hours minimum)
ECT 7791  3  Research Seminar in Vocational, Technical, and Adult Education: Career and Workforce Education I
ECT 7791  3  Research Seminar in Vocational, Technical, and Adult Education: Career and Workforce Education II

Concentration Requirements - 30 hours minimum

Required CWE Core Courses (18 hours minimum)
ECW 7066  3  Foundations of Career and Workforce Education
ECW 7168  3  Principles of Contextual Teaching and Learning
ECW 7167  3  Career Development in Vocational Technical and Adult Ed
ECW 7105  3  Vocational and Adult Education Program Planning and Implementation
ECW 7195  3  Comparative Study of Career and Workforce Education Systems

Cognate (12 hours)
Courses TBD Depending on Individual Interests

Doctoral Qualifying Exam:
Students must take and successfully complete a qualifying examination prior to becoming a candidate for a doctoral degree:

Doctoral Candidacy:
Students must be admitted to candidacy before they are permitted to enroll in dissertation hours.

Dissertation - 12 hours
ECT 7980  12  Dissertation
COUNSELOR EDUCATION (DGC)
Offered from the Leadership, Counseling, Adult, Career, and Higher Education (L-CACHE)
The Ph.D. Degree in Curriculum and Instruction with Concentration in Counselor Education is a research and theory intensive experience designed to provide a balance of intellectual and experiential learning resulting in professional educators who have multiple competencies as researchers, theorists, and problem-solvers in human growth and development. The doctoral major emphasizes research and theory as opposed to clinical skill development and is designed primarily for students who wish to pursue careers in academic institutions. Major Research Areas include: Career development, clinical supervision, mental health counseling, and multicultural counseling.

Total Major requirements with this concentration: 95 hours minimum

Core Requirement:
- EDG 7067 Philosophies of Inquiry 3

Cognate:
Courses in cognate are planned in consultation with the major professor and doctoral committee. Courses in the cognate must be taken at the graduate and/or advanced graduate level.

Measurement/Statistics/Research Design: 11 hours minimum
- EDF 6407 Statistical Analysis I 4
- EDF 7408 Statistical Analysis II 4
- Plus (select one from the listing below)
  - EDF 7484 Statistical Analysis III 4
  - EDF 7437 Advanced Educ. Measurement 3
  - EDG 7931 Qualitative Res., Des., & Data Coll. 3

Foundations: 7 hours minimum
- Philosophical/Social Foundations (select one)
  - EDF 6705 Gender and the Ed. Process 3
  - ESF 7586 Classics in Ed. Research 4
  - ESF 7682 Ed. In Metropolitan. Areas 4

- Psychological Foundations (select one)
  - EDF 7145 Cognitive Issues in Instruction OR 4
  - EDG 7931 (Seminar of choice) 4
  - Requires the approval of the major professor and the college.

Concentration Requirements 38 hours minimum
- EDF 7946 Supervised Exp. In College Teaching 1
- MHS 6311 On-line Services in Counseling 2
- MHS 7740 Planning, Eval., & Accountability OR 3
- EDF 7493 Sys. Approaches for Program Plan & Eval. 4
- MHS 7401 Adv. Counseling Theories 4
- MHS 7610 Consultation and Supervision Theory 4
- MHS 7930 Advanced Seminar in Counseling 4
- EDG 7931 Adv. Practicum in Counseling 4
- SDS 7830 Adv. Internship in Counseling 3
- EDG 7931 Cognitive Behavioral Research. Seminar 3
- EDG 7931 Practicum in Supervision of Counseling 3
- EDG 7931 Proposal Preparation 3
- EDG 7910 Directed Research 3

Dissertation:
- MHS 7980 Dissertation 24
## EARLY CHILDHOOD EDUCATION (DNK)

**Offered from the Department of Teaching and Learning**

This concentration promotes scholarly and multidisciplinary inquiry that further empowers advanced graduate students through the development of knowledge, skills, and dispositions to assume roles as leaders, advocates, and scholars in the development and implementation of high quality and innovative early childhood practices. The major provides a sound theoretical background that is integrally linked to the practice of Early Childhood Education in a diverse, global community with an emphasis on child advocacy and social justice.

### Total Major requirements with this concentration: 66 hours minimum (post-master’s)

#### Core Requirement:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>EDG 7067</td>
<td>Philosophies of Inquiry</td>
<td>3</td>
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</table>

#### Research Methods and Tools:

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>EDF 7408</td>
<td>Statistical Analysis Education II</td>
<td>4</td>
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<tr>
<td>EDF 7410</td>
<td>Design of Systematic Studies in Education</td>
<td>4</td>
</tr>
<tr>
<td>EDF 7437</td>
<td>Advanced Measurement or EDF 7484 Statistical Anal Education III or equivalent course in Statistics/Measurement/Research Design</td>
<td>3</td>
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<tr>
<td>EDF 7477</td>
<td>Qualitative Research in Education I or introductory equivalent selected in conjunction with major committee</td>
<td>3-4</td>
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<tr>
<td>EDF 7478</td>
<td>Qualitative Research in Education II or equivalent qualitative course selected in conjunction with major committee</td>
<td>3-4</td>
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#### Concentration Requirements:

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<tr>
<th>Course Code</th>
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<th>Hours</th>
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<tbody>
<tr>
<td>EEC 7056</td>
<td>Leadership and Advocacy Concerning Issues Affecting Young Children</td>
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<tr>
<td>EEC 7057</td>
<td>Critical Perspectives in Early Childhood Education</td>
<td>3</td>
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<tr>
<td>EEC 7306</td>
<td>Teaching and Learning in Early Childhood</td>
<td>3</td>
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<tr>
<td>EEC 7416</td>
<td>Sociocultural Approaches to Working with Children and Families</td>
<td>3</td>
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<tr>
<td>EEC 7317</td>
<td>ICT in the Early Years</td>
<td>3</td>
</tr>
<tr>
<td>EEC 7627</td>
<td>Arts &amp; Aesthetics in Early Childhood Ed: Curriculum in Context</td>
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#### CELS Professional Development Courses (12 hours minimum)

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<tr>
<td>EDG 7938</td>
<td>Adv Grad Seminar; Intro to Research in Childhood Ed &amp; Lit Studies</td>
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<tr>
<td>EDG 7939</td>
<td>Advanced Grad Seminar: Research in Progress</td>
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<tr>
<td>EDH 7325</td>
<td>Supervised Teaching in Childhood Ed &amp; Lit Studies I</td>
<td>3</td>
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<tr>
<td>EDH 7326</td>
<td>Supervised Teaching in Childhood Ed &amp; Lit Studies II</td>
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#### Cognate:

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The cognate can be described as a secondary concentration or sub-specialization area. Coursework must be taken at the graduate level, and is developed in consultation with the major professor and the doctoral committee. The coursework in the cognate is developed in support of the student’s research objectives.

#### Qualifying Examination

Students must demonstrate satisfactory performance on the Doctoral Qualifying Examination before admission to candidacy. ([See current College of Education Graduate Handbook](http://www.usf.edu/education/main/gradhandbook/advhandbook/Adv_QualExam.html) Also consult doctoral graduate major advisor).

#### Dissertation:

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[http://www.usf.edu/education/](http://www.usf.edu/education/)
EDUCATIONAL PSYCHOLOGY (EPC)
Offered from the Leadership, Counseling, Adult, Career, and Higher Education (L-CACHE)
The Concentration in Educational Psychology is within the College of Education’s Ph.D. degree program in Curriculum and Instruction at the University of South Florida. This concentration will prepare graduates to be conscientious researchers who apply the scientific method specifically to real-world educational problems. Primary concentration goals are: (1) to engage students in cutting-edge collaborative research; (2) to provide a solid foundation that enables students to integrate theory, research, and practice and fosters a commitment to excellence in research and scholarship; and (3) to help students acquire a deep understanding of human development and learning for the preparation of future educators and educational professionals in all contexts.

Concentration Admission Requirements
- A completed application to graduate studies (see admissions at: http://www.usf.edu/admissions/graduate/index.aspx
- The application fee ($30)
- Preferred GRE scores: verbal minimum of 400 (prior scale)/146 (new scale), quantitative minimum of 400 (Prior scale)/140 (New scale)
- GPA minimum 3.00 on a 4.00 grading score in master’s degree program
- Two official transcripts from the master’s degree program and baccalaureate degree program
- Master’s degree from an accredited institution or the equivalent bachelors and/or graduate degrees from a foreign institution
- Current resume or vita
- Personal statement: in a 2-3 page statement, please describe why you want to pursue this degree, why you feel USF would be a good fit, which Educational Psychology faculty you would seek to work with and why, and your long term goals.
- Preference to students with psychology background
- Preference to students with some research experience
- Official TOEFL results are required of all international applicants whose native language is not English and who have not studied in an English speaking country for at least one academic year.
- Three letters of recommendation. The letters should be written by persons who are in a position to comment on the likelihood of success within the department and who are not related to the applicant.
- Phone or personal interviews will be conducted in order to determine the level of fit between the concentration, faculty, and students, but will not be required initially.

Total Major requirements with this concentration 70 hours minimum

Core Requirement
EDG 7067 Philosophies of Inquiry 3

Concentration Requirements
Specialization Coursework:
(At least 12 hours must be 7000 or 6000 level courses requiring advanced graduate standing)
EDF 7357 Applications of Developmental Theories* 4
EDF 7138 Adolescent Development* 4
EDF 7145 Cognitive Issues in Instruction* 4
EDF 7265 Psychology of Oral and Written Language Development 4
EDF 7359 Resilience in Human Development 4
EDF 7947 Research Practicum (1 hour, taken 4 times) 4
EDF 7930 Professional Seminar (1 hour, taken 4 times) 4
EDG 7946 Super. Experience in College Teaching 1

Cognate Area 12 hours minimum

Measurement/Statistics/Research Design 11 hours minimum
EDF 7408 Statistical Analysis in Education II 4
EDF 7410 Design of Systematic Studies in Education 4

http://www.usf.edu/education/
Select at least one of the following courses:
- EDF 7437 Advanced Educational Measurement I 3
- EDF 7484 Statistical Analysis in Education III 4
- EDF 7493 Systems Approaches for Program Planning, Evaluation & 4
- EDF 7477 Qualitative Research in Education I AND Development 4
- EDF 7478 Qualitative Research in Education II 4

Foundations 3 hours
Any graduate level course taught by Philosophical/Social/Historical Foundations

Comprehensive / Qualifying Exam Requirements
Up to half of credits from EDF 7910 can be converted to dissertation requirements

Dissertation: 12 hours minimum

ELEMENTARY EDUCATION (DEE)
Offered from the Department of Teaching and Learning
The doctoral degree program in Curriculum and Instruction with a Concentration in Elementary Education prepares scholars to understand elementary practice through research and innovation that unites community engagement and rigorous intellectual inquiry.

The major features opportunities to:
- Participate in engaged scholarship through collaborative work focused on current educational problems with partner schools and community centers.
- Develop integrated and interdisciplinary perspectives on elementary educational practice with a commitment to diversity and exploring global perspectives.
- Explore issues of equity both locally and globally
- Work both independently and in collaboration with faculty to pursue rigorous research agendas, publish in scholarly journals, and present widely at state, national and international conferences.
- Engage in learning experiences that ensure the candidate possesses an innovative response to key issues in the field.

Total Major requirements with this concentration: 75 hours minimum

Core Requirement
EDG 7067 Philosophies of Inquiry 3

Research Methods and Tools 20 hours minimum
- EDF 7408 Statistical Analysis Education II 4
- EDF 7410 Design of Systematic Studies in Education 4
- EDF 7437 Advanced Measurement or EDF 7484 Statistical Anal Education III or equivalent course in Statistics/Measurement/Research Design 3
- EDF 7477 Qualitative Research in Education I or introductory equivalent selected 3-4 in conjunction with major committee
- EDF 7478 Qualitative Research in Education II or equivalent qualitative course selected with approval from major committee 3-4
- Specialized Research Methods Graduate level Course determined in conjunction with major committee based on the student’s research agenda and prior presentation 3-4

Concentration Requirements 42 hours minimum
- Required Courses
  - EDE 7206 Critical Analysis of Curriculum in Elementary Schools (NEW) 3
  - EDE 7481 Research in Teaching and Learning in Elementary Schools 3
EDG 7046 Trends & Issues Ed Policy: Lit & T Ed 3

Select 4 courses from the following:
- ECE 7317 ICT in the Early Years 3
- EEC 7627 Arts & Aesthetics in Early Childhood Education 3
- EEC 7416 Socio-Cultural App to Working w Child 3
- EEC 7056 Leadership & Advocacy Issues Affecting Young Children 3
- EDG 7931 Working in Schools 3
- EDG 7201 Differentiated Supn & Prof Development 3

**CELS Professional Development Courses** 12 hours minimum
- EDG 7938 Adv Grad Seminar; Intro to Research in Childhood Ed & Lit Studies 3
- EDG 7939 Adv Grad Seminar: Research in Progress 3
- EDH 7325 Supervised Teaching in Childhood Ed & Lit Studies I 3
- EDH 7326 Supervised Teaching in Childhood Ed & Lit Studies II 3

**Cognate** 9 hours minimum
The cognate can be described as a secondary concentration or sub-specialization area. Coursework must be taken at the graduate level, and is developed in consultation with the major professor and the doctoral committee. The coursework in the cognate is normally developed in support of the student’s research objectives.

**Qualifying Examination**

**Dissertation** 4 hours minimum

**ENGLISH EDUCATION (DCE) – 59 HOURS**

**Offered from the Department of Teaching and Learning**
The Curriculum and Instruction degree is offered with a concentration area in English Education. Candidates' majors are planned with the approval of a faculty committee based upon previous experience and future goals.

**Concentration Admission Information**
To be admitted to the English Education Concentration of the doctoral degree program prospective students must meet the university’s minimum admissions requirements which include presenting an earned Bachelor’s and Master’s degree. A 3.00 grade point average is required for all work completed as an upper division student in the Bachelor’s degree, OR a 3.50 grade point average for any work completed in the Master’s degree. Additionally, students must provide the following documents to the doctoral graduate coordinator:

- A current curriculum vitae
- Three letters of recommendation from people who can attest to the candidate’s capacity to do doctoral work and/or excellence as a classroom teacher
- A written statement of professional goals
- Transcripts from previous academic work
- A writing sample. This could be a published article or a scholarly paper prepared for a previous class that demonstrates capacity as a thinker and writer
- Official scores from the Graduate Record Exam.

Formal application to the Office of Graduate Studies must also be made at the time the above documents are submitted. Following a review of the written documentation, prospective students are expected to participate in an interview with the graduate faculty.
Admission Criteria

The admissions committee will consider each candidate in light of his or her unique submission and qualifications. The expectations used by the faculty are:

- 3.50 GPA on a 4.00 scale for all graduate work and 3.00 for the last 60 hours of undergraduate studies,
- An undergraduate major in the English, humanities, English education or a closely related field from a regionally accredited institution or the equivalent bachelors and/or graduate degrees from a foreign institution,
- A master’s degree in English education or closely related field from a regionally accredited institution or its international equivalent,
- Successful teaching experience in a K-12 setting,
- Demonstrated commitment to personal professional growth and development,
- Strong academic, analytic and communications skills.

International Students

All applicants whose native language is other than English or who have earned a degree from an institution outside the United States must meet the University requirements relative to international graduate admission, (e.g. TOEFL scores, etc.). In addition to these university requirements, applicants to the College of Education must provide the following:

- A social security number in majors requiring practica or internships;
- Other information as required by the major of interest, (e.g. Graduate Record Exam scores, etc.)

Total Major requirements with this concentration: 59 hours minimum

Core Requirement

EDG 7067 Philosophies of Inquiry 3

Secondary Education Core

ESE 7343 Teaching and Learning in the Content Areas 3
ESE 7944 Collegiate Teaching in Secondary Education 3
ESE 7937 Advanced Seminar in Secondary Education 3-6
LAE 6906 Independent Study (optional and may be substituted for one of above with approval of Doctoral Committee) 3

Statistics/Measurement/Research Design

EDF 7408 Statistical Analysis II 4
Note: EDF 6407 pre-req for this course
EDF 7410 Design of Systematic Studies in Education 4
EDF 7477 Qualitative Research in Education I 4
EDF 7478 Qualitative Research in Education II 4
Additional courses to be determined by the graduate faculty based on the orientation of the student’s research agenda and prior preparation.

Cognate

LAE students may complete a cognate or a set of electives. These courses must be consistent with the student’s program of study and selected with the approval of a graduate committee. Courses in the Cognate must be taken at the graduate level.

Concentration Requirements

The following four seminars are required:

LAE 7735 Advanced Seminar in English Education: Language and Literacy 3
LAE 7735 Advanced Seminar in English Education: Teacher Education 3
LAE 7735 Advanced Seminar in English Education: Writing 3
LAE 7735 Advanced Seminar in English Education: Research 3
LAE 7910 Directed Research in LAE 12*

Total 24-30 hours minimum
*3 hours repeated with LAE 7735 each semester. This course engages students in establishing a current active research/scholarly agenda that leads toward independent scholarship and successful, timely completion of the doctoral degree. Additional courses in this area will be determined by the student’s research interests.

**Doctoral Qualifying Examination**

Students must demonstrate satisfactory performance on the Doctoral Qualifying Examination before admission to candidacy. *English Education* uses the College of Education Qualifying Exam Option. Consult the Graduate Faculty contact for specific information.

**Dissertation**

4 hours minimum

**HIGHER EDUCATION (DHA)**

*Offered from the Department of Educational and Psychological Studies*

The Higher Education Administration concentration is a research degree that prepares individuals interested in teaching, research, and policy positions in both community colleges and universities.

**Total Major requirements with this concentration:** 63 hours minimum

**Core Requirements**

3 hours minimum

EDG 7067 Philosophies of Inquiry 3

**Measurement/Statistics/Research Design**

12 hours minimum

Research, evaluation or measurement to be determined with the student’s committee's approval with the goal to build a robust and varied academic research background. Student should not take research courses without committee advisement.

**Higher Education Core**

15 hours

EDH 7057 Introduction to Research Studies in Higher Education* 3

EDH 6051 Higher Education in America OR
EDH 6081 Community College American Higher Education 3

EDH 6938 Seminar in College Teaching 3
EDH 7225 Curriculum Development in Higher Education 3
EDH 7935 Higher Education Capstone Seminar 3

(*must be taken early after admitted to the major)

**Concentration Requirements**

21 hours minimum

Specialization courses to be chosen and approved with the student’s major committee, from the following list:

EDH 7505 Higher Education Finance 3
EDH 7632 Leadership in Higher Education 3
EDH 7633 Governing Colleges and Universities 3
EDH 7635 Organization and Administration in Higher Education 3
EDH 7636 Organizational Theory and Practices in Higher Education 3
EDH 7145 Cognitive Issues in Higher Education 3
EDH 7530 History of Higher Education 3
EDH 7931 Critical Issues in Higher Education 3-9
EDH 6906 Independent Study 3-9
EDH 6947 Internship in Higher Education 3-6
EDH 7910 Directed Research 3-9
ADE 6385 Adult Learner 3
SDS 7640 Student Affairs Administration 4

http://www.usf.edu/education/
Residency
There is no residency requirement.

Doctoral Qualifying Examination
Students must demonstrate satisfactory performance on the Doctoral Qualifying Examination before admission to candidacy.

Dissertation
EDH 7980 Dissertation 12 hours minimum
The Office of Graduate Studies policy is that after being admitted to candidacy, the student must register for two hours of EDH 7980 each semester until graduation.

Please be advised that major and/or course requirements are subject to change, per state legislative mandates, Florida State Department of Education program approval standards, and accreditation criteria.

INSTRUCTIONAL TECHNOLOGY (DIT) – 68 HOURS MINIMUM
Offered from the Department of Teaching and Learning
Instructional Technology is the theory and practice of design, development, utilization, management and evaluation processes and resources for learning.” (Seels & Richey, 1994, p.9). The USF Ph.D. in Curriculum and Instruction with a Concentration in Instructional Technology is designed to prepare scholars for leadership roles in colleges, universities, corporations, the military, and other venues where research, development, and implementation of technology-based instructional methods and materials take place.


Total Major requirements with this concentration: 68 hours minimum

Core – 3 hours
Prof Core – 7 hours
Internship – 3 hours
Stats – 16 hours
Specialization – 9 hours
Electives – 12 hours
Cognate – 12 hours
Dissertation – 6 hours

Core Requirement
EDG 7067 Philosophies of Inquiry 3

Interdisciplinary Professional Core
Choice of ONE of the following adult education or foundation courses (3) (required)
- ADE 6385 The Adult Learning 3
- EDG 7931 Globalization and Higher Education 3
- ADE 6070 International Adult Education 3
- EDF 7357 Applications of Developmental Theories 3
- EDF 7486 Classics in Ed Research 4
- EDF 6736 Education Communication and Change 3
- EDF 6745 Schools and the Future 4
- EDF 6883 Issues in Multicultural Education 4
- EDF 6217 Behav. Theory/Class learning 3
- EDF 7530 History of Higher Ed in the U.S. 3
- EDH 7225 Curr Dev in Higher Ed 3

Students may substitute an alternative 6000/7000 level course with approval of their major professor.
The Following course is required:
EDF 7145 Cognitive issues in Instruction 4

However, with major professor approval, a substitution can be made to another ed psych course

College Teaching Internship
ESE 7346 College Teaching in Secondary Education (Required) 3

One to three credits of directed research (EME 7910) may be substituted for doctoral students with documented substantial teaching experience with adult learners, as determined by the student’s major professor

Statistics/Measurement/Research Design 16 hours minimum
EDF 6407 Statistical Analysis I 4
EDF 7408 Statistical Analysis II 4
EDF 7410 Design of Systematic Studies in Education 4
EDF 7477 Qualitative Res in Education I 4
OR EDF 7478 Qualitative Research in Ed. II (Required) 4

Major Specialization 9 hours minimum
EME 6613 Development of Technology-Based Instruction 3
EME 7938 Computer-Augmented Instructional Paradigms in Education 3
EME 7939 Research in Technology-Based Education 3

Electives 12 hours minimum
Choice of FOUR electives from among appropriate IT course offerings below (Required):
EME 7910 Directed Research 3
EME 7458 Research in Distance Learning 3
EME 7631 Research in Technology Project Management 3
EME 7615 Game Design for Ebooks EME 6209 Digital Video 3
EME 6930 Web programming 3
EME 6930 Flash 3
EME 6215 Instructional Graphics 3
EME 6207 Web Design 3
Or other doctoral courses as determined by the graduate faculty to be appropriate

Cognate 12 graduate hours
Courses selected are consistent with the student’s program of study and selected with the approval of a graduate faculty committee and should be coursework other than in the concentration area. Courses in the cognate area must be taken at the graduate level.

Qualifying Examinations
All students will be required to pass a written qualifying examination of twelve hours duration (three successive four-hour days) that integrates work in the specialization area, cognate area and foundations area.

Dissertation 6 hours minimum
EME 7980 – Dissertation

INTERDISCIPLINARY EDUCATION (DIE) – 69 HOURS MINIMUM
Offered from the College of Education

The purpose of the Interdisciplinary track in the Ph.D. degree is to provide a framework to support innovative, boundary-crossing inquiry among students and faculty across campus. Designed to foster research that approaches problems in education from interdisciplinary perspectives, the major allows students who have academic backgrounds and interests that span multiple disciplines to construct an individualized program of study grounded in at least two fields, one of which may be outside the College of Education. Students who have the ability and desire
to integrate study and research between at least two disciplines/fields to address questions in education broadly defined are encouraged to apply to the Interdisciplinary track.

**Total Major requirements with this concentration:**  69 hours minimum

**Core Requirements**

EDG 7067 Philosophies of Inquiry  3

**Foundations of Education – minimum of 9 credits or 3 courses**

Courses selected from among areas of curriculum, social/historical foundations, and educational psychology, or equivalent, with approval of doctoral committee. Examples of appropriate courses identified on list on concentration website.

**Research Methods and Tools – minimum of 15 credits**

Minimum of 15 credits, or 2 courses addressing Quantitative Methods and 2 courses addressing Qualitative Methods. Examples of appropriate courses identified in list on concentration website, or equivalent, with the approval of the doctoral committee. Note that the student’s doctoral committee may require more than the minimum number of courses/experiences.

**Concentration Requirements**  36 hours minimum

Courses must be distributed across two/three disciplines, with the approval of the doctoral committee.

**Doctoral Dissertation**  6 hours minimum

Note that upon attainment of Doctoral Candidacy student must register for a minimum of 2 credit hours of Dissertation every semester (including summers) until successful completion and graduation.

Note that the student’s doctoral committee may require more than the minimum number of hours. Note that the student’s doctoral committee will be responsible for ensuring that the student will acquire a comprehensive understanding of the theory and application of multiple research methods and design, that the student is actively engaged in research throughout the program of study, and that the student will have a supervised teaching experience.

**LITERACY STUDIES (DRD)**

**Offered from the Department of Teaching and Learning**

The doctoral degree program in Curriculum and Instruction with a Concentration in Literacy Studies prepares research scholars with expertise in literacy processes, literacy instruction, and literacy teacher education.

The major features in-depth exploration of literacy theories and research, the broad study of systematic inquiry skills, apprenticeship learning of various research methodologies, the development of personalized strands of research, and a mentored residency experience in literacy studies.

The major features:

- Literacy research based on the highest standards of discovery, creativity, and intellectual attainment.
- Teaching as a process of interactivity and community involvement in which literacies are viewed as mediated competencies within a participatory culture.
- Service to the Community to enrich the lives of students and teachers by promoting the importance of advocacy and autonomy through the development of literacies in the lives of children, adolescents, and adults.
- Global Perspectives broadened through partnerships in diverse communities that embrace multiple perspectives and globalized literacy practices.
- Technology as a tool for playing, performing, simulating, appropriating, multitasking, distributing cognition, collecting intelligence, judging, networking, navigating, and visualizing. In other words, technology as new media literacies. www.newmedialiteracies.org
- Student Success as a shared responsibility and mutual goal of the doctoral student, faculty, and major.
This Concentration is Fall Admission Only

Total Major requirements with this concentration: 69 hours minimum

Core Requirement
EDG 7067 Philosophies of Inquiry 3

Research Methods and Tools 20 hours minimum
EDF 7408 Statistical Analysis for Educational Research II 4
EDF 7410 Design of Systematic Studies in Ed 4
EDF 7437 Advanced Measurement 1 3
OR
EDF 7484 Statistical Analysis for Ed Research III 4
OR an equivalent course in statistics/measurement/research design

EDF 7477 Qualitative Research in Ed 1 4
OR
Introductory equivalent selected in consultation with major committee 3-4

EDF 7478 Qualitative Research in Ed II 4
OR
Introductory equivalent selected in consultation with major committee 3-4

Specialized Research Methods Course selected in conjunction with major Committee 3

Concentration Requirements 42 hours minimum
Literacy Studies Courses (21 hours minimum: students select 7 courses)
RED 7745 Research in Reading Instruction 3
LAE 7868 Symbolic Processes of Multimedia Literacy 3
LAE 7794 Survey of Research on Writing Development and Instruction 3
RED 7798 Research in Trans-Disciplinary Texts and Teaching 3
LAE 7718 Linguistic Foundations in Literacy 3
EDG 7046 Trends and Issues in Ed Policy: Literacy and Teacher ED 3
LAE 7745 Literary Theory and Research in Children’s Literature 3
RED 7931 Special Topics in Reading 3

CELS Professional Development Courses 12 hours minimum
EDG 7938 Advanced Graduate Seminar; Intro to Research 3
EDG 7939 Advanced Grad Seminar: Research in Progress 3
EDH 7325 Supervised Teaching in Childhood Ed and Literacy Studies 3
EDH 7326 Supervised Teaching in Childhood Ed and Literacy Studies 3

Cognate 9 hours
Recognizing the social, cultural, and developmental factors that affect literacy teaching and learning, we encourage doctoral students to explore fields of study that broaden their knowledge of other disciplines and that offer a different lens through which students may understand and explore literacy studies. We ask students to identify a minimum of three courses to form a cognate. Coursework must be taken at the graduate level, and the cognate is developed in consultation with the major professor and the doctoral committee. The coursework in the cognate is developed in support of the student’s research objectives.

Dissertation 4 hours
This concentration includes 20 hours of coursework in research methods and tools as well as 6 hours of seminar courses that specifically apprentice students into the research role. In addition, our annual review process ensures that students engage in research throughout their majors and they receive mentorship from faculty. As
a result, we have set the dissertation hours to reflect the minimum needed for enrollment during one academic year.

**MATHEMATICS EDUCATION (DMA) – 65 HOURS**

Offered from the Department of Teaching and Learning

The Curriculum and Instruction degree is offered with a concentration area in Mathematics Education. Each major is highly individualized. Candidates’ programs of study are planned with the approval of a faculty committee based upon previous experience and future goals.

**Concentration Admission Information**

The admissions committee will consider each candidate in light of his or her unique submission and qualifications. The expectations used by the faculty are:

- degree from regionally accredited institutions or the equivalent bachelors and/or graduate degrees from a foreign institution
- Undergraduate or master’s degree should be in an appropriate education or mathematics related field
- Official GRE scores within the last 5 years with Preferred scores of 600 on the quantitative portion and at least 475 on the verbal portion are expected
- “B” (3.00 on a 4.00 scale) average or higher in all work attempted while registered as an upper division student in the Baccalaureate degree or minimum of 3.0 grade point at the master’s level
- Successful teaching experience in a K-12 or college level setting preferred
- Demonstrated commitment to personal professional growth and development
- Strong academic, analytic and communications skills
- Statement of purpose
- Three letters of recommendation

**Total Major requirements with this concentration:** 65 hours minimum

**College Core**

EDG 7067 Philosophy of Scholarly Inquiry 3

**Secondary Education Core**

- ESE 7415 Teaching and Learning in Content Areas (required) 3
- ESE 7937 Advanced Seminar in Sec Ed (required) 3
- ESE 7944 Collegiate Teaching in Secondary Education (Required) 3

**Statistics/Measurement/Research Design**

- EDF 7408 Statistical Analysis II 4
  - *Note; EDF 6407 is a pre-req to enroll in this course*
- EDF 7410 Design of Systematic Studies in Ed 4
- EDF 7477 Qualitative Res in Ed I 4

Additional research methodology course to be determined by the graduate faculty based on the orientation of the student's research agenda and prior preparation

**Concentration Requirements**

- MAE 7655 Research Issues in Technology 3
- MAE 7146 Curriculum History/Research Mathematics Education 3*
- MAE 7xxx Curriculum Design and Research 3*
- MAE 7794 Preparing K-12 Math teachers 3
- MAE 7796 Research Issues 3
- MAE 7138 Assessment Issues 3
- MAE 7xxx Learning Theories in Math Ed 3
- MAE 7945 Practicum 3
- **OR MAE 7910 Directed Research** 3
Cognate or Electives
MAE students are required to complete a cognate or a set of electives. Courses consistent with the student’s program of study selected with the approval of a major committee. Courses in the Electives or Cognate must be taken at the graduate level.

Doctoral Qualifying Examination
Students must demonstrate satisfactory performance on the Doctoral Qualifying Examination before admission to candidacy. The Qualifying Exam is composed of three distinct sections that represent expected areas of student competency (Synthesis of Math Education Research, Utilization of Professional Expertise, and Evaluation and Design of Research Studies). A student’s cognate area is viewed as connected to his or her math experiences, rather than a separate and unrelated area. As such, the cognate will be embedded into the QE as appropriate.

Dissertation
4 hours

Residency
Students must be registered for nine (9) hours of coursework, two semesters in a twelve-month period. The expectation is that students will work no more than half time employment during the residency period.

MEASUREMENT AND EVALUATION (DME) – 71 HOURS
Offered from the Department of Educational and Psychological Studies
The Department of Educational Measurement and Research offers the Ph.D. in Curriculum and Instruction with a concentration in Measurement, Research and Evaluation. Skills in inquiry and methodology are developed within a programmatic context that encourages growth of knowledge about education, considers important principles of research, and provides an applied setting in which these elements can be fused into professional applications. The intent of the major is to develop personnel to work in colleges and universities, research centers, school districts, government agencies, commercial test publishing, and major evaluation enterprises. The major includes the Common Core course, Philosophies of Inquiry (3 hours), a minimum of 29 hours in the areas of Statistics, Measurement, Evaluation, and Research, a minimum of 12 hours in the area of concentration (Statistics or Measurement or Evaluation or Research), 9 hours in Education taken outside the Department of Educational Measurement and Research, which are aligned with the students’ research interests, and a dissertation (18 hours). The major includes a minimum of 71 hours beyond the master’s degree.

Total Major requirements with this concentration: 71 hours minimum

Core Requirements
EDG 7067 Philosophies of Inquiry 3

Concentration Requirements

Research Methods and Tools: Statistics, Measurement, Evaluation and Research 29 hours minimum
EDF 7408 Statistical Analysis for Educational Research II 4
EDF 7484 Statistical Analysis for Educational Research III 4
EDF 7437 Advanced Educational Measurement I 3
EDF 7438 Advanced Educational Measurement II 4
EDF 7485 Theory and Practice of Program Evaluation 3
EDF 7940 Supervised Practicum in Applied Evaluation 3
EDF 7410 Design of Systematic Studies in Education 4
EDF 7477 Qualitative Research in Education 4

Concentration Courses in Statistics, Measurement, Evaluation, and Research Methods 12 hours minimum
Note: Students, in consultation with their major professor and committee, will select one area and a minimum of 12 hours Courses listed are examples of courses
Statistics
EDF 7412 Application of Structural Equation Modeling in Education 3
EDF 7474 Applied Multilevel Modeling in Education 3
EDG 7498 Analysis for Single Case Experiments 3
PHC 7059 Advanced Survival Analysis 3

Measurement
EDF 7439 Foundations of Item Response Theory 3
EDF 7469 Introduction to Computer-Based Testing 3
EDG 7931 Rasch Model 3
SOP 6669 Factor Analysis 3

Evaluation
EDF 7491 Consulting and Project Management Skills for Evaluators 3
EDF 7462 Metaevaluation 3
EDF 7493 Systems Approaches for Prog Planning Evaluation & Development 3
PHC 6545 Evaluation in Mental Health 3

Research Methods
EDG 7931 Survey Methods 3
EDF 7477 Qualitative Research in Education II 3
ANG 7750 Research Methods in Anthropology 3
PHC 7606 Focus Group Research Strategies 3

Educational Focus 9 hours minimum
Note: Students, in consultation with their major professor and committee, will take a minimum of 9 hours in Education that are outside the Department of Measurement and Research at the graduate level that will support the student’s research objectives. Courses may come from one or more department (i.e., Adult, Career and Higher Education; Childhood Education and Literacy, Educational Leadership and Policy; Physical Education and Exercise Science; Secondary Education; Social and Psychological Foundations; and Special Education).

For example a students with an interest in methodological issues relative to literacy may take the following 3 courses:
RED 7745 Research in Reading Instruction 3
LAE 7868 Symbolic Processes of Multimedia Literacy 3
LAE 7794 Survey Research on Writing Development & Instruction 3

Qualifying Examination
The student will be required to take the doctoral comprehensive qualifying examination on completion of formal coursework as outlined on the approved program of study(or in the semester in which all formal coursework will be completed). The student in consultation with his/her major professor and/or doctoral committee will select one of the two options for the qualifying examinations: a) a 12-hour written examination administered over a 3-day period that will integrate the work in the student’s area of concentration, or b) the development of a comprehensive scholarly paper that requires the student to demonstrate a depth of understanding and appropriate application of principles in the areas of measurement, evaluation, research design, statistical analyses, and educational foundations.

Dissertation 18 hours minimum
Students may be required to take additional hours depending on the course of study and or academic deficiencies. Please check with the major before applying.
SCIENCE EDUCATION (DSC) – 60 HOURS

Offered from the Department of Teaching and Learning

The Curriculum and Instruction degree is offered with a concentration area in Science Education. Candidates’ programs of study are planned with the approval of a faculty committee based upon previous experience and future goals.

Concentration Admission Requirements

- degree from regionally accredited institutions or the equivalent bachelors and/or graduate degrees from a foreign institution
- Submit official GRE scores. Scores of 600 on the quantitative portion and 475 on the verbal portion are expected.
- Three letters of recommendation
- Interview (preferably in person or in some cases, conducted over the phone or internet)
- Personal Statement of goals and philosophy related to science education
- Recommendations from Graduate Faculty
- 3.50 GPA on a 4.00 scale for all graduate work and 3.00 for the last 60 hours of undergraduate studies,
- An undergraduate major in the STEM fields (science, Technology, engineering or mathematics) or science education or a closely related field form a regionally accredited institution,
- A master’s degree in science education or closely related field form a regionally accredited institution
- Successful teaching experience in a formal or informal education K-12 setting,
- Demonstrated commitment to personal professional growth and development

International Students

All applicants whose native language is other than English or who have earned a degree from an institution outside the United States must meet the University requirements relative to international graduate admission, (e.g. TOEFL scores, etc.). In addition to these university requirements, applicants to the College of Education must provide the following:

- A social security number in degree programs requiring practica or internships;
- Other information as required by the major of interest, (e.g. Graduate Record Exam scores, etc.)

Total Major requirements with this concentration: 60 hours minimum

Core Requirement

EDG 7067 Philosophies of Inquiry 3

Secondary Education Core

ESE 7343 Teaching and Learning in the Content Areas AND 3
ESE 7937 Advanced Seminar in Secondary education 3-6
ESE 7944 Collegiate Teaching in Secondary Education 3

In extenuating circumstances, major may substitute an independent study course if needed by a student. However no more than 3 credit hours in this category can be independent study hours.

Statistics/Measurement/Research Design

EDF 6407 Statistical Analysis I 4
EDF 7408 Statistical Analysis II 4
Selection of one qualitative course with approval from major committee 3-4
Selection of additional 7000 level quantitative, qualitative and/or methodological course approved by major committee 3-4

Concentration Requirements

Courses may include, but not be limited to:

SCE 7090 Philosophy and Nature of Science 3
SCE 7931 Historical, Social & Epistemological Foundations of Science Education 3
SCE 7345  Theories and practice of science teaching and learning  3
SCE 7636  Advanced Trends in Science Education  3
SCE 7697  Socioscientific Issues in Science Education  3
SCE 7740  Doctoral Research in Science Education  3
SCE 7910  Directed Research  9-15
Graduate Courses from related major areas may be used in this area with permission of the individual’s doctoral major committee.

Cognate  9 hours
SCE students may complete a cognate or a set of science education electives.
Science Education electives include:
SCE 6634  Current Trends in Science Education  3
SCE 7931  Community Building in Science Education  3
SCE 6645  Mathematics and Science Ed. Policy, Change & School Improvements  3

Courses consistent with the student’s program of study selected with approval of the individual’s doctoral major committee. Courses in the Cognate must be taken at the graduate level.

Doctoral Qualifying Examination
Students must demonstrate satisfactory performance on the Doctoral Qualifying Examination before admission to candidacy.

Dissertation  4 hours minimum

SOCIAL SCIENCE (DSO) – 60 HOURS
Offered from the Department of Teaching and Learning
The Curriculum and Instruction degree is offered with a concentration area in Social Science Education. Each major is highly individualized. Candidates’ programs of study are planned with the approval of a faculty committee based upon a student’s previous experience and future goals.

Concentration Admission Requirements
For consideration for admission, students must submit:
• Official GRE scores (dating back no longer than five years)
• Official transcripts from regionally accredited institutions
• A statement of professional goals
• 3 letters of recommendation from prior professors, and/or school administrators and
• Complete an interview with the doctoral graduate coordinator.

Admission Criteria
The admissions committee will consider each candidate in light of his or her unique submission and qualifications. The expectations used by the faculty are:
• 3.50 GPA on a 4.00 scale for all graduate work and 3.00 for the last 60 hours of Undergraduate
• An undergraduate major in the social sciences or humanities, social sciences education
• or a closely related field from a regionally accredited institution,
• A master’s degree in social sciences education or closely related field from a regionally
degree from regionally accredited institutions or the equivalent bachelors and/or graduate degrees
• Successful teaching experience in a K-12 setting,
• Demonstrated commitment to personal professional growth and development,
• Strong academic, analytic and communications skills.

Total Major requirements with this concentration:  60 hours minimum
Core Requirements:

**College Core** 3 hours minimum
EDG 7067 Phil. Of Scholarly Inquiry 3

**Secondary Education Core** 6 hours minimum
ESE 7343 Teaching & Learning in Content Area (Required) 3
ESE 7937 Advanced Seminar in Secondary Education (Required) 3
ESE7346 Collegiate Teaching in Secondary Education (Optional) 3
SSE 7910 Independent Study (Optional) 3

*Note: Under special circumstances, major may substitute an independent study course if needed by a student. However, no more than 3 credit hours in this category can be independent study hours.*

**Statistics/Measurement/Research Design** 14 hours minimum
EDF 7408 Statistical Analysis II 4
   *Note: EDF 6407 is a prerequisite to enrolling in EDF 7408*
EDF 7410 Design of Systematic Studies in Education 4
Selection of one qualitative course with approval from major committee. 3-4
Selection of additional 7000 level quantitative, qualitative and/or methodological course approved by major committee. 3-4

Or courses to be determined by the graduate faculty based on the orientation of the student’s research agenda and prior preparation.

**Concentration Requirements:** 24 hours minimum
Social Science Education:
The requirements are as follows or as recommended by the doctoral coordinator, graduate faculty, or doctoral committee, and approved by the college and/or Office of Graduate Studies.
SSE 7700 Social Science Curriculum and Instruction Issues 4
SSE 7710 Research in Social Science Education 4
SSE 7720 Social Science Education Technological Innovations 4
SSE 7730 Philosophy of Social Science Education 4
SSE 7945 Applied Rsch Soc Sc Ed – SSE 8*
*(2 hours repeated with SSE 7730, SSE7720, SSE7700 and SSE 7710 This course engages SSE students in establishing an active research/scholarly agenda that leads toward independent scholarship and successful, timely completion of the doctoral degree.)*

**Cognate:** 9 hours
SSE students are required to complete a cognate or a set of electives. Courses consistent with the student’s program of study are selected with the approval of the student’s major committee. Courses in the Cognate must be taken at the graduate level. Although it is expected that all SSE Ph.D. students will satisfy the “teaching in higher education” requirement through direct experience teaching courses in the major, they may opt to take the proposed “college teaching” course under consideration by the department as an elective or part of their Cognate.

**Doctoral Qualifying Examination**
Students must demonstrate satisfactory performance on the Doctoral Qualifying Examination before admission to candidacy.

**Dissertation:** 4 hours minimum
SSE 7980 Dissertation Research
Residency
Students must be registered for nine (9) hours of coursework, two semesters in a twelve-month period. The expectation is that students will work no more than half time during the residency period.

SPECIAL EDUCATION (DSE) – 64 HOURS (MINIMUM)
Offered from the Department of Teaching and Learning
The doctoral degree program in Curriculum and Instruction with a Concentration in Special Education focuses on urban special education and university-school partnerships in preparing researchers, teacher educators, and school leaders. Graduates of the major will have an informed perspective on ethical issues in the interactions of race, ethnicity, social class, gender, and disability; and the impact of these issues on special education policies, research, teacher education and services.

Major graduates will demonstrate knowledge and skills in the design, implementation and maintenance of university-school partnerships; an interdisciplinary grounding in and respect for multiple genres and methods of inquiry; the ability to conceptualize, plan and conduct research; and the ability to value the conceptual and analytical skills of a scholar. The Department emphasizes interdisciplinary research and development. Faculty members in several departments have joint appointments in special education. After admission to a major, the student will be assigned a doctoral major advisor who will assist in identifying a major professor.

Concentration Admission Requirements:
Requirements for all applicants:

- Have a master’s or educational specialist’s degree, or equivalent, from a regionally accredited college or university or the equivalent bachelors and/or graduate degrees from a foreign institution
- Have earned a GPA of at least 3.00 on a 4.00 scale in upper division undergraduate coursework, or a minimum GPA of 3.50 on a 4.00 scale in graduate coursework.
- Have submitted official Graduate Record Examination (GRE) scores.
- Provide three letters of recommendation from professionals who are familiar with their scholarship and work history.
- Provide evidence of at least three years of successful work experience in relevant professional roles.
- Present self professionally in an oral interview with two or more faculty members.
- Demonstrate the ability to write professionally by submitting a spontaneous writing sample at the time of the interview.
- Provide a statement of professional goals (immediate, intermediate, and long term) and research interests. Professional goals and research interests should be compatible with the opportunities provided through a doctoral degree in special education.
- Receive endorsement by majority of tenured and tenure-earning faculty members in the department.

For international applicants: Applicants whose native language is not English or who have earned a degree outside the United States must meet the University requirements relative to international graduate admission, (e.g. TOEFL scores). In addition to these university requirements, applicants to the college of Education must provide the following; 2) A social security number in degree programs requiring practica or internships; 3) Other information as required of all other applicants to the Ph.D. degree program in Special Education.

Total Major requirements with this concentration: 64 hours minimum post-master’s
Major Common Core– 3 hours
Statistics/Research Methods – 12 hours
Concentration requirements – 25 hours
Cognate – 12 hours
Dissertation – 12 hours

Statistics/Research Methods - 12hours
In addition to the specialization requirements, all students must complete at least 12 hours of coursework in Measurement/Statistics/Research Design, including:

- EDF 7408 Statistical Analysis for Education II
- Two qualitative research methods courses (6 hrs. minimum)
- EDF 7477 Qualitative Research in Education Part I I

http://www.usf.edu/education/
EDF 7478 Qualitative Research in Education Part II 4

Concentration Requirements - 25 hours
EEX 7744 C&I Issues in Urban Special Education 3
EEX 7815 Research Seminar/Field Study 6
EEX 7429 Special Education Teacher Education 3
EEX 7428 Teacher Education in Special Education: Conceptual 3
EDA 7238 Special Education Law & Policy Issues 3
EEX 7425 Special Education Leadership Studies 1
EEX 7745 Historical, Ethical, & Disciplinary Foundations of Special Education 3
EEX 7746 Ethics in Teacher Education and Teacher Development 3

Cognate (Minimum) - 12 hours
Courses selected are consistent with the student’s program of study and selected with the approval of a major committee and should be coursework other than in the concentration area. Courses in the cognate area must be taken at the graduate level.

Doctoral Qualifying Examination:
All students must perform successfully on a doctoral qualifying examination as part of the criteria for admission to candidacy.

Dissertation - 12 hours
Dissertation hours may not be taken until after Candidacy is attained. Students must be registered for a minimum of 2 credit hours every semester following candidacy until dissertation is defended, including semester in which student graduates.
EEX 7980: Dissertation: Doctoral 12

TEACHER EDUCATION (TED)
Offered from the Department of Teaching and Learning: A minimum of 60 hours beyond the Master’s degree is required.
The doctoral degree program in Curriculum and Instruction with a Specialization in Teacher Education prepares students to become scholars and practitioners in the field of teacher education. The Specialization engages students in course work, research, and professional experience in school and community settings. Graduates will have the knowledge and skills needed to excel in the scholarships of teaching, service and research.

The Concentration features opportunities to:
- Participate in engaged scholarship through collaborative work focused on current educational problems with partner schools and community centers.
- Develop integrated and interdisciplinary perspectives on teacher education practice with a commitment to diversity and exploring global perspectives.
- Explore issues of equity both locally and globally.
- Work both independently and in collaboration with faculty to pursue rigorous research agendas, publish in scholarly journals, and present widely at state, national and international conferences.
- Engage in learning experiences that ensure the candidate possesses an innovative response to key issues in teacher education and their Area of Emphasis (e.g., subject area or level).
- Participate in teacher education programs as teaching assistants.
- Engage in scholarship of teaching and learning.

Concentration Admission Requirements
- Earned degrees from regionally accredited institutions or an international equivalent.
- Submit official GRE scores
- Three letters of recommendation.
- Interview (preferably in person or telephone/Internet).
- Personal Statement of goals and philosophy related to teacher education.
- Recommendations from Specialization Faculty.
- 3.50 GPA on a 4.00 scale for all graduate work and 3.00 for the last 60 hours of undergraduate studies.
- An undergraduate major in a field appropriate to the applicant’s expected Area of Emphasis from a regionally accredited institution.
- A master’s degree in a field appropriate to the applicant’s expected Area of Emphasis from a regionally accredited institution.
- Successful teaching experience in a formal or informal education P-12 setting.
- Demonstrated commitment to issues of diversity and social justice.

**Total Major requirements with this concentration: 60 hours minimum**

**Core Requirement**

EDG 7067 3 Philosophies of Inquiry

**Research Methods and Tools – 12-16 hours minimum**

Selection of four 7000 level quantitative, qualitative or methodological courses approved by the student’s major committee.

**Concentration Requirements - 18 hours minimum**

EDE 7481 Teacher Education Seminar (students will enroll at least three times)

at least three other courses approved by the student’s major committee such as:

EDG 7066 Critical Pedagogy in Teacher Education

ESE 7220 Curriculum Frameworks for Teacher Preparation

ESE 7346 Collegiate Teaching in Secondary Education

EDF 7946 Supervised Experience in College Teaching

EDG 7626 Supervised Teaching in Childhood Education & Literacy Studies I

EDE 7327 Differentiated Supervision and Professional Development

EDG 7035 Design and Evaluation of Teacher Education Programs

or other courses approved by doctoral committee.

**Teacher Education Area of Emphasis - 9 hours minimum**

A minimum of three courses in teaching and learning in a subject area (e.g., English, Social Studies, Science, Math, Foreign Language); at a level (e.g., Early Childhood, Elementary Education, Middle School, High School); and/or in a specialized area (e.g., Special Education) approved by the student’s major committee.

**Research Practicum in the Area of Emphasis - 6 hours minimum**

Students will be expected to engage in research activities under the direction of a Area of Emphasis faculty member that will lead to the development of the students’ knowledge and skills needed to write literature reviews, and design and conduct research studies.

**Qualifying Examination**


**Dissertation - 12 hours minimum**

EDG 7980 12 Dissertation

**COURSES**

See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
EDUCATIONAL LEADERSHIP PROGRAM

Master of Education (M.Ed.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines
Fall: June 1
Spring: October 15

Minimum Total Hours: 30
Level: Masters
CIP Code: 13.0401
Dept. Code: LEA
Major/College Codes: CAS ED
Approved: 1974

CONTACT INFORMATION

College: Education
Department: Leadership, Counseling, Adult, Career, and Higher Education (L-CACHE)
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Master of Education (M.Ed.) in Educational Leadership degree consists of a minimum of thirty credits of coursework beyond the Bachelor’s degree. Students in the program engage research in order to develop socially just decision-making strategies, engage and inform stakeholders, sustain motivation for change, and build academic improvement opportunities for all children. Through collaborative inquiry, culturally relevant pedagogy, leadership opportunities, and public deliberation, students address historical and perennial issues confounding public education. Accordingly, the M.Ed. in Educational Leadership prepares schools leaders to perform their designated tasks in an effective, equitable and ethical manner aligned to the Florida Principal Leadership Standards (FPLS) for K-12 schools. Successful completion of coursework and degree requirements fulfills core curriculum requirements for State of Florida Level I Educational Leadership certification.

Accreditation
Accredited by National Council for the Accreditation of Teacher Education/Council for the Accreditation of Educator Preparation (NCATE/CAEP); and the Florida Department of Education.

ADMISSION INFORMATION

Admission to the M.Ed. in Educational Leadership Program occurs each fall and spring semester. Admission is based on a holistic evaluation of each applicant’s demonstrated academic potential to complete all degree requirements successfully. Success in the M.Ed. program requires a commitment to utilizing rigorous inquiry, developing strong analytical and writing skills, and demonstrating a commitment to purposeful inclusive practices that lead to learning for all students. The program faculty will consider each applicant within the context defined by her or his personal and professional qualifications.

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

• Have a master’s or educational specialist’s degree, or equivalent, from a regionally accredited college or university or the equivalent bachelors and/or graduate degrees from a foreign institution
• A minimum 3.00 GPA on a 4.00 scale in upper division undergraduate coursework.
• For those seeking State of Florida Level I Educational Leadership certification, a valid Florida Professional Educator’s Certificate
• Two years of teaching experience
• A letter of intent (brief statement outlining experience and goals for the degree).
• Three letters of professional recommendation from persons knowledgeable about the applicant’s academic and professional competence.
• Roof of English for Speakers of Other Languages (ESOL) training (e.g. ESOL endorsement; completion of ESOL certification exam plus 120 hours of ESOL district in-service training; or, completion TSL 5085; ESOL 1 or equivalent.) Note: Contact the program if you do not meet the above criteria. Non-degree seeking coursework or the Graduate Record Examination scores may be required if an applicant’s GPA is below 3.00.

International Students
All applicants whose native language is other than English or who have earned a degree from an institution outside the United States must meet the University requirements relative to international graduate admission, (e.g. TOEFL scores, etc.). In addition to these university requirements, applicants to the College of Education must provide the following:
• A social security number in degree programs requiring practica or internships;
• Other information as required by the major of interest, (e.g. Graduate Record Exam scores, etc.).

CURRICULUM REQUIREMENTS

<table>
<thead>
<tr>
<th>Total Minimum Hours</th>
<th>30 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational Leadership Core Knowledge Requirements</td>
<td>15 hours</td>
</tr>
<tr>
<td>EDA 6192 Educational Leadership</td>
<td>3</td>
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<tr>
<td>EDA 6061 Principles of Educational Administration</td>
<td>3</td>
</tr>
<tr>
<td>EDA 6213 Culturally Relevant Leadership</td>
<td>3</td>
</tr>
<tr>
<td>EDG 6627 Foundations of Curriculum and Instruction</td>
<td>3</td>
</tr>
<tr>
<td>EDA 6232 School Law</td>
<td>3</td>
</tr>
<tr>
<td>Educational Leadership Praxis and Field Experience Requirements</td>
<td>15 hours</td>
</tr>
<tr>
<td>EDA 6106 Administrative Analysis and Change</td>
<td>3</td>
</tr>
<tr>
<td>EDA 6945 Administration Practicum I</td>
<td>3</td>
</tr>
<tr>
<td>EDA 6285 School Curriculum Improvement</td>
<td>3</td>
</tr>
<tr>
<td>EDA 6945 Administration Practicum II</td>
<td>3</td>
</tr>
<tr>
<td>EDA 6194 Educational Leadership II: Building Capacity</td>
<td>3</td>
</tr>
</tbody>
</table>

Comprehensive Exam
A comprehensive electronic portfolio is submitted for evaluation in lieu of a comprehensive examination.

Graduation Requirement
The Florida Educational Leadership Exam (FELE) must be passed prior to graduation. Official FELE score report submission required.

Please be advised that program and/or course requirements are subject to change, per state legislative mandates, Florida State Department of Education program approval standards, and accreditation criteria.

COURSES
See http://www.ugs.usf.edu/course-inventory/
EDUCATIONAL LEADERSHIP

Education Specialist (Ed.S.) Degree

### DEGREE INFORMATION

**Priority Admission Application Deadlines:**
- **Fall:** May 1
- **Spring:** October 15
- **Summer:** February 15

International applicant deadlines: [http://www.grad.usf.edu/majors](http://www.grad.usf.edu/majors)

- **Minimum Total Hours:** 30
- **Level:** Specialist
- **CIP Code:** 13.0401
- **Dept. Code:** LEA
- **Major/College Codes:** SAS ED
- **Approved:** 1981

### CONTACT INFORMATION

- **College:** Education
- **Department:** Leadership, Counseling, Adult, Career, and Higher Education (L-CACHE)
- **Contact Information:** [www.grad.usf.edu](http://www.grad.usf.edu)

### MAJOR INFORMATION

The Ed.S. Degree is an advanced graduate degree between the masters degree and the doctorate. The Ed.S. provides experienced professional educators with an opportunity to develop advanced competencies in areas of special needs and interest. Graduates of the Ed.S. degree program may go into a wide range of administrative leadership and professional development roles in K-12 schools, including many district-level positions. The Ed.S. degree program supports university-district partnerships and can be tailored to meet needs of partnering school districts or other educational entities.

**Accreditation**

Accredited by National Council for the Accreditation of Teacher Education (NCATE).

### ADMISSION INFORMATION

Applicants should contact the Program Advisor prior to applying to Graduate Admissions. Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

Admission to the Ed.S. degree Program is based on a holistic evaluation of each applicants demonstrated academic potential to complete all of the degree requirements successfully. Success in the Ed.S. degree program requires a commitment to utilizing rigorous inquiry, applying appropriate research methods, and developing strong analytical and writing skills. The graduate faculty will consider each applicant within the context defined by her or his personal and professional qualifications. Applicants meeting a set of initial criteria will be asked to submit a writing sample and complete an oral interview.

**Preferred Applicants should have the following:**
- Have earned a Master’s degree from an accredited institution of higher education
- An earned grade point average of 3.50 in their master’s degree and an earned undergraduate GPA of 3.00 in the last half of the baccalaureate
- A statement of purpose
- A current resume or CV
- Writing sample based on a DELPs prompt

[http://www.usf.edu/education/](http://www.usf.edu/education/)
• Three letters of recommendation from persons knowledgeable about the applicant’s academic and professional competence

CURRICULUM REQUIREMENTS

Total Minimum Hours – 30 hours

Area A: Required 7000 Level Courses (15 hours)

EDA 7206 3 Appreciative Inquiry and Organizing in Public Education  
EDA 7069 3 Ethics in Educational Leadership  
EDA 7692 3 Issues in Curriculum and Instruction  
EDA 7215 3 Educational Politics and Engagement of Communities  
EDA 7281 3 Policy Analysis and Implementation Strategies

Area B: Required 6000 level courses (9 hours)

EDA 6931 3 Case Studies in School Administration  
EDA 6106 3 Administrative Analysis and Change  
EDA 6213 3 Culturally Relevant Leadership

Area C: Thesis/Capston Project (6 hours)

EDA 6971 2 A: Thesis/Capstone Project  
EDA 6971 2 B: Thesis/Capstone Project

Comprehensive Exam

Students will be required to develop and defend a capstone research project proposal.

Capstone Thesis

EDA 7971 6 Thesis

For the Ed.S., students will complete a capstone project, in which they are called upon to identify and analyze educational problems and opportunities in their school system environment and apply concepts developed in the program in order to provide solutions to problems of practice.

Please be advised that program and/or course requirements are subject to change, per state legislative mandates, Florida State Department of Education program approval standards, and accreditation criteria.

COURSES
See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
EDUCATIONAL LEADERSHIP

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines
- Summer: February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 63 post-masters
Level: Doctoral
CIP Code: 13.0401
Dept. Code: LEA
Major/College Codes: EAS PhD
Approved: 1981

CONTACT INFORMATION

College: Education
Department: Educational and Psychological Studies
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Ph.D. in Educational Leadership degree is designed for those individuals who intend to build an academic career focused on conducting research in the multidisciplinary field of education; or, an administrative career focused on innovative and inquiry-based leadership. Accordingly, this program will prepare individuals for careers in research universities and teaching colleges; private, non-profit, state, federal, or international educational agencies; or analyzing K-12 education systems. Individual students will work alongside a collection of highly-regarded educational leadership faculty with expertise in multiple arenas including: school accountability, curriculum and pedagogy, education law, educational leadership, organization theory, politics of education, economics of education, and education reform. Once admitted into the program, students will be engaged in coursework organized around curriculum, leadership, and policy studies; and, will be matched with a faculty advisor whose research interests are congruent with the student’s. Ultimately, each student will design a unique, policy-based study that reflects specific research interests and prepares them to conduct, evaluate, and utilize high-quality research; write and present scholarly papers at professional conferences; and submit research articles for publication in education journals. For further information, please see http://www.usf.edu/education/academics/departments.aspx

Accreditation:
Accredited by the National Council for the Accreditation of Teacher Education (NCATE).

ADMISSION INFORMATION

Admission to the Doctor of Philosophy (Ph.D.) program in Educational Leadership occurs each spring and is based on a holistic evaluation of each applicant’s demonstrated academic potential to complete all of the degree requirements successfully. Success in the Ph.D. degree program requires a commitment to utilizing rigorous inquiry, applying excellence in research methods, and developing exceptional policy writing skills. The graduate faculty will consider each applicant within the context defined by personal and professional qualifications.

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

Admission to the Ph.D. degree program is based on a holistic evaluation of each applicant’s demonstrated academic potential to complete all of the degree requirements successfully. Applicants meeting a set of initial
criteria will be asked to submit a writing sample and may be asked to complete an oral interview. Preferred applicants should:

- Have a master’s or educational specialist’s degree, or equivalent, from a regionally accredited college or university or the equivalent bachelors and/or graduate degrees from a foreign institution
- Have earned an undergraduate grade point average of 3.00 (B) in the last half of the baccalaureate or a grade point average of 3.50 in the master’s degree;
- Have an official GRE score with a preferred score greater than 300 (new scoring) taken within the last five years with no Quantitative or Verbal sub-test score below 150;
- Submit a letter of intent (statement outlining experiences and goals - 3 page maximum);
- Submit a current resume;
- Submit three letters of professional reference, each enclosed in a sealed envelope and signed across the flap by the recommender or emailed by recommender to Lisa Adkins (lisaadkins@usf.edu). Please ask references to include your name and “letter of reference” in subject line when emailing the letter.

**International Students**

All applicants whose native language is other than English or who have earned a degree from an institution outside the United States must meet the University requirements relative to international graduate admission, (e.g. TOEFL scores, etc.). In addition to these university requirements, applicants to the College of Education must provide the following:

- A social security number in degree programs requiring practica or internships;
- Other information as required by the major of interest, (e.g. Graduate Record Exam scores, etc.).

**CURRICULUM REQUIREMENTS**

<table>
<thead>
<tr>
<th>Total Minimum Hours:</th>
<th>63 hours</th>
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<tbody>
<tr>
<td><strong>Educational Leadership Core Requirements</strong></td>
<td>12 hours</td>
</tr>
<tr>
<td>EDA 7197 Critical Readings and Discourses in Educational Leadership</td>
<td>3</td>
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<tr>
<td>EDG 7067 Philosophies of Inquiry</td>
<td>3</td>
</tr>
<tr>
<td>EDA 7069 Ethics in Educational Leadership</td>
<td>3</td>
</tr>
<tr>
<td>EDA 7205 Educational Politics and Policy: Theory &amp; Issues</td>
<td>3</td>
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<tr>
<td><strong>Educational Leadership Knowledge Requirements</strong></td>
<td>18 hours</td>
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<tr>
<td>EDA 7193 Organizational Leadership &amp; Systems Theory</td>
<td>3</td>
</tr>
<tr>
<td>EDA 7233 Legal Dimensions of School Administration</td>
<td>3</td>
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<tr>
<td>EDA 7281 Policy Analysis and Implementation</td>
<td>3</td>
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<tr>
<td>EDA 7280 Curriculum Theory</td>
<td>3</td>
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<tr>
<td>EDA 7692 Issues in Curriculum</td>
<td>3</td>
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<td>And either</td>
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<tr>
<td>EDA 7667 Curriculum Analysis</td>
<td>3</td>
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<td>Or</td>
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<tr>
<td>EDA 7247 Advanced School Finance</td>
<td>3</td>
</tr>
<tr>
<td><strong>Educational Leadership Specialization Requirements</strong></td>
<td>12 hours</td>
</tr>
<tr>
<td><strong>Note:</strong> A minimum of four (4) courses must be taken at 7000-level, or 6000-level courses requiring advanced graduate standing from outside the Department of Educational Leadership &amp; Policy Studies.</td>
<td></td>
</tr>
<tr>
<td><strong>Educational Leadership Methods Courses</strong></td>
<td>15 hours</td>
</tr>
<tr>
<td>EDF 7410 Qualitative Case Methods (or equivalent)</td>
<td>4</td>
</tr>
<tr>
<td>EDF 7478 Qualitative Research in Education II (or equivalent)</td>
<td>4</td>
</tr>
<tr>
<td>EDF 6407 Statistical Analysis Education I (or equivalent)</td>
<td>4</td>
</tr>
<tr>
<td>EDF 7408 Statistical Analysis Education II (or equivalent)</td>
<td>4</td>
</tr>
</tbody>
</table>
Note: A minimum of five (5) advanced qualitative or quantitative methods graduate level courses must be taken. Two courses must be qualitatively oriented; and two courses must be quantitatively oriented. The final methods course is chosen in conjunction with individual program committees.

**Dissertation**

EDG 7980 Dissertation: Doctoral

6 hours

**Required Examinations**

A qualifying examination is required prior to admission to candidacy. Upon approval of major professor, the qualifying examination can be scheduled after a candidate has completed a minimum of 48 credit hours of all required coursework.

**Residency**

There is no on-campus residency requirement for the Ph.D.

**COURSES**

See [http://www.ups.usf.edu/course-inventory/](http://www.ups.usf.edu/course-inventory/)
EDUCATIONAL PROGRAM DEVELOPMENT

Doctor of Education (Ed.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines
Fall: February 15
Spring: October 15
Summer: February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 54 post-master’s
Level: Doctoral
CIP Code: 13.0301
Dept. Code: CNI
Major/College Codes: EPD ED
Approved 1991

Concentrations:
Administration of Special Education (ESE)
Adult Education (EAE)
Educational Innovation (EIN)
Elementary Education (EEE)
Vocational Education (EVO)

Note – not all concentrations are available every semester.
Prior to submitting the admission application, check with the
Graduate Director to confirm if the concentration of interest
is available.

CONTACT INFORMATION

College: Education
Departments:
• Leadership, Counseling, Adult, Career, and
Higher Education (L-CACHE)
• Teaching and Learning

Contact Information: www.grad.usf.edu
Refer to individual concentrations for Contact Information.

MAJOR INFORMATION

The Doctor of Education degree is available in Educational Leadership and in Educational Program Development with
concentrations/specializations in Adult Education, Educational Leadership (K-12 and College Leadership), Elementary
Education, Educational Innovation, and Special Education Administration and Supervision. The focus of this degree program is
on the improvement of educational practice. Although research skills are recognized as being the basis of any doctoral program,
the Ed.D. is considered more a practitioner’s than a research degree.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed
below.

• Undergraduate grade point average of 3.00 in upper level division undergraduate coursework or grade point average
  of 3.50 at the master’s level
• Three letters of recommendation to be submitted directly to the program. These must be from professional sources,
  and, if possible, should include at least one reference from a USF faculty member.
• Favorable recommendations from program faculty.
A master’s degree from an accredited university in education, a related professional field, or a specialization for which the student plans to develop educational programming or the equivalent bachelors and/or graduate degrees from a foreign institution

- An optional personal interview with the program faculty if the applicant has no previous relationship with the faculty.
- Evidence of two years of successful professional experience in education or an education-related setting.
- A personal statement indicating reasons for applying for the program, pertinent personal and professional qualities and dispositions, and training, experience, and credentials relevant to the pursuit of the Ed.D.

For international applicants
Applicants whose native language is not English or who have not earned a degree in the U.S. must, according to university policy, submit a TOEFL score (minimum of 550 paper-based, 213 computer-based, or 80 internet-based test). See the Office of Graduate Studies website for further clarification and possible exemptions. Please check with program regarding the policy on evaluation of transcripts. For more information, please visit http://www.grad.usf.edu/graduate-admissions-checklist.asp.

### CURRICULUM REQUIREMENTS

<table>
<thead>
<tr>
<th>Core Requirement</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>54 credit hours post-ma...</td>
<td>3</td>
<td>Sustainable Innovation in Education</td>
</tr>
<tr>
<td>Core – 3 hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statistics/Measurement/Research Design/Applied Research – 9 hours minimum</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychological and Social Foundations – 3 hours minimum</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concentration – 15 hours minimum</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electives – 15 hours minimum</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissertation – 9 hours minimum</td>
<td></td>
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<table>
<thead>
<tr>
<th>Core Requirement</th>
<th>Credits</th>
<th>Description</th>
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<tbody>
<tr>
<td>EDG 7069</td>
<td>3</td>
<td>Sustainable Innovation in Education</td>
</tr>
<tr>
<td>Statistics/Measurement/Research Design/Applied Research – 9 hours minimum</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selection of three quantitative, qualitative, applied, or action research courses chosen in consultation with advisor.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDF 7408</td>
<td>4</td>
<td>Statistical Analysis for Educational Research II</td>
</tr>
<tr>
<td>EDF 7410</td>
<td>4</td>
<td>Design of Systematic Studies in Education</td>
</tr>
<tr>
<td>EDF 7438</td>
<td>4</td>
<td>Advanced Educational Measurement I</td>
</tr>
<tr>
<td>EDF 7484</td>
<td>4</td>
<td>Statistical Analysis for Educational Research III</td>
</tr>
<tr>
<td>EDF 7493</td>
<td>4</td>
<td>Systems Approaches for Program Planning, Evaluation and Development</td>
</tr>
<tr>
<td>EDF 7477</td>
<td>4</td>
<td>Qualitative Research in Education Part I</td>
</tr>
<tr>
<td>EDF 7478</td>
<td>4</td>
<td>Qualitative Research in Education Part II</td>
</tr>
<tr>
<td>Psychological and Social Foundations Requirement – 3 hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course focused on equity, diversity and social justice chosen in consultation with advisor.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDF 7145</td>
<td>4</td>
<td>Cognitive Issues in Instruction</td>
</tr>
<tr>
<td>EDF 7655</td>
<td>4</td>
<td>Organization Development in Educational Institutions</td>
</tr>
<tr>
<td>EDF 6883</td>
<td>4</td>
<td>Issues in Multicultural Education</td>
</tr>
<tr>
<td>EDF 7934</td>
<td>4</td>
<td>Seminar in Social Foundations of Education</td>
</tr>
<tr>
<td>EDF 6938</td>
<td>3</td>
<td>History of Higher Education in the United States</td>
</tr>
</tbody>
</table>

| Concentration – 15 hours minimum | | |
| Students select from the following concentrations: | | |
| ADMINISTRATION OF SPECIAL EDUCATION (ESE) – Not open for admissions. | | |
| ADULT EDUCATION (EAE) | | |
| Offered from the Department of Leadership, Counseling, Adult, Career, and Higher Education (L-CA... | | |
Educational Program Development (Ed.D.)

Prepares leaders for adult, continuing education, and human resource development positions in a variety of employment settings. The program is designed to develop the competencies of educational practitioners and to obtain and synthesize knowledge for the solution of educational problems and practices.

Concentration Requirements:
Students select 15 credit hours from the following, or other graduate course as approved by the Graduate Director. For those who have not earned a master’s degree in adult education, the continuing education and human resource development specialization is the only specialization choice available.

Continuing Education and Human Resource Development Specialization
ADE 6198 3 Effective Continuing Education for Professional Groups
ADE 7076 3 Continuing Education in the Community College and Higher Ed.
ADE 7676 3 Human Resource Development Policy Seminar

Career and Workforce Development Specialization
ECT 7066 3 Foundations and Philosophy of Vocational-Technical Education
ECW 7105 3 Vocational and Adult Ed. Program Planning and Implementation
ECT 6661 3 Trends and Issues in Career and Technical Education

Community College and Higher Education Specialization
EDH 6051 3 Higher Education in America
EDH 6061 3 The Community College in America
EDH 7225 3 Curriculum Development in Higher Education
EDH 7636 3 Organizational Theory and Practice in Higher Education
EDH 6081 3 The Community College in Higher Education

EDUCATIONAL INNOVATION (EIN)
Offered in the Department of Teaching and Learning

The aim of the Concentration is to foster the development of effective and judicious innovators with the capacity to plan, develop, evaluate, and revise educational improvement efforts in their institutional settings.

Students complete 15 credit hours from the following, or other graduate course as approved by the Graduate Director.

EDG 7695 3 Problems of Practice in Education
EDG 7936 6 Graduate Seminar: Leader-Scholar Community
EDG 7941 6 Pract. Innovation in Education

ELEMENTARY EDUCATION (EEE) – Not open for admissions.
Offered from the Department of Teaching and Learning

VOCATIONAL EDUCATION (EVO)
Offered in the Department of Leadership, Counseling, Adult, Career, and Higher Education (L-CACHE)
The Ed.D. in Vocational Education is designed to develop the competencies of career and workforce education practitioners in a variety of employment settings. Practitioners will also obtain and synthesize knowledge for the solution of education problems and practices in the field.

Students select 15 credit hours from the following, or other graduate course as approved by the Graduate Director:
ECW 7066 3 Foundations and Philosophy of Vocational, Technical and Adult Education
ECW 7168 4 Instructional Development for Vocational, Technical and Adult Education
ECW 7105 3 Vocational and Adult Education Program Planning and Implementation
ECT 7791 3 Research Seminar in Vocational, Technical and Adult Education
ECW 7195 1-4 Comparative Study of Career and Workforce Education Systems
EDG 6931 1-4 Equity and Access in the New Economy

http://www.coedu.usf.edu/
Electives – 15 hours
At least four additional 6000 or 7000 level courses selected in consultation with advisor.

Recommended
ESE 7343  3  Teaching and Learning in the Content Areas
EDG 7207  3  Transforming the Curriculum

Doctoral Qualifying Exam
See College requirements

Dissertation - 9 hours minimum
Students must be admitted to doctoral candidacy before they are permitted to enroll in dissertation hours.

EDG 7980  9  Dissertation in Practice

COURSES
See http://www.ugs.usf.edu/course-inventory/
ELEMENTARY EDUCATION

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines
Fall: February 15
Spring: October 15
Summer: February 15

Minimum Total Hours: 33
Level: Masters
CIP Code: 13.1202
Dept. Code: EDR
Major/College Codes: AEE ED
Approved: 1964

Concentrations:
Early Childhood (MEA)
Elementary Curriculum (MEL)
Language Arts (MLG)
Science & Mathematics (MSM)

Note – not all concentrations are available every semester.
Prior to submitting the admission application, check with the Graduate Director to confirm if the concentration of interest is available.

The M.A.T. degree in Elementary Education is available for students seeking initial teacher certification.

CONTACT INFORMATION

College: Education
Department: Teaching and Learning
Contact Information: www.grad.usf.edu

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below. For admission, all majors require earned degrees from regionally accredited institutions or an international equivalent in order to be considered for admission, first-time or transferring graduate applicants must:

- Have a master’s or educational specialist’s degree, or equivalent, from a regionally accredited college or university or the equivalent bachelors and/or graduate degrees from a foreign institution
- Have earned a “B” (GPA of 3.0 on a 4.0 scale) average or higher in all work attempted while registered as an upper division student working in a baccalaureate degree in a regionally accredited institution, or GRE with a preferred score of 540 for math and 460 for verbal if the GPA is between 2.5 and 2.999.
Elementary Education (M.A.)

- Have an earned, valid, professional teaching certificate OR
- Be eligible for professional certification through the completion of a Bachelor’s Degree (state-approved program) in Elementary Education.

Exceptions to minimum requirements will be considered for applicants who have earned National Board Certification and who have maintained an outstanding professional record.

For international applicants: All applicants whose native language is other than English or who have earned a degree from an institution outside the United States must meet the University requirements relative to international graduate admission, (e.g. TOEFL scores, etc.). In addition to these university requirements, applicants to the College of Education must provide the following:
- A social security number in degree programs requiring practica or internships;
- Other information as required by the major of interest (e.g. GRE scores, etc.).

CURRICULUM REQUIREMENTS

A minimum of 33 graduate hours including 6 hours of process core, 6 hours of program core, and 21 hours of emphasis area courses. National Board Certified Teachers will be permitted to substitute 3 hours from NBC studies for one elective course with receipt of transcript from National Board Program. Please contact program coordinator for more information.

Program of Study

<table>
<thead>
<tr>
<th>Core Requirements</th>
<th>33 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Process Core:</strong></td>
<td></td>
</tr>
<tr>
<td>EDF 6215 Learning Principles Applied to Instruction or</td>
<td>4</td>
</tr>
<tr>
<td>EDF 6120 Child Development</td>
<td>-</td>
</tr>
<tr>
<td>EDF 6481 Foundations of Educational Research</td>
<td>3</td>
</tr>
<tr>
<td>LAE 6315 Writing and Writers</td>
<td>3</td>
</tr>
<tr>
<td>RED 6449 Literacy and Technology</td>
<td>3</td>
</tr>
<tr>
<td>RED 6748 Teacher Researcher Methods in Reading</td>
<td>-</td>
</tr>
<tr>
<td>Elective Trends Course in area of focus</td>
<td></td>
</tr>
</tbody>
</table>

Concentration Requirements

Students select from one of the following concentration areas:

**EARLY CHILDHOOD (MEA) – Not open for admissions.**

**ELEMENTARY CURRICULUM (MEL)**

Offered from the Department of Teaching and Learning

Concentration Requirements

<table>
<thead>
<tr>
<th>Concentration Requirements</th>
<th>6 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED 6748 Teacher Research or</td>
<td>-</td>
</tr>
<tr>
<td>EDG 6935 Seminar in Curriculum Research</td>
<td>1-3</td>
</tr>
<tr>
<td>LAE 6316 Trends in Literacy in a Diverse Society or</td>
<td>-</td>
</tr>
<tr>
<td>LAE 6415 Literature and the Learner</td>
<td>3</td>
</tr>
</tbody>
</table>

**LANGUAGE ARTS (MLG) – Not open for admissions.**

**SCIENCE & MATHEMATICS (MSM)**

Electives

21 hours

Elective courses may be chosen from a variety of Departments. Possibilities are 6000 level courses in math, science, social studies, ESOL, and technology (all located in Secondary Education Department). Students may also choose from Early Childhood (EEC) courses located in the Childhood Education and Literacy Studies Department.
Comprehensive Examination: Transition Point Projects
Students must successfully complete a Transition Point Project after each block of courses, culminating in an action research project.

Program and/or course requirements are subject to change, per state legislative mandates, and Florida State Department of Education program approval standards. Please contact Program for more information.

COURSES - See http://www.ugs.usf.edu/course-inventory/
ELEMENTARY EDUCATION

Master of Arts in Teaching (M.A.T.) Degree

DEGREE INFORMATION

<table>
<thead>
<tr>
<th>Priority Admission Application Deadlines</th>
<th>CONTACT INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fall:</strong> June 1</td>
<td>College: Education</td>
</tr>
<tr>
<td><strong>Spring:</strong> October 15</td>
<td>Department: Teaching and Learning</td>
</tr>
<tr>
<td><strong>Summer:</strong> February 15</td>
<td>Contact Information: <a href="http://www.grad.usf.edu">www.grad.usf.edu</a></td>
</tr>
</tbody>
</table>

*applications accepted on an on-going basis

International applicant deadlines: http://www.grad.usf.edu/majors

Minimum Total Hours: 53
Level: Masters
CIP Code: 13.1202
Dept. Code: EDR
Major/College Codes: TEE ED
Approved: 2001

MAJOR INFORMATION

This major is designed for students who have a non-elementary bachelor’s degree and who wish to become elementary teachers for grades K-6. Students earn an ESOL endorsement at the same time as a Master’s degree in Elementary Education.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

For admission, all programs require earned degrees from regionally accredited institutions or an international equivalent.

Requirements for applicants include:

- Have one of the following
  - Have a master’s or educational specialist’s degree, or equivalent, from a regionally accredited college or university or the equivalent bachelors and/or graduate degrees from a foreign institution
  - and have earned a “B” (3.0 on a 4.0 scale) average or higher in all work attempted cumulatively or as an upper division student
  - A graduate degree from a regionally accredited institution or equivalent graduate degree from a foreign institution with at least a 3.0 GPA for the preceding baccalaureate, or a 3.5 GPA for the graduate degree

- A personal statement indicating reasons for applying to the program, pertinent personal and professional dispositions, and experiences and/or credentials relevant to teaching.

For admission to a Master of Arts in Teaching Program, the student must demonstrate mastery of general knowledge by one of the following:

* Passing the General Knowledge Test, a portion of the Florida Teacher Certification Exam (link to http://www.fldoe.org/accountability/assessments/postsecondary-assessment/ftce)

Or
During the 2014 Legislative Session, the passage of House Bill 433 amended s. 1012.56, FS, to eliminate the obsolete option of achieving a passing score on the CLAST earned prior to July 1, 2002, to satisfy the general knowledge requirement.

For international applicants: Applicants whose native language is not English or who have not earned a degree in the U.S. must, according to university policy, submit a TOEFL score (minimum of 550 paper-based, 213 computer-based, or 80 internet-based test) with the admissions application. See the Graduate Admission website for further clarification and exemptions. Please check with program regarding the policy on evaluation of transcripts. For more information, please visit http://www.usf.edu/admissions/graduate/index.aspx

International students entering this degree program must obtain a social security number for purposes of practicum, internship and certification testing.

**CURRICULUM REQUIREMENTS**

A minimum of 53 hours of coursework (including internships). Students are expected to meet State of Florida testing requirements and Florida State Department of Education program approval standards, and accreditation criteria.

<table>
<thead>
<tr>
<th>Program of Study:</th>
<th>53 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Requirements:</td>
<td>9 hours</td>
</tr>
<tr>
<td>LAE 6427 Children’s Literature: Teaching Literature Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>RED 6315 Emergent Literacy: Skills, Strategies, and Assessment</td>
<td>3</td>
</tr>
<tr>
<td>EDE 6326 Instructional Planning for Diverse Learners</td>
<td>3</td>
</tr>
<tr>
<td>Process Core:</td>
<td>6 hours</td>
</tr>
<tr>
<td>EDF 6211 Psychological Foundations or EDF 6938 Child Development</td>
<td>3</td>
</tr>
<tr>
<td>EDF 6432 Measurement for Teachers</td>
<td>3</td>
</tr>
<tr>
<td>Concentration Requirements:</td>
<td>11 hours</td>
</tr>
<tr>
<td>EDE 6946 Practicum Field Experience</td>
<td>3</td>
</tr>
<tr>
<td>EDG 6947 MAT Final Internship</td>
<td>1-9</td>
</tr>
<tr>
<td>EDE 6458 I and EDE 6458 II Selected Topics: Reflect. on Inst. Decision Making (I and II)</td>
<td>1-3</td>
</tr>
<tr>
<td>Content Specialization:</td>
<td>27 hours</td>
</tr>
<tr>
<td>TSL 5085 ESOL I: Theory and Practice for Teaching English Language Learners</td>
<td>3</td>
</tr>
<tr>
<td>TSL 5086 ESOL II: Second Language and Literacy Acquisition in Children and Adolescents</td>
<td>3</td>
</tr>
<tr>
<td>TSL 5242 ESOL III: Language Principles, Acquisition, and Assessment for Teaching English Language Learners</td>
<td>3</td>
</tr>
<tr>
<td>MAE 6117 Teaching Elementary Math</td>
<td>3</td>
</tr>
<tr>
<td>SCE 6135 Teaching Elementary (K-5) School Science</td>
<td>3</td>
</tr>
<tr>
<td>SSE 6617 Trends in K-6 Social Science Education</td>
<td>3</td>
</tr>
<tr>
<td>RED 6317 Intermediate Literacy: Assessment Skills &amp; Strategies Using Transdisciplinary Text</td>
<td>3</td>
</tr>
<tr>
<td>LAE 6314 Teaching Composition in the Elementary Classroom: Research into Practice</td>
<td>3</td>
</tr>
<tr>
<td>EDE 6506 Managing and Differentiating the Instructional Environment in Elementary Schools</td>
<td>3</td>
</tr>
</tbody>
</table>

Please be advised that curriculum and/or course requirements are subject to change, per state legislative mandates, Florida State Department of Education program approval standards, and accreditation criteria.
Practicum and Internship
All students are required to complete a two-day a week practicum during their program and a final full-time internship in their last semester. Placements are made for students in local school districts.

Comprehensive Examination
Students are required to pass a comprehensive exam to be taken during their final internship semester or in the semester immediately prior to internship.

Tests or Examinations
Students must pass all sections of the Florida Teacher Certification Exam and have an original copy of the results sent to the department prior to internship.

COURSES
See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
ENGLISH EDUCATION

Master of Arts in Teaching (M.A.T.) Degree

DEGREE INFORMATION

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</tr>
</tbody>
</table>

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 41
Level: Masters
CIP Code: 13.1305
Dept. Code: EDI
Major/College Codes: TEN ED
Approved: 2002

MAJOR INFORMATION

A program of study designed to prepare students for initial certification in English education.

The M.A.T. in English Education is designed to include initial certification to teach English, grades 6-12 with ESOL Endorsement while working towards a masters degree. It is planned for graduates of B.A. Liberal Arts English programs or for graduates of other programs who have completed the following within their programs of study: grammar/language development, adolescent literature, American literature, British literature, female/minority literature, expository writing, and creative writing. All students must make an appointment with an advisor to ensure that all certification requirements either within the degree itself or in addition to it have been met, and to develop a Graduate Planned Program.

Accreditation: Includes the State of Florida Accomplished Practices as well as NCATE/NCTE accreditation standards, and program approval by the Department of Education.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

Requirements for all applicants include:

- Minimum GPA of 3.0 in upper division work completed while in the Baccalaureate degree or the equivalent bachelors and/or graduate degrees from a foreign institution. OR
- An earned graduate degree with a minimum GPA of 3.5 in coursework for that degree.

For admission to a Master of Arts in Teaching Program, the student must demonstrate mastery of general knowledge by one of the following:

* Passing the General Knowledge Test, a portion of the Florida Teacher Certification Exam (link to http://www.fldoe.org/accountability/assessments/postsecondary-assessment/ftce)

Or
* Effective for tests administered on or after July 1, 2015, achievement of passing scores, as identified in Rule 6A-4.0021(12), F.A.C., on test sections of the GRE® revised General Test GRE Analytical Writing combined score of 4 out of 6 acceptable for GK Essay GRE Quantitative Reasoning scaled score of 147 acceptable for GK Mathematics GRE Verbal Reasoning scaled score of 151 acceptable for both GK English Language Skills and GK Reading.

During the 2014 Legislative Session, the passage of House Bill 433 amended s. 1012.56, FS, to eliminate the obsolete option of achieving a passing score on the CLAST earned prior to July 1, 2002, to satisfy the general knowledge requirement.

International Students
All applicants whose native language is other than English or who have earned a degree from an institution outside the United States must meet the University requirements relative to international graduate admission, (e.g. TOEFL scores, etc.). In addition to these university requirements, applicants to the College of Education must provide the following:

- A social security number in degree programs requiring practica or internships;
- Other information as required by the major of interest, (e.g. Graduate Record Exam scores, etc.).

**CURRICULUM REQUIREMENTS**

The courses required for the M.A.T. in English Education are listed below. Please check with the department for other requirements.

**Core Requirements**
- EDF 6432 Measurement for Teachers
- ESE 5342 Teaching the Adolescent Learner
- ESE 5344 Classroom Management for a Diverse School and Society 3
  - including ESOL Endorsement:
    - TSL 5430 ESOL I – Theory and Practice of Teaching English Language Learners
    - TSL 5086 ESOL II Secondary Language and Literacy Acquisition
    - TSL 5241 ESOL III Language Principles, Acquisition & Assessment for English Language Learners
  3

**Current Trends in Teaching Concentration**
- LAE 6637 Current Trends in English Education 3

**Concentration Requirements**
- LAE 6738 Teaching Reading in English Curriculum
- LAE 5862 Classroom Communication
- LAE 6325 Methods of Teaching Middle School Language Arts
- LAE 6339 Methods of Teaching Secondary Language Arts 4

**Practicum, Internship, Field Work, etc.**
- LAE 6947 Internship: English Education (PR: CI and passing scores on FTCE) 6

**Comprehensive Examination:**
All candidates must take and successfully pass a Master’s Comprehensive Examination in English Education the last spring semester of their major.

**Completion of State of Florida Tests is also a requirement.**

Please be advised that curriculum and/or course requirements are subject to change per state legislative mandates, Florida State Department of Education program approval standards, and accreditation criteria.

**COURSES**
See [http://www.usf.edu/education/main/departments/seced/English/Engma_courswk.htm](http://www.usf.edu/education/main/departments/seced/English/Engma_courswk.htm)
EXEMPLARY STUDENT EDUCATION (ESE)

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines
Fall: February 15
Spring: October 15
Summer: February 15

International applicant deadlines: http://www.grad.usf.edu/majors

Minimum Total Hours: 36
Level: Masters
CIP Code: 13.1001
Dept. Code: EDS
Major/College Codes: AVE ED
Approved: 1985

CONTACT INFORMATION

College: Education
Department: Teaching and Learning
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Master’s degree programs in the Department of Teaching and Learning prepare special education teacher leaders for work in public and private schools and in state, federal, or community settings. Specific areas of education and training include behavior disorders, intellectual disabilities, specific learning disabilities, and varying exceptionalities (exceptional student education). The major is designed to ensure that all graduates are prepared to be reflective practitioners, able to evaluate and continuously learn from their own teaching; collaborative professionals who affirm diversity; knowledgeable of theory and research; and skilled in the best practices of special education. Graduates of this major will have advanced clinical and pedagogical skills in working with children with disabilities and their families. The major is structured so that students can maintain full-time employment while pursuing their degrees through on-line course delivery. After admission to a major, the candidate and the department advisor together chart a program of study incorporating both core requirements and courses of specific interest to the student. All majors stress field application.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

For admission, all majors require earned degrees from regionally accredited institutions or an international equivalent. Other requirements include:

- An earned baccalaureate degree or its equivalent from a regionally accredited college or university, or its international equivalent.
- Scholastic evidence to successfully perform in the academic program, as indicated by one of the following:
  - An earned graduate degree from a regionally accredited college or university.
  - A minimum GPA of 3.0 on a 4.0 scale in upper division undergraduate coursework.
  - The following preferred minimum GRE scores:
    1. Verbal 60th percentile
    2. Quantitative 45th percentile
    3. Analytical Writing 60th percentile
- A Professional Goals Statement that addresses why the candidate desires to pursue an MA degree in education.
Exceptional Student Education (ESE) (M.A.)

- At least two (2) letters of recommendation from persons who have observed the candidate teach and/or work with children and youth.
- Interview with the MA program faculty.

For international applicants
Applicants whose native language is not English or who have not earned a degree in the U.S. must, according to university policy, submit a TOEFL score (minimum of 550 paper-based, 213 computer-based, or 80 internet-based test). See the Graduate Admissions website for further clarification and possible exemptions. Please check with program regarding the policy on evaluation of transcripts. For more information, please visit [http://www.usf.edu/admissions/graduate/index.aspx](http://www.usf.edu/admissions/graduate/index.aspx)

CURRICULUM REQUIREMENTS

Plan I
The M.A. degree program in Exceptional Student Education is a 36-hour major, designed for students with an undergraduate degree in education. This major is delivered fully online. Students usually take one or two courses a semester and complete their program of study within two to four years. Students are required to take courses two of the three semesters each calendar year and they must complete their program of study within 7 years of their admission date.

<table>
<thead>
<tr>
<th>Program of Study</th>
<th>36 hours minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Requirements</td>
<td>24 hours</td>
</tr>
<tr>
<td>EDF 6481 Foundational Issues in Special Education</td>
<td>3</td>
</tr>
<tr>
<td>EEX 6025* Trends and Issues in Special Education</td>
<td>3</td>
</tr>
<tr>
<td>EEX 6612 Management and Motivation of Exceptional and At-Risk Students</td>
<td>3</td>
</tr>
<tr>
<td>EEX 6222 Advanced Psychoeducational Assessment of Exceptional Students</td>
<td>3</td>
</tr>
<tr>
<td>EEX 6245 Transitional Programming for the Adolescent and Young Adult Exceptional Student</td>
<td>3</td>
</tr>
<tr>
<td>EEX 6732 Consultation and Collaboration in Special Education</td>
<td>3</td>
</tr>
<tr>
<td>EEX 5752 Working with Families: A Pluralistic Perspective</td>
<td>3</td>
</tr>
<tr>
<td>EEX 6248 Instructional Approaches for Exceptional Populations</td>
<td>3</td>
</tr>
<tr>
<td>EEX 6939 Advanced Seminar: paradigms, Practices, and Policies in Special Education</td>
<td>3</td>
</tr>
</tbody>
</table>

* Not required, if equivalent course taken in undergraduate program.

<table>
<thead>
<tr>
<th>Specialization Requirements</th>
<th>9 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Varying Exceptionalities courses (Choose one)</td>
<td></td>
</tr>
<tr>
<td>EBD 6215 Adv Theories and Practices in Behavior Disorders</td>
<td>3</td>
</tr>
<tr>
<td>ELD 6015 Adv Theories and Practices in Specific Learning Disabilities</td>
<td>3</td>
</tr>
<tr>
<td>EMR 6052 Advanced Theories and Practices in Intellectual Disabilities</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Comprehensive Examination</th>
<th>3 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>A project is required to fulfill the comprehensive examination requirement. EEX 6943</td>
<td></td>
</tr>
</tbody>
</table>

Plan III
This option is available for students who do not hold an undergraduate degree in education.

COURSES
See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
EXCEPTIONAL STUDENT EDUCATION

Master of Arts in Teaching (M.A.T.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines
Fall: June 1
Spring: October 15
Summer: February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 36
Level: Masters
CIP Code: 13.1001
Dept. Code: EDS
Major/College Codes: TVE ED
Approved: 2002

CONTACT INFORMATION

College: Education
Department: Teaching and Learning
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Master of Arts in Teaching (MAT) is a graduate degree program in special education for individuals teaching with temporary certification and/or individuals who hold an undergraduate degree in an area other than special education. The Master of Arts in Teaching degree program leads to certification in Exceptional Student Education (ESE) and endorsement in Reading and ESOL. Students can be admitted to the major during any semester throughout the year; however, the special education core course sequence begins in the fall. Students in the M.A.T. degree program benefit from an integrated curriculum taught in six-hour blocks; mentors who are master teachers within the district that provide one-on-one mentoring for each major participant; and accelerated delivery of course content which allows for completion of the degree in one summer and four academic semesters. All students are required to conduct action research in their classrooms, investigating how they can more effectively use research-based interventions. This requires that students link theory and practice and encourages an inquiry approach to teaching.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- An earned baccalaureate degree or its equivalent from a regionally accredited college or university or the equivalent bachelors and/or graduate degrees from a foreign institution
- Evidence of ability to perform successfully in the academic program, as indicated by one of the following:
  - An earned graduate degree from a regionally accredited college or university, OR
  - An undergraduate GPA of 3.0 or higher in all work attempted while registered as an upper division student working for a baccalaureate degree, OR
  - Preferred minimum GRE scores of: 430 Verbal; 470 Quantitative; and 4 Analytical Writing.
- A letter of application that addresses why the candidate desires to pursue a master’s degree in special education.
- At least two (2) letters of recommendation, one from a person who has seen the candidate teach and/or work with children/youth and the other from an administrator or supervisor.
- A completed application submitted to the Office of Graduate Studies
- Interview with the M.A.T. program faculty.
For admission to a Master of Arts in Teaching Program, the student must demonstrate mastery of general knowledge by one of the following:

* Passing the General Knowledge Test, a portion of the Florida Teacher Certification Exam (link to http://www.fldoe.org/accountability/assessments/postsecondary-assessment/ftce)

Or

* Effective for tests administered on or after July 1, 2015, achievement of passing scores, as identified in Rule 6A-4.0021(12), F.A.C., on test sections of the GRE® revised General Test GRE Analytical Writing combined score of 4 out of 6 acceptable for GK Essay GRE Quantitative Reasoning scaled score of 147 acceptable for GK Mathematics GRE Verbal Reasoning scaled score of 151 acceptable for both GK English Language Skills and GK Reading

During the 2014 Legislative Session, the passage of House Bill 433 amended s. 1012.56, FS, to eliminate the obsolete option of achieving a passing score on the CLAST earned prior to July 1, 2002, to satisfy the general knowledge requirement.

For International Applicants

Applicants whose native language is other than English or who have earned a degree from an institution outside the United States must also submit TOEFL scores earned within two (2) years of the desired term of entry. A minimum total score of 79 on the internet-based test, or 550 on the paper-based test, are required. Applications submitted with TOEFL scores that do not meet the minimum requirements will be denied. The TOEFL requirement may be waived if the applicant meets one of the following conditions:

- The applicant’s native language is English, or
- Has scored 500 or higher on the GRE Verbal Test, or
- Has earned a college degree at a U.S. institution of higher learning, or
- Has earned a college degree from an institution whose language of instruction is English (must be noted on the transcript), or
- Has scored 6.5 on International English Language Testing System (IELTS) http://www.ielts.org/

**CURRICULUM REQUIREMENTS**

**Program of Study**

(Students entering with an ESOL endorsement and certification in Elementary Education have a minimum of 36 hours required to complete the program)

**College Requirements**

<table>
<thead>
<tr>
<th>Core Requirements:</th>
<th>6 hours minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDF 6211 Psychological Foundations of Education</td>
<td>3</td>
</tr>
<tr>
<td>EDF 6481 Foundations of Educational Research</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Concentration Requirements</th>
<th>29 hours minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>EEX 6051 Creating Positive Learning Environments for Students with Disabilities</td>
<td>6</td>
</tr>
<tr>
<td>EEX 6224 Developing Individualized Educational Programs for students with Disabilities</td>
<td>6</td>
</tr>
<tr>
<td>EEX 6247 Implementing and Evaluating Individualized Programs for Students with Disabilities</td>
<td>6</td>
</tr>
<tr>
<td>EEX 6943 Practicum in Exceptional Student Education</td>
<td>2</td>
</tr>
<tr>
<td>RED 6514 The Reading Process in the Elementary School</td>
<td>3</td>
</tr>
<tr>
<td>RED 6544 Remediation of Comprehension Problems</td>
<td>3</td>
</tr>
<tr>
<td>MAE 6117 Math Methods</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ESOL Requirements</th>
<th>9 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSL 5085 Theory and Practice of Teaching English Language Learners</td>
<td>3</td>
</tr>
<tr>
<td>TSL 5086 Second Language Acquisition and Literacy in Children and Adolescents</td>
<td>3</td>
</tr>
<tr>
<td>TSL 5240 Language Principles, Acquisition, and Assessment for Teaching English Language Learners</td>
<td>3</td>
</tr>
</tbody>
</table>
NOTE: The special requirements for ESOL endorsement through infusion are as follows: Successful completion of (1) TSL 5085, TSL 5086, and TSL 5240, with a minimum grade of 70% or better on all three sections of the ESOL Comprehensive Exam administered in the three ESOL courses; (2) a 20-hour early ESOL field experience in ESOL 1; 3 a late ESOL field experience where students plan, implement, and evaluate lessons for one or more ESOL students over a series of weeks; and 4 an ESOL folder, containing all assignments and test results from ESOL 1, 2, and 3.

Note: If a student obtains a state approved ESOL Endorsement prior to internship, consideration will be given to waiving TSL 5085, TSL 5086 and TSL 5240 with the appropriate program and college approvals.

Internship

EDG 6947 Internship and Classroom Research

6 hours

Practicum and Internship

Practicum Requirements
All students are required to register for and complete a 1-hour practicum (EEX 6943) during the semesters they are taking EEX 6225 Developing Individualized Educational Programs for Students with Disabilities and EEX 6247 Implementing and Evaluating Individualized Programs for Students with Disabilities. Students who are employed as an ESE-teacher, or as teaching assistant/paraprofessional may complete the practicum in the classroom where they are employed. Students who are not employed as a teacher or teaching assistant/paraprofessional will be placed in a classroom practicum setting with a mentor teacher in the local school district.

Internship Requirements
All students are required to complete a full-time semester long internship as a special education teacher in a K-12 classroom setting. The internship can be a supervised paid internship which an employed teacher can complete in his/her own classroom. If a student is not employed as a special education teacher, he/she must complete the internship (non-paid) in a supervising teacher’s (Professional Practice Partner) classroom.

Comprehensive Exam
The successful completion of a comprehensive exam in the form of an action research project is required of all students in their final semester of the program. If the student does not successfully complete the action research project in the last semester of the program, the student must pass 2 hours of EDG 6970 – Project Master’s the following semester for a maximum of two attempts.

Tests and Examinations
All students must pass the following examinations:

- General Knowledge Test (all four subtests) – if the CLAST (taken after July 1, 2002) was used to fulfill admission requirements instead of the General Knowledge Test (GKT), the GKT must be passed before internship.
- Florida Teacher Certification Professional Education Test – must be passed prior to graduation.
- Florida Teacher Certification ESE Subject Area Test – must be passed prior to graduation.

Please be advised that program and/or course requirements are subject to change, per state legislative mandates, Florida State Department of Education program approval standards, and accreditation criteria.

COURSES

See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
EXERCISE SCIENCE

Master of Science (M.S.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines
Fall: February 15
Spring: No admission
Summer: No admission

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 33
Level: Masters
CIP Code: 31.0505
Dept. Code: EXC
Major/College Codes: EDP / ED
Approved: 2011

Concentrations available in:
Strength and Conditioning (EST)
Health and Wellness (EHW)

CONTACT INFORMATION

College: Education
Department: Educational and Psychological Studies
Contact Information: www.grad.usf.edu

- MAJOR INFORMATION

The M.S. in Exercise Science provides and in-depth study of applied human physiology and how it relates to athletic performance and health and wellness. The purpose of the program is to prepare fitness professionals that are equipped to meet the needs of adults in their pursuit of improved health and performance. Exercise science professionals work with adults in leadership positions in areas such as strength & conditioning, worksite health promotion, commercial and community fitness/wellness, hospital/clinical rehabilitation, personal fitness training, and sports performance. In addition, graduates of this program will have the educational background to pursue doctoral education and other advanced degree programs. The major offers three options: Exercise Science, Exercise Science with a concentration in Strength & Conditioning, and Exercise Science with a concentration in Health & Wellness.

Major Research Areas
Environmental and Occupational Health/Heat Stress
Legal Liability, Risk Management, and Fitness Safety
Physical Activity Behavior and Adherence
Psychobiology of Exercise
Sports Nutrition and Performance Enhancement
Strength & Conditioning

http://www.usf.edu/education/
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- Resume
- 2 letters of recommendation
- Letter of intent (please include career goals, any type of experience related to the field and/or research experience).

To be successful in this major, the following pre-requisite courses are recommended: Anatomy & Physiology I, Anatomy & Physiology II, Nutrition, and Exercise Physiology.

Admissions decisions are based on the following: GPA, relevant coursework, experience in the field, letter of intent, research experience, and letters of recommendation. Applicants should be aware that admission into any graduate major is granted on a competitive basis.

CURRICULUM REQUIREMENTS

Total Minimum Hours - 33 hours minimum

Core – 7 hours
Concentration – 12 hours
Non-thesis – 14 hours electives
Thesis – 11 hours electives, 3 hours thesis

Core - 7 hours minimum
EDF 6407  4  Statistical Analysis
PET 6536  3  Research Methods in Exercise Science

Concentrations - 12 hours minimum
Students select from the following options:

STRENGTH AND CONDITIONING (12)
PET 6098  3  Topics in Strength and Conditioning
APK 6116  3  Neuromuscular Aspects of Exercise Physiology
PET 6367  3  Sports Nutrition and Exercise Metabolism
PET 6389  3  Fitness Assessment and Prescription

HEALTH AND WELLNESS (12)
PET 6003  3  Theories and Models of Health and Physical Activity
APK 6109  3  Cardiorespiratory Aspects of Exercise Physiology
PET 6388  3  Physical Activity, Health and Disease
PET 6389  3  Fitness Assessment and Prescription

Electives - 11 hours minimum
14 hours minimum (non-thesis students) or 11 hours minimum (thesis students)
Electives can be selected from the following, or other graduate course as approved by the faculty advisor and graduate program coordinator.
APK 6109  3  Cardiorespiratory Aspects of Exercise Physiology
APK 6116  3  Neuromuscular Aspects of Exercise Physiology
APK 6406  3  Psychology of Exercise
PET 6081  3  Lifespan Fitness
PET 6216  3  Sport Psychology

http://www.usf.edu/education/
PET 6003  3  Theories and Models of Health and Physical Activity
PET 6098  3  Topics in Strength & Conditioning
PET 6256  3  Sport in Society
PET 6367  3  Sports Nutrition and Exercise Metabolism
PET 6388  3  Physical Activity, Health and Disease
PET 6494  3  Legal Aspects of Physical Activity
PET 6906  1-6  Independent Study
PET 6910  1-4  Research Project
PET 6947  1-6  Internship in Exercise Science
PET 6971  1-5  Thesis: Physical Education

Comprehensive Exam
A comprehensive exam is required. For students in the thesis option, the thesis serves in lieu of the comprehensive exam.

Thesis - 3 hours minimum
PET 6971  1-5  Thesis: Physical Education

Thesis is not required but considered as elective hours for those who select to do a thesis. Students interested in registering for thesis credit must have the approval of a faculty member that agrees to serve as the thesis chairperson.

Non-Thesis
Students in the non-thesis option take an additional 3 hours of electives

COURSES
See  http://www.ugs.usf.edu/course-inventory/
FOREIGN LANGUAGE EDUCATION PROGRAM

Master of Arts (M.A.) Degree

DEGREE INFORMATION

*This Program is Closed for Admissions – being terminated*

Minimum Total Hours: 30
Level: Masters
CIP Code: 13.1306
Dept. Code: EDI
Major/College Codes: FLE EJ

Concentrations
Foreign Language Ed., French (AFF)
Foreign Language Ed., German (AFG)
Foreign Language Ed., Spanish (AFS)

CONTACT INFORMATION

Diploma: Education
Department: Teaching and Learning
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

Prepares educators for teaching foreign language in a K-12 environment.

Major Research Areas
German, Spanish, French, Latin, Foreign Language Education.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

For admission, all programs require earned degrees from regionally accredited institutions or an international equivalent. The admissions committee will consider each applicant in light of his or her qualifications and likelihood of success. The faculty employs a holistic approach to the admissions consideration, taking into account all the information and balancing previous grade point averages, test scores, previous success in graduate coursework, recommendations, and professional experiences as well as fit of the program to the applicants’ personal and professional goals. In order to be admitted to the graduate program in Foreign Language Education, students must present the following:

Requirements for all applicants include the following:

- Minimum GPA of 3.00 in upper division coursework in the Baccalaureate degree or the equivalent bachelors and/or graduate degrees from a foreign institution
- Proof of relevant educational or professional experience
- A current resume
- A clear and detailed statement of professional and personal goals describing the reasons that earning the degree is important to those goals.
- Two letters of recommendation, preferably at least one from a current or former professor (or school principal if working in a school environment) who will attest to the applicant’s likelihood of success in a graduate program.
- Strong GRE scores with no more than one sub-score below the 33rd percentile. If a score in one area is very low, the other should be considerably higher.
- Evidence of 30 credit hours in foreign language coursework or evidence of native language proficiency.

http://www.usf.edu/education/
• An appropriate level of proficiency in foreign language demonstrated by an interview with the program faculty (in person or by telephone), by presenting an ACTFL OPI score of intermediate high or higher, or by any equivalent measure as approved by the program faculty.

Additional requirements for German Concentration:
- A social security number in degree programs requiring practica or internships; and
- Other information as required by the major of interest, (e.g. Graduate Record Exam scores, etc.).

For International Applicants
Applicants whose native language is not English or who have not earned a degree in the U.S. must, according to university policy, submit a TOEFL score (minimum of 550 paper-based, 213 computer-based, or 80 internet-based test). See http://www.usf.edu/admissions/international/graduate/requirements-deadlines/english-proficiency.aspx for further clarification and exemptions. Please check with program regarding the policy on evaluation of transcripts. For more information, please visit http://web.usf.edu/iac/admissions

CURRICULUM REQUIREMENTS

For M.A. - Plan I
Program of Study 36 hours

CORE REQUIREMENTS  
Professional Education
EDF 6211 or EDF 6215 3

Select one from the following:
EDF 6517 Historical Foundations of American Education 4  
or
EDF 6606 Socio-Economic Foundations of American Education 4

EDF 6481 Foundations of Educational Research 3
EDF 6432 Foundations of Measurement 3
FLE 6665 Current Trends 3
FLE 5291 Applications of Technology to FLE (except if taken as part of the B.A.) 3

CONCENTRATION REQUIREMENTS 18 hours
Students select one of the following concentrations:

FRENCH (AFF) – 18 HOURS
Offered from the Department of Teaching and Learning
Description: Prepares educators for teaching French in a K-12 environment.
Concentration Requirements
In addition to the Program requirements, students must complete the following concentration requirements:

At the 5000 and 6000 Level: Six (6) courses in the French language are taken at the 5000 and 6000 level in the World Language Education Department in the College of Arts & Sciences to provide students with further specialization in the foreign language. With their advisor, students are encouraged to select a mix of courses based on the areas (literature, civilization, linguistics) they wish to be examined on during their comprehensive examination. Please refer to the USF course catalogue as well as your advisor for course selection.

GERMAN (AFG) – 18 HOURS
Offered from the Department of Teaching and Learning
Description: Prepares educators for teaching German in a K-12 environment.
Concentration Requirements
In addition to the Program requirements, students must complete the following concentration requirements:

**At the 5000 and 6000 Level:** Six (6) courses in the French language are taken at the 5000 and 6000 level in the World Language Education Department in the College of Arts & Sciences to provide students with further specialization in the foreign language. With their advisor, students are encouraged to select a mix of courses based on the areas (literature, civilization, linguistics) they wish to be examined on during their comprehensive examination. Please refer to the USF course catalogue as well as your advisor for course selection.

**Comprehensive Examination**
A Comprehensive Examination must be taken in the final semester in the program. It is a 3-hour exam where the candidate will be expected to answer questions that display knowledge about the broad subjects that were covered in your program of studies.

**SPANISH (AFS) – 18 HOURS**
Offered from the Department of Teaching and Learning

**Description:** Prepares educators for teaching Spanish in a K-12 environment.

**Concentration Requirements**
In addition to the Program requirements, students must complete the following concentration requirements:

**At the 5000 and 6000 Level:** Six (6) courses in the French language are taken at the 5000 and 6000 level in the World Language Education Department in the College of Arts & Sciences to provide students with further specialization in the foreign language. With their advisor, students are encouraged to select a mix of courses based on the areas (literature, civilization, linguistics) they wish to be examined on during their comprehensive examination. Please refer to the USF course catalogue as well as your advisor for course selection.

**Comprehensive Examination:** Required in both Foreign Language and Foreign Language Education.

- **Plan II** – inactive.

- **Plan III** - A Plan III, non-certification option is also available for those who do not desire teacher certification. For information on Plan III, contact the program coordinator. This plan is closed for new applications for the German Concentration.

**COURSES**
See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
FOREIGN LANGUAGE EDUCATION

Master of Arts in Teaching (M.A.T.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines
Fall: June 1
Spring: October 15
Summer: February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 33
Level: Masters
CIP Code: 13.1306
Dept. Code: EDI
Major/College Codes: TFL ED
Approved: 2002

Concentrations:
General Education – Fast-Track Concentration (with no ESOL Endorsement) – Not Available (ENE)
Chinese (CHN)
French (AFF)
German (AFG)
Italian (ITA)
Japanese (JPN)
Latin (LAT)
Russian (BFR)
Spanish (AFS)

CONTACT INFORMATION

College: Education
Department: Teaching and Learning
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The M.A.T. degree is designed for individuals with a Bachelor’s degree in a field other than education who wish to become certified teachers in foreign language at the middle or high school level in the following Languages: Spanish, French, German, Latin, Italian, Chinese, Japanese, or Russian. Students can earn ESOL endorsement at the same time as the Master’s degree.

Accreditation
Accredited by the National Council for the Accreditation of Teacher Education, and the Department of Education.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.
- Minimum GPA of 3.0 in upper division coursework completed in the baccalaureate degree, OR the equivalent bachelor's and/or graduate degrees from a foreign institution
- An earned graduate degree with a minimum GPA of 3.5
- Two Letters of recommendation (1 personal and 1 professional) stating the ability of the student to complete graduate studies.
- Concept Paper or goal statement
- Evidence of 30 credit hours in foreign language coursework or evidence of native language proficiency.

http://www.usf.edu/education/
• An appropriate level of proficiency in the foreign language demonstrated by an interview with the program faculty (in person or by telephone, by presenting an ACTFL OPI score of intermediate high or higher, or by any equivalent measure as approved by the program faculty.

For admission to a Master of Arts in Teaching degree program, the student must demonstrate mastery of general knowledge by one of the following:

* Passing the General Knowledge Test, a portion of the Florida Teacher Certification Exam (link to http://www.fldoe.org/accountability/assessments/postsecondary-assessment/ftce)
Or
* Effective for tests administered on or after July 1, 2015, achievement of passing scores, as identified in Rule 6A-4.0021(12), F.A.C., on test sections of the GRE® revised General Test GRE Analytical Writing combined score of 4 out of 6 acceptable for GK Essay GRE Quantitative Reasoning scaled score of 147 acceptable for GK Mathematics GRE Verbal Reasoning scaled score of 151 acceptable for both GK English Language Skills and GK Reading

During the 2014 Legislative Session, the passage of House Bill 433 amended s. 1012.56, FS, to eliminate the obsolete option of achieving a passing score on the CLAST earned prior to July 1, 2002, to satisfy the general knowledge requirement.

International Students
All applicants whose native language is other than English or who have earned a degree from an institution outside the United States must meet the University requirements relative to international graduate admission, (e.g. TOEFL scores, etc.). In addition to these university requirements, applicants to the College of Education must provide the following:

• A social security number in degree programs requiring practica or internships; and
• Other information as required by the major of interest, (e.g. Graduate Record Exam scores, etc.).

CURRICULUM REQUIREMENTS

A program of study designed for the holder of a non-education baccalaureate degree who is functionally competent and proficient in the target language. This program meets initial certification requirements (K-12) as well as full ESOL endorsement. There is also a fast-track concentration without ESOL endorsement.

Minimum Hours

<table>
<thead>
<tr>
<th>Core Requirements</th>
<th>9 hours minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDF 6432 Foundations of Measurement OR TSL 5440, Language Testing</td>
<td></td>
</tr>
<tr>
<td>ESE 5342 Teaching the Adolescent Learner</td>
<td>3</td>
</tr>
<tr>
<td>ESE 5344 Classroom Management for a Diverse School &amp; Society</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Current Trends in Teaching Specialization</th>
<th>3 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLE 6665 Current Trends in Foreign Language Education</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>ESOL Endorsement Track</th>
<th>24 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>This track is for individuals who wish to receive the ESOL Endorsement.</td>
<td></td>
</tr>
<tr>
<td>TSL 5085 ESOL I</td>
<td>3</td>
</tr>
<tr>
<td>TSL 5086 ESOL II</td>
<td>3</td>
</tr>
<tr>
<td>TSL 5242 ESOL III</td>
<td>3</td>
</tr>
<tr>
<td>FLE 5291 Applications of Technology to FLE</td>
<td>3</td>
</tr>
<tr>
<td>FLE 5313 Methods of Teaching FL &amp; ESOL in the Elementary School</td>
<td>3</td>
</tr>
<tr>
<td>FLE 5331 Methods of Teaching FL &amp; ESOL in the Secondary School</td>
<td>3</td>
</tr>
<tr>
<td>FLE 5895 Dual Language Education</td>
<td>3</td>
</tr>
<tr>
<td>FLE 5946 Practicum in FL Teaching in the Secondary School</td>
<td>3</td>
</tr>
</tbody>
</table>
CONCENTRATION REQUIREMENTS

Students select one of the following Concentrations:

**GENERAL EDUCATION-- Fast-Track Concentration, with No ESOL Endorsement** 15 hours minimum

Not Available

The fast track program is designed for the individuals who wish to become certified teachers in foreign language at the elementary, middle, or high school level (K-12), in the following languages: Spanish, French, German, Latin, Italian, Chinese, Japanese, or Russian, but do not want or need the ESOL Endorsement.

TSL 5932  L2 Reading for ESOL Students Across Content Areas 3
FLE 5313  Methods of Teaching FL & ESOL in the Elementary School 3
FLE 5331  Methods of Teaching FL & ESOL in the Secondary School 3
FLE 5895  Dual Language Education 3
FLE 5946  Practicum in FL Teaching in the Secondary School 3

**CHINESE**

FLE 6947 Internship 6 hours
- Student’s participation in the internship experience in classes that correspond to the specific area in which he or she will be certified.
- Passing score on the appropriate subject area exam.
- Student’s content degree or equivalent (an admissions requirement)

**FRENCH**

FLE 6947 Internship 6 hours
- Student’s participation in the internship experience in classes that correspond to the specific area in which he or she will be certified.
- Passing score on the appropriate subject area exam.
- Student’s content degree or equivalent (an admissions requirement)

**GERMAN**

FLE 6947 Internship 6 hours
- Student’s participation in the internship experience in classes that correspond to the specific area in which he or she will be certified.
- Passing score on the appropriate subject area exam.
- Student’s content degree or equivalent (an admissions requirement)

**ITALIAN**

FLE 6947 Internship 6 hours
- Student’s participation in the internship experience in classes that correspond to the specific area in which he or she will be certified.
- Passing score on the appropriate subject area exam.
- Student’s content degree or equivalent (an admissions requirement)

**JAPANESE**

FLE 6947 Internship 6 hours
- Student’s participation in the internship experience in classes that correspond to the specific area in which he or she will be certified.
- Passing score on the appropriate subject area exam.
- Student’s content degree or equivalent (an admissions requirement)
LATIN
FLE 6947 Internship 6 hours
- Student’s participation in the internship experience in classes that correspond to the specific area in which he or she will be certified.
- Passing score on the appropriate subject area exam.
- Student’s content degree or equivalent (an admissions requirement)

RUSSIAN
FLE 6947 Internship 6 hours
- Student’s participation in the internship experience in classes that correspond to the specific area in which he or she will be certified.
- Passing score on the appropriate subject area exam.
- Student’s content degree or equivalent (an admissions requirement)

SPANISH
FLE 6947 Internship 6 hours
- Student’s participation in the internship experience in classes that correspond to the specific area in which he or she will be certified.
- Passing score on the appropriate subject area exam.
- Student’s content degree or equivalent (an admissions requirement)

Comprehensive Examination
A Comprehensive Examination must be taken in the final semester in the program. It is a 3-hour exam where the candidate will be expected to answer questions that display knowledge about the broad subjects that were covered in the program of studies.

Practicum, Internship, Field Work, etc. 6 hours
A 6-credit hour internship provides an essential practical and evaluative exit to the program. It is highly recommended to complement it with a 2-credit hour Senior Seminar to debrief and enhance the internship experience.

FLE 6947 Internship (PR: CI and passing scores of FTCE) 6
FLE 5936 Senior Seminar (optional)

Please be advised that curriculum and/or course requirements are subject to change per state legislative mandates, Florida State Department of Education program approval standards, and accreditation criteria.

COURSES
See http://www.ugs.usf.edu/course-inventory/
FOREIGN LANGUAGE EDUCATION ACCELERATED

Bachelor of Arts (B.A.) / Master of Arts in Teaching (M.A.T.) Degree

DEGREE INFORMATION

This Program is closed for Admissions

Minimum Total Hours: 42
Level: Bachelors/Masters
CIP Code: 13.1306
Dept. Code: EDI
Major/College Codes: TFL ED

CONTACT INFORMATION

College: Education
Department: Teaching and Learning
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Accelerated B.A. or B.S. to M.A.T. Degree Program offers benefits for students who decide to pursue a career in the teaching profession. It provides the background within specific liberal arts disciplines and then allows students to take that knowledge into an accelerated master’s degree in teaching, designed around collaboration, academic excellence, progressive research, and ethical practices within diverse environments.

ADMISSION INFORMATION

For admission, all programs require earned degrees from regionally accredited institutions or an international equivalent. Requirements for all applicants include:

The B.A./B.S. to M.A.T. Program is designed for academically talented and educationally mature students who meet the following criteria:

- Are admitted to one of the participating undergraduate majors in the College of Arts and Sciences (French, Spanish, or Latin programs) OR the equivalent bachelors and/or graduate degrees from a foreign institution
- Have completed at least 90 semester hours of coursework in one of the participating programs
- Have an earned grade point average of at least 3.0 both overall and in the major coursework
- Have no arrest record or have disclosed any record of previous arrests and/or convictions

Applying to the B.A./B.S. to M.A.T. Program

It is very important that students interested in the BA/BS to MAT Program work closely with their undergraduate academic advisor to ensure timely application to the program and a seamless transition from undergraduate to graduate status.

Please review and follow these steps carefully:

1. Contact your undergraduate academic advisor in the relevant subject area:
   - World Languages: Osiris Albrecht
2. File an Accelerated Major Interest Form.
3. Submit the Interest form to your undergraduate advisor (instructions are on the form).
4. When the time comes to apply for the graduate program, submit the Accelerated Major Application.
5. Provide an official copy of the General Knowledge Test (GKT) score report verifying passing scores on all four sections of the exam when submitting the Accelerated Major Application. For more information about the GKT, please visit the following link: http://www.fl.nesinc.com/FL_testselection.asp. NOTE: The GKT information can be found under the "Florida Teacher Certification" of this webpage. The test code for the GKT is 082.

For international applicants

Applicants whose native language is not English or who have not earned a degree in the U.S. must, according to university policy, submit a TOEFL score (minimum of 550paper-based, 213 computer-based, or 80 internet-based test). See

http://www.usf.edu/education/
CURRICULUM REQUIREMENTS

A program of study designed for a student currently in the World Language Education French, Spanish, or Latin BA degree, who has already completed a minimum of 90 credits of course work in that degree.

Core Requirements

<table>
<thead>
<tr>
<th>Course Requirement</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDF 6432 Foundations of Measurement or TSL 5440 Language Testing</td>
<td>3</td>
</tr>
<tr>
<td>ESE 5344 Classroom Management for a Diverse School &amp; Society</td>
<td>3</td>
</tr>
<tr>
<td>ESE 5342 Teaching the Adolescent Learner</td>
<td>3</td>
</tr>
</tbody>
</table>

Including ESOL Endorsement

<table>
<thead>
<tr>
<th>Course Requirement</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSL 5085 ESOL I</td>
<td>3</td>
</tr>
<tr>
<td>TSL 5086 ESOL II</td>
<td>3</td>
</tr>
<tr>
<td>TSL 5242 ESOL III</td>
<td>3</td>
</tr>
</tbody>
</table>

Current Trends in Teaching Specialization

<table>
<thead>
<tr>
<th>Course Requirement</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLE 6665 Current Trends in FLE</td>
<td>3</td>
</tr>
</tbody>
</table>

Course Requirements

<table>
<thead>
<tr>
<th>Course Requirement</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLE 5313 Methods of Teaching FL &amp; ESOL in the Elementary School</td>
<td>3</td>
</tr>
<tr>
<td>FLE 5331 Methods of Teaching FL &amp; ESOL in the Secondary School</td>
<td>3</td>
</tr>
<tr>
<td>FLE 5895 Dual Language Education</td>
<td>3</td>
</tr>
<tr>
<td>FLE 5946 Practicum in FL Teaching in the Secondary School</td>
<td>3</td>
</tr>
<tr>
<td>FLE 5291 Applications of Technology to FLE</td>
<td>3</td>
</tr>
</tbody>
</table>

Comprehensive Examination:

A Comprehensive Examination must be taken in the final semester in the program. It is a 3-hour exam where the candidate will be expected to answer questions that display knowledge about the broad subjects that were covered in your program of studies.

Practicum, Internship, Field Work, etc.

A 6-credit hour internship provides an essential practical and evaluative exit to the program.

<table>
<thead>
<tr>
<th>Course Requirement</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLE 6947 Internship (PR: CI and passing scores of FTCE)</td>
<td>6</td>
</tr>
</tbody>
</table>

(The internship is planned observation and teaching, supervised by a member of the University faculty and a school staff member.) Please refer to [www.coedu.usf.edu/sas](http://www.coedu.usf.edu/sas) for specific internship entrance and State of Florida testing requirements.

COURSES

See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
MATHEMATICS EDUCATION

Master of Arts (M.A.) Degree

DEGREE INFORMATION

This Program is Closed for admissions

Minimum Total Hours: 33
Level: Masters
CIP Code: 13.1311
Dept. Code: EDI
Major/College Codes: AMA EJ
Approved: 1966

CONTACT INFORMATION

College: Education
Department: Teaching and Learning
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

This degree is designed primarily for secondary school teachers desiring to improve their skills in the teaching of mathematics to secondary students.

ADMISSION INFORMATION

For admission, all majors require earned degrees from regionally accredited institutions or an international equivalent.

MA Plan I
Meet one of the following criteria:

- Shall have earned a “B” (3.0 on a 4.0 scale) average or better in all upper division level undergraduate coursework in the baccalaureate degree OR the equivalent bachelors and/or graduate degrees from a foreign institution
- OR Shall have GRE preferred scores of 450 verbal and 550 quantitative or higher taken within five years.
- Certification in mathematics education (Include copy of your Florida State Teaching Certification with your application. Temporary Certificates are not acceptable).

MA Plan II Inactive
MA Plan III Inactive

For international applicants
Applicants whose native language is not English or who have not earned a degree in the U.S. must, according to university policy, submit a TOEFL score (minimum of 550 paper-based, 213 computer-based, or 80 internet-based test). See the Graduate Admissions website for further clarification and possible exemptions. Please check with program regarding the policy on evaluation of transcripts. For more information, please visit: http://www.usf.edu/admissions/graduate/index.aspx

CURRICULUM REQUIREMENTS

Plan I Option

Core Requirements
EDF 6432 Foundation of Measurement 3
EDF 6481 Foundation of Ed Research 3

9 hours minimum
EDF 6211 Psychological Foundations of Education or 3
EDF 6215 Learning Principles Applied to Instruction 4

Current Trends
MAE 6136 Current Trends in Secondary School Mathematics 3

Course Requirements 18 hours minimum
Graduate level mathematics courses to be approved by the student’s advisor.
Courses with the following prefixes are acceptable: MAA, MAD, MAE, MAP, MAT, MHF, and STA

Elective:
3 graduate hours of mathematics education

Comprehensive Examination
The comprehensive examination will consist of a written and/or oral examination in the concentration area.

A Plan III option is available for individuals who are neither certified nor desire certification.
Process Core: 9 hours minimum
EDF 6432 Foundation of Measurement 3
EDF 6481 Foundation of Ed Research 3
EDF 6211 Psychological Foundations of Education or 3
EDF 6215 Learning Principles Applied to Instruction 4

The Master of Arts in Teaching (M.A.T.) in Mathematics Education Degree program is currently available at the middle grades (5-9) level and secondary grades (6-12). Please check the Mathematics Education website for an update as well as other sections of this catalog.

Please be advised that program and/or course requirements are subject to change, per state legislative mandates, Florida State Department of Education program approval standards, and accreditation criteria

COURSES
See http://www.ugs.usf.edu/course-inventory/
MATHEMATICS EDUCATION (6-12)

Master of Arts in Teaching (M.A.T.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines
Fall:       June 1
Spring:    October 15
Summer:   February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 40
Level: Masters
CIP Code: 13.1311
Dept. Code: EDI
Major/College Codes: TSM ED
Approved 2005

CONTACT INFORMATION

College: Education
Department: Teaching and Learning
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The MAT in Mathematics Education (6-12) is designed for individuals seeking initial certification to teach High School or Middle School mathematics (grades 6-12) while working towards a Master’s degree. It is planned for graduates of B.A. Liberal Arts Mathematics programs or for graduates of other programs who have completed at least 30 credit hours of mathematics courses that include 6 hours of calculus, 3 hours of linear or abstract algebra, 3 hours of number theory. Please be advised that program and/or course requirements are subject to change per state legislative mandates, Florida Department of Education program approval standards and accreditation criteria.

Accreditation: Accredited by the Florida Department of Education, and the National Council for the Accreditation of Teacher Education.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- A bachelor’s degree or equivalent from a regionally accredited university or its international equivalent the equivalent bachelors and/or graduate degrees from a foreign institution

- An earned minimum grade point average of 3.0 on a 4.0 scale average or higher in all upper division undergraduate coursework in the baccalaureate degree (usually the last two years of coursework).

- Meet one of the following criteria: Have passed the Florida Subject Area Exam in Mathematics 6-12 (FTCE) Or have completed at least 30 credit hours in mathematics to include 6 hours of calculus, 3 hours of linear or abstract algebra, 3 hours of number theory

For admission to a Master of Arts in Teaching degree program, the student must demonstrate mastery of general knowledge by one of the following:
* Passing the General Knowledge Test, a portion of the Florida Teacher Certification Exam (link to http://www.fldoe.org/accountability/assessments/postsecondary-assessment/ftce)
Or
* Effective for tests administered on or after July 1, 2015, achievement of passing scores, as identified in Rule 6A-4.0021(12), F.A.C., on test sections of the GRE® revised General Test GRE Analytical Writing combined score of 4 out of 6 acceptable for GK Essay GRE Quantitative Reasoning scaled score of 147 acceptable for GK Mathematics GRE Verbal Reasoning scaled score of 151 acceptable for both GK English Language Skills and GK Reading

During the 2014 Legislative Session, the passage of House Bill 433 amended s. 1012.56, FS, to eliminate the obsolete option of achieving a passing score on the CLAST earned prior to July 1, 2002, to satisfy the general knowledge requirement.

International Students
All applicants whose native language is other than English or who have earned a degree from an institution outside the United States must meet the University requirements relative to international graduate admission, (e.g. TOEFL scores, etc.). In addition to these university requirements, applicants to the College of Education must provide the following:

- A social security number in degree programs requiring practica or internships;
- Other information as required by the major of interest, (e.g. Graduate Record Exam scores, etc.).

CURRICULUM REQUIREMENTS

Total Minimum Hours 40 hours

Pre-requisites
Students without appropriate ESOL training and/or a measurement course must complete graduate course(s) to satisfy those two program prerequisites. Students admitted without a 30-hour mathematics background will have to take undergraduate course work to insure that their background reflects at least:

- 6 hours of Calculus
- 3 hours of linear algebra or abstract algebra
- 3 hours of Number Theory or Discrete Mathematics
- 3 hours of geometry
- 3 hours of History of Mathematics
- 3 hours of Probability or Statistics

Any pre-requisite undergraduate credit hours taken will not apply to the minimum curriculum requirements for the Major.

Core Requirements

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDF 6432</td>
<td>Foundations of Measurement</td>
<td>3</td>
</tr>
<tr>
<td>ESE 5344</td>
<td>Classroom Management for a Diverse School and Society</td>
<td>3</td>
</tr>
<tr>
<td>ESE 5342</td>
<td>Teaching the Adolescent Learner</td>
<td>3</td>
</tr>
<tr>
<td>TSL 5325</td>
<td>ESOL Strategies for Content for Content Area Teachers</td>
<td>3</td>
</tr>
</tbody>
</table>

Current Trends in Teaching Concentration

MAE 6136  Current Trends Secondary Math Education 3

Concentration  15 minimum

Students may waive up to 6 hours of course credit based upon approval of their academic advisor and the department.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAE 6643</td>
<td>Communication Skills in Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>MAE 6337</td>
<td>Topics in Teaching Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MAE 6338</td>
<td>Topics in Teaching Geometry</td>
<td>3</td>
</tr>
<tr>
<td>MAE 6317</td>
<td>Topics in Teaching Probability and Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>
MAE 6336  Topics in Teaching Calculus  3
MAE 6370  Mathematics for High School Teachers  3
MAE 6362  Senior High Mathematics Methods  3

**Practicum, Internship, Field Work, etc.**  
MAE 6945  Practicum in Mathematics Education  3
MAE 6947  Internship in Secondary Education for Mathematics  6
MAE 6899  Internship Seminar in Mathematics Education  1

10 hours

**Testing**
All portions of the General Knowledge Test (GK) of the Florida Teacher Certification Exam (FTCE) must be passed prior to internship. Both the Mathematics 6 – 12 test and the Professional Education test of the FCTE must be passed prior to completion of internship.

**Comprehensive Examination:**
Passing a comprehensive exam is required prior to graduation. Students should contact their academic advisor to make arrangements to take the comprehensive exam in last fall or spring semester it can only be taken while enrolled in at least 2 credits. Making these arrangements two semesters prior to graduation is advised.

**COURSES**

See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)

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**USF Graduate Catalog 2017-2018** mathematics education (6-12) (M.A.T.)

MAE 6336  Topics in Teaching Calculus  3
MAE 6370  Mathematics for High School Teachers  3
MAE 6362  Senior High Mathematics Methods  3

**Practicum, Internship, Field Work, etc.**  
MAE 6945  Practicum in Mathematics Education  3
MAE 6947  Internship in Secondary Education for Mathematics  6
MAE 6899  Internship Seminar in Mathematics Education  1

10 hours

**Testing**
All portions of the General Knowledge Test (GK) of the Florida Teacher Certification Exam (FTCE) must be passed prior to internship. Both the Mathematics 6 – 12 test and the Professional Education test of the FCTE must be passed prior to completion of internship.

**Comprehensive Examination:**
Passing a comprehensive exam is required prior to graduation. Students should contact their academic advisor to make arrangements to take the comprehensive exam in last fall or spring semester it can only be taken while enrolled in at least 2 credits. Making these arrangements two semesters prior to graduation is advised.

**COURSES**

See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
MIDDLE GRADES MATHEMATICS (5-9)

Master of Arts in Teaching (M.A.T.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines
Fall: June 1
Spring: October 15
Summer: February 15

Minimum Total Hours: 39
Level: Masters
CIP Code: 13.1311
Dept. Code: EDI
Major/College Codes: TMA ED
Approved: 2002

CONTACT INFORMATION

College: Education
Department: Teaching and Learning
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The M.A.T. in Middle Grades Mathematics Education (5-9) is designed for individuals seeking initial certification to teach mathematics at the middle grades level. Please be advised that program and/or course requirements are subject to change, per state legislative mandates, Florida Department of Education program approval standards, and accreditation criteria.

Accreditation
Accredited by the Florida Department of Education and the National Council for the Accreditation of Teacher Education.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- A bachelor’s degree or equivalent from a regionally accredited university OR the equivalent bachelor’s and/or graduate degrees from a foreign institution
- Have an earned minimum grade point average of 3.0 on a 4.0 scale average or higher in all upper division level undergraduate coursework taken in the baccalaureate degree
- Shall have preferred GRE scores of 450 Verbal and 550 Quantitative or higher taken within five years
- Meet one of the following criteria:
  - Have passed the Florida Subject Area Exam in Mathematics 5-9
  - Have completed at least 18 credit hours in mathematics at the level of college algebra

For admission to a Master of Arts in Teaching Program, the student must demonstrate mastery of general knowledge by one of the following:
* Passing the General Knowledge Test, a portion of the Florida Teacher Certification Exam (link to http://www.fldoe.org/accountability/assessments/postsecondary-assessment/ftce)

Or

* Effective for tests administered on or after July 1, 2015, achievement of passing scores, as identified in Rule 6A-4.0021(12), F.A.C., on test sections of the GRE® revised General Test GRE Analytical Writing combined score of 4 out of 6 acceptable for GK Essay GRE Quantitative Reasoning scaled score of 147 acceptable for GK Mathematics GRE Verbal Reasoning scaled score of 151 acceptable for both GK English Language Skills and GK Reading

During the 2014 Legislative Session, the passage of House Bill 433 amended s. 1012.56, FS, to eliminate the obsolete option of achieving a passing score on the CLAST earned prior to July 1, 2002, to satisfy the general knowledge requirement.

International Students

All applicants whose native language is other than English or who have earned a degree from an institution outside the United States must meet the University requirements relative to international graduate admission, (e.g. TOEFL scores, etc.). In addition to these university requirements, applicants to the College of Education must provide the following:

- A social security number in degree programs requiring practica or internships;
- Other information as required by the major of interest, (e.g. Graduate Record Exam scores, etc.).

CUCCURRICULUM REQUIREMENTS

Total Minimum Hours 39 hours

Pre-Requisites 6 hours

EDF 6432 Foundations of Measurement (Or Equivalent) 3
FLE 5366 ESOL Competencies in Content Area 3

Core Requirements

Required Courses 6 hours

ESE 5344 Classroom Management 3
ESE 5342 Teaching the Adolescent Learner 3

Concentration Requirements 9 hours

MAE 6328 Algebra for Middle Grade Teachers 3
MAE 6329 Geometry for Middle Grade Teachers 3
MAE 6127 Probability & Statistics for Middle Grade Teachers 3

Math Education 18 hours

MAE 6356 Teaching Pre-secondary Math 3
MAE 6126 Current Trends Middle Grade Math 3
MAE 6643 Comm. Skills in Math 3
MAE 6945 Practicum in Math Education 3
MAE 6947 Graduate Internship in Math Education 6

Project

Action Research Project to be taken in the last fall or spring: Can only be taken while enrolled in at least two credits.

COURSES

See http://www.ugs.usf.edu/course-inventory/
PHYSICAL EDUCATION

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines
Fall: February 15
Spring: October 15
Summer: February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 30
Level: Masters
CIP Code: 13.1314
Dept. Code: EDP
Major/College Codes: APH ED
Approved: 1962
Offered only online

CONTACT INFORMATION

College: Education
Department: Teaching and Learning
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

This degree is designed for anyone interested in the lifelong process of becoming a reflective, effective teacher who is prepared to lead youngsters to become physically active for a lifetime. The master’s degree in Physical Education is offered online only. Consequently, an I-20 cannot be issued for international students to come to Tampa to enroll in this program. If accepted to the program, international students may only enroll in the program’s online courses from outside the United States.

Accreditation
Accredited by the National Council for Accreditation of Teacher Education, National Association for Sport and Physical Education.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

For admission, all programs require earned degrees from regionally accredited institutions or an international equivalent.
Requirements:

- A bachelor’s degree from a regionally accredited institution OR the equivalent bachelor’s and/or graduate degrees from a foreign institution and satisfying at least one of the following criteria:
  - A “B” average (3.0 on a 4.0 scale) or higher in all work attempted while registered as an upper division student in a Baccalaureate degree OR A previous graduate degree from a regionally accredited institution with a grade point average of at least a 3.5

International Students
Foreign applicants who are outside the U.S. are required to apply for a visa. Depending on the country of origin, this may take a few months. So the deadlines for these international applicants may be earlier than the Program deadline and these applicants must apply prior to both deadlines. They are strongly encouraged to apply as early as possible. Foreign applicants who are in the U.S. and are currently on a visa may use the domestic application deadline dates. In addition to meeting the published application deadline for the Major of interest, all immigration documents should be submitted as soon as possible, but must be on file at USF no later than the following processing deadlines:
Fall: February 15  
Spring: September 15  
Summer: January 15  

All applicants whose native language is other than English or who have earned a degree from an institution outside the United States must meet the University requirements relative to international graduate admission, (e.g. TOEFL scores, etc.). In addition to these university requirements, applicants to the College of Education must provide the following:  
- A social security number in degree programs requiring practica or internships;  
- Other information as required by the major of interest, (e.g. Graduate Record Exam scores, etc.).

## CURRICULUM REQUIREMENTS

### Physical Education K-12

Two plans are available (Plan I and Plan III).

#### Plan I

**Program of Study**  
30 hours minimum

**Core Requirements:**  
6 hours minimum

- EDF 6432 Foundations of Measurement  
- EDF 6481 Foundations of Educational Research

**OR (Exercise Science Concentration)**  
- EDF 6407 Statistical Analysis for Educational Research  
  4

Other 24 hours determined by Program.

#### Plan III

**Program of Study**  
30 hours minimum

**Core Requirements**  
6 hours minimum

- EDF 6432 Foundations of Measurement  
- EDF 6481 Foundations of Educational Research

**Other Requirements**

- PET 6419 Clinical Supervision in Physical Education  
- PET 6443 Instructional Design and Content: Games  
- PET 6444 Instructional Design and Content: Dance and Gymnastics  
- PET 6516 Learner Assessment in School Based Physical Education  
- PET 6706 Analysis of Research in Physical Education  
- PET 6716 Analysis of Teaching in Physical Education

**Electives**  
6 hours

- PET 6419 Sport Psychology  
- PET 6447 Grant Writing in PE  
- PET 6447 Adapted PE

**Comprehensive Exam**  
A written comprehensive examination is required during the semester in which the student completes the requirements for the master’s degree.

Please be advised that program and/or course requirements are subject to change, per state legislative mandates, Florida State Department of Education program approval standards, and accreditation criteria.

### COURSES  
http://www.ugs.usf.edu/course-inventory/
READING EDUCATION

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines
Fall: February 15
Spring: October 15
Summer: February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 36
Level: Masters
CIP Code: 13.1315
Dept. Code: EDR
Major/College Codes: ARD ED
Approved: 1962

CONTACT INFORMATION

College: Education
Department: Teaching and Learning
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

This degree is designed to prepare special reading teachers, clinicians, supervisors, directors, and coordinators of reading for school systems, as well as non-educational contexts.

Accreditation: Accredited by the National Council for the Accreditation of Teacher Education, and the Department of Education.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

For admission, all majors require earned degrees from regionally accredited institutions or an international equivalent. In order to be considered for admission, first-time or transferring graduate applicants must:

- Have a bachelor’s degree or equivalent from a regionally accredited university or the equivalent bachelors and/or graduate degrees from a foreign institution
- Have earned a “B” (3.0 on a 4.0 scale) average or higher in all work attempted while registered as an upper division student working in a baccalaureate degree in a regionally accredited institution

Have an earned, valid teaching certificate for Plan II OR Be eligible for professional certification through the completion of a Bachelor’s degree in Education OR enroll in the Plan III MA in Reading which does not grant Reading Certification

Exceptions to minimum requirements will be considered for National Board Certification and an outstanding professional record.

For International Students

http://www.usf.edu/education/
All applicants whose native language is other than English or who have earned a degree from an institution outside the United States must meet the University requirements relative to international graduate admission, (e.g. TOEFL scores, etc.). In addition to these university requirements, applicants to the College of Education must provide the following:

- A social security number for purposes of State testing, internship and practica.

**CURRICULUM REQUIREMENTS**

**Program of Study**

Two options are available:

**Option 1:**

**Core Requirements**

**Process Core**

EDF 6481: Foundations of Educational Research

**Research**

RED 6656: Trends in Literature in a Diverse Society

**Concentration Requirements:**

RED 6247: District and School Level Supervision and Coaching in Reading 3
RED 6449: Literacy and Technology 3
RED 6540: Assessment in Literacy 3
RED 6544: Cognition, Comprehension, and Content Area Reading: Remediation of Reading Problems 3
RED 6545: Learning Disciplinary Texts through Vocabulary and Word Study 3
RED 6747: History and Foundations of Reading in STEM Disciplines: Prevention and Intervention of Reading Difficulties 3
RED 6068: Adolescent Literacy 3
RED 6846: Practicum in Reading 3
LAE 6315: Composing Disciplinary Texts: Research and Practice for Writers and Writing Psychological 3
TSL 5085: ESOL I: Teaching limited English Proficiency Students in K-12 3
TSL 5085 may be waived with appropriate documentation by the COEDU ESOL Coordinator.

**Option 2: Reading Education Plan III**

**Core Requirements**

**Process Core**

EDF 6481: Foundations of Educational Research

**Research**

RED 6656: Literature in a Diverse Society

**Concentration Requirements:**

RED 6247: District and School Level Supervision and Coaching in Reading 3
RED 6449: Literacy and Technology 3
RED 6540: Assessment in Literacy 3
RED 6544: Cognition, Comprehension, and Content Area Reading: Remediation of Reading Problems 3
RED 6545: Learning Disciplinary Texts through Vocabulary and Word Study 3
RED 6747: History and Models of Reading in STEM Disciplines: Prevention and Intervention of Reading Difficulties 3
RED 6068: Adolescent Literacy 3
RED 6846: Practicum in Reading 3
LAE 6315: Composing Disciplinary Texts: Research and Practice for Writers and Writing Psychological 3
EDF 6517: Historical Foundations of American Education OR EDF 6211: Psychological Foundations of Education 3

http://www.usf.edu/education/
Comprehensive Examination
Successful performance on a Comprehensive Examination is required for degree completion.

Practicum
Students are required to take RED 6846 Practicum in Reading.

Critical Tasks and Projects
Students must successfully complete Critical Tasks/Projects in designated courses. These tasks/projects are posted to a Chalk and Wire account.

COURSES
See http://www.ugs.usf.edu/course-inventory/
SCHOOL PSYCHOLOGY

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines
Fall: January 1
Fall Admission Only

International applicant deadlines: http://www.grad.usf.edu/majors

Minimum Total Hours: 32
Level: Masters*
Program Status: Active
CIP Code: 42.2805
Dept. Code: EDF
Major/College Codes: ASP EJ
Approved 1972

*Only available when combined with the Ed. S. or Ph.D.

CONTACT INFORMATION

College: Education
Department: Educational and Psychological Studies
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The M.A. degree in School Psychology is offered only when combined with the Ed.S. and/or Ph.D. degrees. The M.A. in School Psychology is not a terminal degree and cannot be used for certification or licensure as a school psychologist.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

Admission occurs once each year for the Fall class. The School Psychology program is a limited access program. This means that only a limited number of students are able to be accepted each year.

For all admission, all programs require earned degrees from regionally accredited institutions. International students are also required to:

1. Submit passing TOEFL scores

Prerequisite Coursework for Admission
- Bachelor’s degree or higher or the equivalent bachelors and/or graduate degrees from a foreign institution
- An undergraduate (or graduate) course in Statistics
- An undergraduate (or graduate) course in Tests and Measurements (including issues such as reliability, validity, standard error of measurement, etc.)
- An undergraduate (or graduate) course in Research Methods or Experimental Design with a lab component.

Required Admissions Materials
All admissions materials should be submitted directly to our program. A complete application includes the following:

- A completed Application to Graduate Studies. All applications must be submitted online and can be located on our program website: http://www.usf.edu/education/schoolpsych/
- The application fee ($30) - payable by credit card.
- Submit official GRE scores (Note: Verbal, Quantitative, and Analytical Writing scores are required; scores should not be more than 5 years old).
USF Graduate Catalog 2017-2018

School Psychology (M.A.)

- Provide official transcripts from all colleges and universities where you have completed coursework. Applicants must have an undergraduate GPA of 3.5 or higher in upper division level undergraduate coursework.
- Provide a statement of professional goals. In a 2-3 page statement, explain your immediate, intermediate, and long term goals as well as your research interests. Professional goals and research interests must be compatible with the School Psychology Program.
- Submit three letters of recommendation from professionals who are familiar with your scholarship and work history.
- Demonstrate the ability to write professionally by submitting a scholarly paper completed as part of your prior coursework.
- If invited for an interview, a) present self professionally in an oral interview with two or more faculty members and graduate students, and b) provide a writing sample related to a relevant topic to the field of school psychology during the interview process.

For International Applicants
Applicants whose native language is not English or who have not earned a degree in the United States must also submit TOEFL scores earned within two (2) years of the desired term of entry. A minimum total score of 79 on the internet-based test, or 550 on the paper-based test, are required. Applications submitted with TOEFL scores that do not meet the minimum requirements will be denied. The TOEFL requirement may be waived if the applicant meets one of the following conditions:

- The applicant’s native language is English, or
- Has scored 500 or higher on the GRE Verbal Test, or
- Has earned a college degree at a U.S. institution of higher learning, or
- Has earned a college degree from an institution whose language of instruction is English (must be noted on the transcript), or
- Has scored 6.5 on International English Language Testing System (IELTS) [http://www.ielts.org/].

CURRICULUM REQUIREMENTS

Core Requirements
- EDF 6938 Issues in Child Development
- EDF 6214 Classroom Learn
- EDF 6217 Behavior Learn

Concentration Requirements
- SPS 6936 Seminar in School Psychology
- EDF 6407 Statistics I
- SPS 6197 Assessment I
- SPS 6198 Assessment II
- EDF 6288 Instructional Des
- EDF 6166 Consultation

Note: Students may be required to take additional hours depending on the course of study and or academic deficiencies.

Practicum
Students must complete a school-based practicum consisting of eight (8) hours per week for a minimum of 32 weeks (2 semesters) for a total of 256 contact hours.

Comprehensive Exam
Prior to clearance for the MA degree, candidates must satisfactorily complete a portfolio of performance-based accomplishments that is evaluated by the School Psychology faculty.

COURSES
See [http://www.ugs.usf.edu/course-inventory/] and [www.coedu.usf.edu/schoolpsych]

http://www.usf.edu/education/
SCHOOL PSYCHOLOGY

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines
Fall: January 1
Fall Admission Only

Minimum Total Hours: 84 (post-masters)
Level: Doctoral
Program Status: Active
CIP Code: 42.2805
Dept. Code: EDF
Major/College Codes: DSG ED
Approved 2001

CONTACT INFORMATION

College: Education
Department: Educational and Psychological Studies
Contact Information: http://www.grad.usf.edu/majors

MAJOR INFORMATION

The Ph.D. degree program in School Psychology at the University of South Florida is offered through the College of Education’s Educational and Psychological Studies. The Program has been designed specifically for training in school psychology and has been developed to meet all relevant national accreditation standards. The Ph.D. program is fully accredited by the American Psychological Association and fully approved by the National Association of School Psychologists and the Florida Department of Education. Students who complete the School Psychology Training Program at USF automatically meet the academic and field training requirements for certification as a Nationally Certified School Psychologist (N.C.S.P.)

The Ph.D. program in School Psychology is committed to training professionals who have expertise in the depth and diversity of both psychology and education. This training is accomplished within a scientist-practitioner model that emphasizes comprehensive school psychological services using a social and cognitive behavioral learning theory orientation that recognizes the impact of children’s individual differences and the importance of multicultural awareness and skills. Graduates of the Ph.D. program move to positions of employment as university faculty and researchers, as psychologists in school, hospital, and agency settings, and as program leaders in applied settings. The program also offers professional development opportunities for practitioners in the field.

Accreditation
Accredited by NCATE, and the American Psychological Association, and Approved by the National Association of School Psychologists.

Major Research Areas
Pediatric School Psychology, Organizational Development and Consultation, Academic Assessment and Intervention, Problem-Solving and Response to Intervention, School-Based Mental Health Services, Positive Psychology, Behavior Disorders, Home-School Collaboration, Gender-Related Issues in Education and Adolescent Development, and ADHD.
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

Admission occurs once each year for the Fall class. The School Psychology program is a limited access program. This means that only a limited number of students are able to be accepted each year

For all admission, all programs require earned degrees from regionally accredited institutions. International students are also required to:

1. Submit passing TOEFL scores

Prerequisite Coursework for Admission

- Bachelor’s degree or higher the equivalent bachelors and/or graduate degrees from a foreign institution
- An undergraduate (or graduate) course in Statistics
- An undergraduate (or graduate) course in Tests and Measurements (including issues such as reliability, validity, standard error of measurement, etc.)
- An undergraduate (or graduate) course in Research Methods or Experimental Design with a lab component.

Required Admissions Materials

- All admissions materials should be submitted directly to our program. A complete application includes the following:
- A completed Application to Graduate Studies. All applications must be submitted online and can be located on our program website: [http://www.usf.edu/education/schoolpsych/](http://www.usf.edu/education/schoolpsych/)
- The application fee ($30) - payable by credit card.
- Submit official GRE scores (Note: Verbal, Quantitative, and Analytical Writing scores are required; scores should not be more than 5 years old).
- Provide official transcripts from all colleges and universities where you have completed coursework. Applicants must have an undergraduate GPA of 3.5 or higher in upper division level undergraduate coursework.
- Provide a statement of professional goals. In a 2-3 page statement, explain your immediate, intermediate, and long term goals as well as your research interests. Professional goals and research interests must be compatible with the School Psychology Program.
- Submit three letters of recommendation from professionals who are familiar with your scholarship and work history.
- Demonstrate the ability to write professionally by submitting a scholarly paper completed as part of your prior coursework.
- If invited for an interview, a) present self professionally in an oral interview with two or more faculty members and graduate students, and b) provide a writing sample related to a relevant topic to the field of school psychology during the interview process.

For international applicants

Applicants whose native language is not English or who have not earned a degree in the United States must also submit TOEFL scores earned within two (2) years of the desired term of entry. A minimum total score of 79 on the internet-based test, or 550 on the paper-based test, are required. Applications submitted with TOEFL scores that do not meet the minimum requirements will be denied. The TOEFL requirement may be waived if the applicant meets one of the following conditions:

- The applicant’s native language is English, or
- Has scored 500 or higher on the GRE Verbal Test, or
- Has earned a college degree at a U.S. institution of higher learning, or
- Has earned a college degree from an institution whose language of instruction is English (must be noted on the transcript), or
- Has scored 6.5 on International English Language Testing System (IELTS) [http://www.ielts.org/](http://www.ielts.org/)
CURRICULUM REQUIREMENTS

The Doctor of Philosophy (Ph.D.) degree consists of approximately 84 semester hours beyond the Masters degree in School Psychology and includes advanced leadership coursework and practica experiences, concentration and area of emphasis courses in school psychology, a 2,000 clock hour internship, and the dissertation. A Master of Arts (M.A.) degree is earned by most students during the first year of their Ph.D. program. However, the M.A. is not considered a terminal degree and is not sufficient for state certification in school psychology.

Core Requirements

Research Competencies

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDF 7410 Research Design</td>
<td>4</td>
</tr>
<tr>
<td>EDF 6407 Statistics I</td>
<td>4</td>
</tr>
<tr>
<td>EDF 7408 Statistics II</td>
<td>4</td>
</tr>
<tr>
<td>EDF 7484 Statistics III</td>
<td>4*</td>
</tr>
<tr>
<td>SPS 7980 Dissertation</td>
<td>9</td>
</tr>
</tbody>
</table>

*or similar course as recommended by doctoral committee and approved by the College and/or Office of Graduate Studies.

Psychological Foundations

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
<td>SPS 6101 Behavior Disorders</td>
<td>3</td>
</tr>
<tr>
<td>EDF 6938 Social Psychology</td>
<td>3</td>
</tr>
<tr>
<td>EDF 6883 Issues in Multicultural Education</td>
<td>4</td>
</tr>
<tr>
<td>EDF 6213 Biological Bases of Behavior</td>
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</table>

Consultation/Intervention/Problem-Solving

<table>
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<th>Course</th>
<th>Units</th>
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<tr>
<td>SPS 6700 Intervention I</td>
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</tr>
<tr>
<td>SPS 6701 Intervention II</td>
<td>4</td>
</tr>
<tr>
<td>SPS 6702 Intervention III</td>
<td>4</td>
</tr>
<tr>
<td>SPS 7205 Advanced Consultation</td>
<td>3</td>
</tr>
<tr>
<td>SPS 7700 Advanced Behavioral Intervention</td>
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Professional Practice

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<th>Units</th>
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<tr>
<td>SPS 7936 Advanced Seminar</td>
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<tr>
<td>SPS 6940 Intervention Practicum</td>
<td>2</td>
</tr>
<tr>
<td>SPS 6941 Intervention Practicum</td>
<td>2</td>
</tr>
<tr>
<td>EDG 7931 Advanced Practicum</td>
<td>2</td>
</tr>
<tr>
<td>SPS 7090 Supervision</td>
<td>4</td>
</tr>
<tr>
<td>SPS 6947 Internship</td>
<td>16</td>
</tr>
</tbody>
</table>

Note: Students may be required to take additional hours depending on the course of study and or academic deficiencies.

Area of Emphasis

All doctoral students in School Psychology must specialize in at least one Area of Emphasis. An area of emphasis is defined by coursework, practice, research, and internship experiences taken by the student. Possible Areas of Emphasis include: Pediatric School Psychology, Organizational Development and Consultation, Academic Assessment and Intervention, Problem-Solving and Response to Intervention, School-Based Mental Health Services, Positive Psychology, Behavior Disorders, Home-School Collaboration, Gender-Related Issues in Education and Adolescent Development, and ADHD.

Qualifying Examination

The purpose of the qualifying examination is to evaluate the student’s ability to apply and synthesize the skills and knowledge acquired during graduate study. Students must successfully complete the qualifying examination and complete all required coursework before admission to doctoral candidacy.
Tests or Examinations
All students must complete the General Knowledge Exam prior to internship. It is recommended that students take both the General Knowledge Examination and the Professional Education Examination (required for degree completion) at the same time. Both of these requirements should be completed as a part of the Ed.S. Degree. All students are required to take and pass the National Association of School Psychology Certification Exam during the internship year, prior to graduation.

Residency Requirement
University academic residency is defined as registration for at least 9 semester hours, two semesters in a 12 month period.

COURSES
See http://www.ugs.usf.edu/course-inventory/
SCIENCE EDUCATION

Master of Arts (M.A.) Degree

DEGREE INFORMATION

This Major is Closed for Admission

Minimum Total Hours: 33
Level: Masters
CIP Code: 13.1316
Dept. Code: EDI
Major/College Codes: SCE EJ

Concentrations:
Biology (ASB)
Chemistry (ASC)
Physics (ASY)

CONTACT INFORMATION

College: Education
Department: Teaching and Learning
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

Plan I – The Plan I track is a program of graduate study designed for those with initial certification in the area of concentration (typically with a baccalaureate degree from a college of education) who desire to increase their competence in the subject specialization. It is an individually planned program of study in consultation with a departmental advisor.

Accreditation: Accredited by the National Council for Accreditation of Teacher Education, and the Department of Education.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- A bachelor’s degree or the equivalent bachelors and/or graduate degrees from a foreign institution in a science field (biology, chemistry, physics, geology, etc.) or coursework in a science teaching field acceptable to the program faculty. Students should provide a typed listing of science courses as part of their application. Students who do not meet this requirement can enroll in undergraduate courses prior to application. These courses will not be counted toward the master’s degree and can be taken at any regionally accredited university or community college.

- A “B” (3.0 on a 4.0 scale) average or higher in all work attempted while registered as an upper division student working for a baccalaureate degree, or students seeking admission by completing three graduate courses with a B or higher in each course while a non-degree seeking student should take: * EDF 6432 Foundations of Measurement and * EDF 6211 or 6215 Psychological Foundations and * SCE 5337 or SCE 5364, and

- CLAST, GKT, Praxis I or GRE is required. For the GRE the following score minimums are preferred: V:430, Q:570, AW:4.

- Proof of educational or professional experience.

- Proof of initial certification or relevant degree (Plan I).

http://www.usf.edu/education/
International Students
All applicants whose native language is other than English or who have earned a degree from an institution outside the United States must meet the University requirements relative to international graduate admission, (e.g. TOEFL scores, etc.). In addition to these university requirements, applicants to the College of Education must provide the following:

- A social security number in degree programs requiring practica or internships; and
- Other information as required by the major of interest, (e.g. Graduate Record Exam scores, etc.).

CURRICULUM REQUIREMENTS

Plan I
Program of Study 33 hours minimum

Core Requirements 12 hours minimum
EDF 6432 Foundations of Measurement 3
EDF 6211 Psychological Foundations of Education or 3
EDF 6215 Learning Principles Applied to Instruction 3

Select one from the following:
   EDF 6517 Historical Foundations of American Education 4
   EDF 6606 Socio-Economic Foundations of American Education 4
   EDF 6481 Foundations of Educational Research 3
   OR an equivalent research methods course.

Current Trends in Teaching Concentration 3 hours minimum
SCE 6634 Current Trends in Science Education 3

Concentration Requirements 18 hours minimum
Students select from the following concentrations:

   BIOLOGY (ASB)
   CHEMISTRY (ASC)
   PHYSICS (ASY)

Courses to be taken in the College of Arts and Sciences based on the prior background and interests of the student.

Comprehensive Examination
The comprehensive exam will consist of a written and/or oral examination in the major area.

COURSES
See http://www.ugs.usf.edu/course-inventory/
SCIENCE EDUCATION

Master of Arts in Teaching (M.A.T.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines
Fall: June 1
Spring: October 15
Summer: February 15

Minimum Total Hours: 39
Level: Masters
CIP Code: 13.1316
Dept. Code: EDI
Major/College Codes: TSC ED
Approved: 2002

Concentrations:
Biology (ASB)
Chemistry (ASC)
Earth & Space Science (AES)
Physics (ASY)

Also offered as an Accelerated Program

CONTACT INFORMATION

College: Education
Department: Teaching and Learning
Contact Information: www.grad.usf.edu

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- Minimum GPA of 3.0 in upper division coursework in the Baccalaureate degree or the equivalent bachelors and/or graduate degrees from a foreign institution

For admission to a Master of Arts in Teaching Program, the student must demonstrate mastery of general knowledge by one of the following:

* Passing the General Knowledge Test, a portion of the Florida Teacher Certification Exam (link to http://www.fldoe.org/accountability/assessments/postsecondary-assessment/ftce)
Or
* Effective for tests administered on or after July 1, 2015, achievement of passing scores, as identified in Rule 6A-4.0021(12), F.A.C., on test sections of the GRE® revised General Test GRE Analytical Writing combined score of 4 out of 6 acceptable for GK Essay GRE Quantitative Reasoning scaled score of 147 acceptable for GK Mathematics GRE Verbal Reasoning scaled score of 151 acceptable for both GK English Language Skills and GK Reading

During the 2014 Legislative Session, the passage of House Bill 433 amended s. 1012.56, FS, to eliminate the obsolete option of achieving a passing score on the CLAST earned prior to July 1, 2002, to satisfy the general knowledge requirement.

International Students
All applicants whose native language is other than English or who have earned a degree from an institution outside the United States must meet the University requirements relative to international graduate admission, (e.g. TOEFL scores, etc.). In addition to these university requirements, applicants to the College of Education must provide the following:

- A social security number in degree programs requiring practica or internships;
- Other information as required by the major of interest, (e.g. Graduate Record Exam scores, etc.).

CURRICULUM REQUIREMENTS

Total Minimum Hours 39 hours minimum
The courses required for the M.A.T. in Science Education are listed below. Please check with the program for other program requirements.

Core Requirements

Process Core 33 hours minimum

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDF 6432</td>
<td>Measurement for Teachers</td>
<td>3</td>
</tr>
<tr>
<td>ESE 5342:</td>
<td>Teaching the Adolescent Learner</td>
<td>3</td>
</tr>
<tr>
<td>ESE 5344:</td>
<td>Classroom Management for a Diverse School and Society</td>
<td>3</td>
</tr>
<tr>
<td>TSL 5325:</td>
<td>ESOL Education in Content Areas</td>
<td>3</td>
</tr>
<tr>
<td>SCE 5564:</td>
<td>Reading and Communication Science Education</td>
<td>3</td>
</tr>
<tr>
<td>SCE 5325:</td>
<td>Methods for Middle Grades Science Education</td>
<td>3</td>
</tr>
<tr>
<td>SCE 5337:</td>
<td>Methods for Secondary Science Education</td>
<td>3</td>
</tr>
<tr>
<td>SCE 6416</td>
<td>Teaching Secondary School Biology</td>
<td>3</td>
</tr>
<tr>
<td>SCE 6456:</td>
<td>Teaching Secondary School Physical and Earth Science</td>
<td>3</td>
</tr>
<tr>
<td>SCE 6634:</td>
<td>Current Trends in Secondary Science Education</td>
<td>3</td>
</tr>
<tr>
<td>SCE 6938:</td>
<td>Topics in Science Education: Field Practicum</td>
<td>3</td>
</tr>
</tbody>
</table>

Concentrations
Students select from the following Concentrations:

Biology

**SCE 6947 Internship** 6 hours
(Pr: CI and passing scores of FTCE exam)

- Student’s participation in the internship experience in classes that correspond to the specific area in which he or she will be certified.
- Passing score on the appropriate subject area exam.
- Student’s content degree or equivalent (an admission’s requirement).

Chemistry

**SCE 6947 Internship** 6 hours
(Pr: CI and passing scores of FTCE exam)
- Student’s participation in the internship experience in classes that correspond to the specific area in which he or she will be certified.
- Passing score on the appropriate subject area exam.
- Student’s content degree or equivalent (an admission’s requirement).

**Earth & Space Science**

**SCE 6947 Internship**

6 hours

(PR: CI and passing scores of FTCE exam)

- Student’s participation in the internship experience in classes that correspond to the specific area in which he or she will be certified.
- Passing score on the appropriate subject area exam.
- Student’s content degree or equivalent (an admission’s requirement).

**Physics**

**SCE 6947 Internship**

6 hours

(PR: CI and passing scores of FTCE exam)

- Student’s participation in the internship experience in classes that correspond to the specific area in which he or she will be certified.
- Passing score on the appropriate subject area exam.
- Student’s content degree or equivalent (an admission’s requirement)

**Comprehensive Examination**

A written narrative exam tailored to the individual student. Exam needs to be completed by two weeks before final exam week of the student’s graduating semester. Exams will only be accepted during fall or spring semester, unless previous contract is established with the student’s advisor.

**TOTAL**

39 hours

**Accelerated Program Options:**

The MAT in Science Education has the following Accelerated Program Options. Specific requirements are on the following pages.

- BS-MAT: Biomedical Sciences/Science Education
- BA-MAT: Chemistry/Science Education
- BS-MAT: Environmental Biology/Science Education
- BS-MAT: Environmental Microbiology/Science Education
- BS-MAT: Integrative Animal Biology/Science Education
- BS-MAT: Interdisciplinary Sciences/Science Education
- BS-MAT: Marine Biology/Science Education
- BA-MAT: Physics/Science Education

http://www.usf.edu/education/
Accelerated B.S./M.A.T. in Biomedical Sciences /Science Education

The accelerated Bachelor’s to M.A.T. in Science Education program is a collaborative effort between the College of Arts and Sciences and the College of Education. This program is an attractive and viable career path for students in the College of Arts and Sciences degree programs that results in secondary science teacher certification. Students who complete this program receive the necessary science content and pedagogy coursework to be highly qualified science teachers at the secondary level.

This program intends for students to complete a B.S. in Biomedical Sciences (College of Arts and Sciences) and a M.A.T. in Secondary Science (College of Education) over the span of five years. Students completing this program will be eligible for high school and/or middle school science teacher certification. Completion of this program requires students to complete 12 credits toward the M.A.T. in Science Education during their senior year of their B.S. in Biomedical Sciences.

Admission Requirements
For admission to the program a student must:

1. Have completed 15 hours in the B.S. in Biomedical Sciences major upon applying and thirty (30) semester hours in science (includes twenty-one (21) semester hours in a science concentration (e.g. chemistry, biology, physics) plus 9 hours in minor science content area) with associated laboratory experiences to be fully admitted as a graduate student in the M.A.T. Science Education Program. Evidence of successfully completing all sections of the General Knowledge Test (GKT) is also required for full admission to the graduate program.
2. Have a minimum 3.0 GPA overall; and
3. Have a minimum undergraduate 3.25 GPA in the major.

Degree Requirements
Students must satisfy the degree requirements for both the Undergraduate and Graduate Degree programs as posted in the respective Catalogs. B.S. in Biomedical Sciences requirements: [http://www.ugs.usf.edu/pdf/cat1213/08ACADEMICPOL.pdf](http://www.ugs.usf.edu/pdf/cat1213/08ACADEMICPOL.pdf)

M.A.T. in Science Education: see above

Shared B.S./M.A.T. Requirements
This accelerated program shares 12 credits between already existing degrees/concentrations:

- B.S. in Biomedical Sciences
- M.A.T. in Science Education

According to the BOG Articulation Regulation 6A-10.030; earn a minimum of 48 semester hours of upper-level work (courses numbered 3000 and above), therefore, the B.S. in Biomedical Sciences students will take 21 credits of additional 3000+ level coursework in addition to their required major and exit courses listed below. Out of this 21 credits, 12 credits will be shared with the MAT Science Education program. The shared courses are listed below:

- SCE 6938 Topics in Science Education: Field Practicum (3 credits)
- SCE 5325 Methods for Middle Grades Science Education (3 credits)
- SCE 5337 Methods for Secondary Science Education (3 credits)
- SCE 6456 Teaching the Physical Sciences (3 credits)

Timeline and benchmarks:
1. To be considered for acceptance into the Accelerated B.S./M.A.T. Science Education students must have completed a minimum of 15 credit hours in the Biomedical Science undergraduate major.
2. Students must have a minimum undergraduate GPA of 3.0 overall, and a minimum GPA of 3.25 in the major and passing scores on all sections of the General Knowledge Test (GKT) to be eligible for the accelerated major. You can find information on the General Knowledge Test on the Florida Teacher Certification section of the following webpage:
3. Following completion of a minimum of 15 hours in the undergraduate major, students may be considered for acceptance into the accelerated program through faculty nomination or student self-nomination, via submission of an Accelerated Program Application Form. Both B.S. and M.A. T. programs will review the applications and approve the nominations. All applications require the approval of the College of Education Graduate Program, the College of Arts and Sciences, and the USF Graduate School.

http://www.usf.edu/education/
To be promoted to graduate status, students must meet all admission requirements of the M.A.T. in Science Education in the College of Education. Specifically, the following materials must be submitted:

a. Undergraduate transcripts; and evidence of possessing a degree in a science discipline (biology, chemistry, physics, geology, etc.) that is taught in a middle or high school, or comparable coursework in a science teaching field acceptable to the program faculty. A minimum of 21 hours in a major science content area of concentration (e.g., chemistry, biology, physics) plus 9 hours in minor science content area are required to teach secondary school. Note, to teach secondary science in a specialty area (e.g. chemistry, biology, physics) the state of Florida requires: A bachelor’s or higher degree with thirty (30) semester hours in science to include twenty-one (21) semester hours in that specialty area with associated laboratory experiences.

d. Documentation of GKT scores.

Students must earn a minimum of a “B” (3.00) in all graduate courses. Failure to earn at least a “B” in a graduate course will result in academic review by the graduate program. Failure to maintain a minimum 3.0 GPA will result in academic probation, according to the procedures of the USF Office of Graduate Studies. A comprehensive plan of study to complete the integrated B.S./M.A.T program will be developed with the guidance of an advisor and a faculty member.

Accelerated B.A./M.A.T. in Chemistry /Science Education

The accelerated Bachelor’s to M.A.T. in Science Education program is a collaborative effort between the College of Arts and Sciences and the College of Education. This program is an attractive and viable career path for students in the Department of Chemistry degree programs that results in secondary science teacher certification. Students who complete this program receive the necessary science content and pedagogy coursework to be highly qualified chemistry teachers at the secondary level.

This program intends for students to complete a B.A. in Chemistry (College of Arts and Sciences) and a M.A.T. in Secondary Science (College of Education) over the span of five years. Students completing this program will be eligible for high school and/or middle school science teacher certification. Completion of this program requires students to complete 12 credits toward the M.A.T. in Science Education during the senior year of their B.A. in Chemistry.

Admission Requirements

For admission to the program a student must:

1. Have completed 15 hours in the B.A. in Chemistry major upon applying and thirty (30) semester hours in science (includes twenty-one (21) semester hours in chemistry plus 9 hours in minor science content area) with associated laboratory experiences to be fully admitted as a graduate student in the M.A.T. Science Education Program. Evidence of successfully completing all sections of the General Knowledge Test (GKT) is also required for full admission to the graduate program

2. Have a minimum 3.0 GPA overall; and

3. Have a minimum undergraduate 3.25 GPA in the major.

Degree Requirements

Students must satisfy the degree requirements for both the Undergraduate and Graduate Degree programs as posted in the respective Catalogs.

BA in Chemistry - All Chemistry, BA students will complete FLENT, FLEX and Summer Enrollment requirements as well as graduation requirements listed in the catalog: [http://www.ugs.usf.edu/pdf/cat1213/08ACADEMICPOL.pdf](http://www.ugs.usf.edu/pdf/cat1213/08ACADEMICPOL.pdf)

M.A.T. in Science Education: see above

Shared B.A./M.A.T. Requirements

This accelerated program shares 12 credits between already existing degrees/concentrations:

- B.A. in Chemistry
- M.A.T. in Science Education

According to the BOG Articulation Regulation 6A-10.030; earn a minimum of 48 semester hours of upper-level work (courses numbered 3000 and above), therefore, the Chemistry, B.A. students will take 21 credits of additional 3000+ level coursework in...
addition to their required major and exit courses listed above. Of this 21 credits, 12 credits will be shared with the M.A.T. Science Education program. The shared courses are listed below:

SCE 6938 Topics in Science Education: Field Practicum (3 credits)
SCE 5325 Methods for Middle Grades Science Education (3 credits)
SCE 5337 Methods for Secondary Science Education (3 credits)
SCE 6456 Teaching the Physical Sciences (3 credits)

Timeline and benchmarks:
1. To be considered for acceptance into the Accelerated B.A./M.A.T. Chemistry/Science Education students must have completed a minimum of 15 credit hours in the Chemistry undergraduate major.
2. Students must have a minimum undergraduate GPA of 3.0 overall, and a minimum GPA of 3.25 in the major and passing scores on all sections of the General Knowledge Test (GKT) to be eligible for the accelerated major. You can find information on the General Knowledge Test on the Florida Teacher Certification section of the following webpage: http://www.fl.nesinc.com/
3. Following completion of a minimum of 15 hours in the undergraduate major, students may be considered for acceptance into the accelerated program through faculty nomination or student self-nomination, via submission of an Accelerated Program Application Form. Both B.A. and M.A. T. programs will review the applications and approve the nominations. All applications require the approval of the College of Education Graduate Program, the College of Arts and Sciences, and the USF Graduate School.
4. To be promoted to graduate status, students must meet all admission requirements of the M.A.T. in Science Education in the College of Education. Specifically, the following materials must be submitted:
   a. Undergraduate transcripts; and evidence of possessing a degree in a science discipline (biology, chemistry, physics, geology, etc.) that is taught in a middle or high school, or comparable coursework in a science teaching field acceptable to the program faculty. A minimum of 21 hours in major science content area of concentration (plus 9 hours in minor science content area) are required to teach secondary school. Note, to teach secondary chemistry the state of Florida requires: A bachelor’s or higher degree with thirty (30) semester hours in science to include twenty-one (21) semester hours in chemistry with associated laboratory experiences.
   d. Documentation of GKT scores.
5. Students must earn a minimum of a “B” (3.00) in all graduate courses. Failure to earn at least a “B” in a graduate course will result in academic review by the graduate program. Failure to maintain a minimum 3.0 GPA will result in academic probation, according to the procedures of the USF Office of Graduate Studies.

A comprehensive plan of study to complete the integrated B.A./M.A.T program will be developed with the guidance of an advisor and a faculty member.

Accelerated B.S./M.A.T. in Environmental Biology /Science Education
This program intends for students to complete a Biology B.S. Environmental Biology major (College of Arts and Sciences) and a M.A.T. in Secondary Science (College of Education) over the span of five years. Students completing this program will be eligible for high school and/or middle school science teacher certification. Completion of this program requires students to complete 12 credits toward the M.A.T. in Science Education during the senior year of their Biology BS (Environmental Biology) major.

Target students and expected outcomes
The accelerated Bachelor’s to M.A.T. in Science Education program is a collaborative effort between the College of Arts and Sciences and the College of Education. This program is an attractive and viable career path for students in the Department of Integrative Biology degree programs that results in secondary science teacher certification. Students who complete this program receive the necessary science content and pedagogy coursework to be highly qualified biology teachers at the secondary level.

Admission Requirements
For admission to the program a student must:

1. Have completed 15 hours in the Biology B.S. Environmental Biology major upon applying and thirty (30) semester hours in science (includes twenty-five (25) semester hours in biology plus 5 hours of upper level work in math or
supporting science content area) with associated laboratory experiences to be fully admitted as a graduate student in the M.A.T. Science Education Program. Evidence of successfully completing all sections of the General Knowledge Test (GKT) is also required for full admission to the graduate program.

2. Have a minimum 3.0 GPA overall; and
3. Have a minimum undergraduate 3.25 GPA in the major.

**Degree Requirements**

Students must satisfy the degree requirements for both the Undergraduate and Graduate Degree programs as posted in the respective Catalogs.

**Shared B.S./M.A.T. Requirements**

This accelerated program shares 12 credits between already existing degrees/concentrations:

- B.S. in Environmental Biology
- M.A.T. in Science Education

Twelve credits of upper level unassigned 3000 or 4000 level electives will be replaced by the following:

- SCE 6938 Topics in Science Education: Field Practicum (3 credits)
- SCE 5325 Methods for Middle Grades Science Education (3 credits)
- SCE 5337 Methods for Secondary Science Education (3 credits)
- SCE 6456 Teaching the Physical Sciences (3 credits)

**Timeline and benchmarks:**

1. To be considered for acceptance into the Accelerated B.S./M.A.T. Biology (Environmental Biology)/Science Education students must have completed a minimum of 15 credit hours in the Biology B.S. Environmental Biology undergraduate major.
2. Students must have a minimum undergraduate GPA of 3.0 overall, and a minimum GPA of 3.25 in the major and passing scores on all sections of the General Knowledge Test (GKT) to be eligible for the accelerated major. You can find information on the General Knowledge Test on the Florida Teacher Certification section of the following webpage: http://www.fl.nesinc.com/
3. Following completion of a minimum of 15 hours in the undergraduate major, students may be considered for acceptance into the accelerated program through faculty nomination or student self-nomination, via submission of an Accelerated Program Application Form. Both B.A. and M.A. T. programs will review the applications and approve the nominations. All applications require the approval of the College of Education Graduate Program, the College of Arts and Sciences, and the USF Office of Graduate Studies.
4. To be promoted to graduate status, students must meet all admission requirements of the M.A.T. in Science Education in the College of Education. Specifically, the following materials must be submitted:
   a. Undergraduate transcripts; and evidence of possessing a degree in a science discipline (biology, chemistry, physics, geology, etc.) that is taught in a middle or high school, or comparable coursework in a science teaching field acceptable to the program faculty. Note, to teach secondary biology the state of Florida requires: A bachelor’s or higher degree in biology or a bachelor’s or higher degree with thirty (30) semester hours in science to include twenty-one (21) semester hours in biology with associated laboratory experiences.
   d. Documentation of GKT scores.
5. Students must earn a minimum of a “B” (3.00) in all graduate courses. Failure to earn at least a “B” in a graduate course will result in academic review by the graduate program. Failure to maintain a minimum 3.0 GPA will result in academic probation, according to the procedures of the USF Office of Graduate Studies.

A comprehensive plan of study to complete the accelerated B.A./M.A.T program will be developed with the guidance of an advisor and a faculty member. A possible plan of study could be as follows. Summer sessions may also be included in the study plan.
Accelerated B.S./M.A.T. in Environmental Microbiology /Science Education

This program intends for students to complete a Biology B.S. Environmental Microbiology major (College of Arts and Sciences) and a M.A.T. in Secondary Science (College of Education) over the span of five years. Students completing this program will be eligible for high school and/or middle school science teacher certification. Completion of this program requires students to complete 12 credits toward the M.A.T. in Science Education during the senior year of their Biology BS Environmental Microbiology major.

Target students and expected outcomes
The accelerated Bachelor's to M.A.T. in Science Education program is a collaborative effort between the College of Arts and Sciences and the College of Education. This program is an attractive and viable career path for students in the Department of Integrative Biology degree programs that results in secondary science teacher certification. Students who complete this program receive the necessary science content and pedagogy coursework to be highly qualified biology teachers at the secondary level.

Admission Requirements
For admission to the program a student must:

1. Have completed 15 hours in the Biology B.S. Environmental Microbiology major upon applying and thirty (30) semester hours in science (includes twenty-five (25) semester hours in biology plus 5 hours of upper level work in math or supporting science content area) with associated laboratory experiences to be fully admitted as a graduate student in the M.A.T. Science Education Program. Evidence of successfully completing all sections of the General Knowledge Test (GKT) is also required for full admission to the graduate program
2. Have a minimum 3.0 GPA overall; and
3. Have a minimum undergraduate 3.25 GPA in the major.

Degree Requirements
Students must satisfy the degree requirements for both the Undergraduate and Graduate Degree programs as posted in the respective Catalogs.

Shared B.S./M.A.T. Requirements
This accelerated program shares 12 credits between already existing degrees/concentrations:

- B.S. in Environmental Microbiology
- M.A.T. in Science Education

Twelve credits of upper level unassigned 3000 or 4000 level electives will be replaced by the following:

- SCE 6938 Topics in Science Education: Field Practicum (3 credits)
- SCE 5325 Methods for Middle Grades Science Education (3 credits)
- SCE 5337 Methods for Secondary Science Education (3 credits)
- SCE 6456 Teaching the Physical Sciences (3 credits)

Timeline and benchmarks:
1. To be considered for acceptance into the Accelerated B.S./M.A.T. Biology (Environmental Biology)/Science Education students must have completed a minimum of 15 credit hours in the Biology B.S. Environmental Biology undergraduate major.
2. Students must have a minimum undergraduate GPA of 3.0 overall, and a minimum GPA of 3.25 in the major and passing scores on all sections of the General Knowledge Test (GKT) to be eligible for the accelerated major. You can find information on the General Knowledge Test on the Florida Teacher Certification section of the following webpage: http://www.fl.nesinc.com/
3. Following completion of a minimum of 15 hours in the undergraduate major, students may be considered for acceptance into the accelerated program through faculty nomination or student self-nomination, via submission of an Accelerated Program Application Form. Both B.A. and M.A. T. programs will review the applications and approve the nominations. All applications require the approval of the College of Education Graduate Program, the College of Arts and Sciences, and the USF Office of Graduate Studies.

http://www.usf.edu/education/
4. To be promoted to graduate status, students must meet all admission requirements of the M.A.T. in Science Education in the College of Education. Specifically, the following materials must be submitted:
   a. Undergraduate transcripts; and evidence of possessing a degree in a science discipline (biology, chemistry, physics, geology, etc.) that is taught in a middle or high school, or comparable coursework in a science teaching field acceptable to the program faculty. Note, to teach secondary biology the state of Florida requires: A bachelor’s or higher degree in biology or a bachelor’s or higher degree with thirty (30) semester hours in science to include twenty-one (21) semester hours in biology with associated laboratory experiences.
   d. Documentation of GKT scores.

5. Students must earn a minimum of a “B” (3.00) in all graduate courses. Failure to earn at least a “B” in a graduate course will result in academic review by the graduate program. Failure to maintain a minimum 3.0 GPA will result in academic probation, according to the procedures of the USF Office of Graduate Studies.

A comprehensive plan of study to complete the accelerated B.A./M.A.T program will be developed with the guidance of an advisor and a faculty member. A possible plan of study could be as follows. Summer sessions may also be included in the study plan.

**Accelerated B.S./M.A.T. in Integrative Animal Biology /Science Education**

This program intends for students to complete a Biology B.S. Integrative Animal Biology major (College of Arts and Sciences) and a M.A.T. in Secondary Science (College of Education) over the span of five years. Students completing this program will be eligible for high school and/or middle school science teacher certification. Completion of this program requires students to complete 12 credits toward the M.A.T. in Science Education during the senior year of their Biology BS Integrative Animal Biology major.

**Target students and expected outcomes**

The accelerated Bachelor’s to M.A.T. in Science Education program is a collaborative effort between the College of Arts and Sciences and the College of Education. This program is an attractive and viable career path for students in the Department of Integrative Biology degree programs that results in secondary science teacher certification. Students who complete this program receive the necessary science content and pedagogy coursework to be highly qualified biology teachers at the secondary level.

**Admission Requirements**

For admission to the program a student must:

1. Have completed 15 hours in the Biology B.S. Integrative Animal Biology major upon applying and thirty (30) semester hours in science (includes twenty-five (25) semester hours in biology plus 5 hours of upper level work in math or supporting science content area) with associated laboratory experiences to be fully admitted as a graduate student in the M.A.T. Science Education Program. Evidence of successfully completing all sections of the General Knowledge Test (GKT) is also required for full admission to the graduate program
2. Have a minimum 3.0 GPA overall; and
3. Have a minimum undergraduate 3.25 GPA in the major.

**Degree Requirements**

Students must satisfy the degree requirements for both the Undergraduate and Graduate Degree programs as posted in the respective Catalogs.

**Shared B.S./M.A.T. Requirements**

This accelerated program shares 12 credits between already existing degrees/concentrations:

- B.S. in Integrative Animal Biology
- M.A.T. in Science Education
Twelve credits of upper level unassigned 3000 or 4000 level electives will be replaced by the following:

- SCE 6938 Topics in Science Education: Field Practicum (3 credits)
- SCE 5325 Methods for Middle Grades Science Education (3 credits)
- SCE 5337 Methods for Secondary Science Education (3 credits)
- SCE 6456 Teaching the Physical Sciences (3 credits)

**Timeline and benchmarks:**

1. To be considered for acceptance into the Accelerated B.S./M.A.T. Biology (Integrative Animal Biology)/Science Education students must have completed a minimum of 15 credit hours in the Biology B.S. Integrative Animal Biology undergraduate major.
2. Students must have a minimum undergraduate GPA of 3.0 overall, and a minimum GPA of 3.25 in the major and passing scores on all sections of the General Knowledge Test (GKT) to be eligible for the accelerated major program. You can find information on the General Knowledge Test on the Florida Teacher Certification section of the following webpage: [http://www.fl.nesinc.com/](http://www.fl.nesinc.com/)
3. Following completion of a minimum of 15 hours in the undergraduate major, students may be considered for acceptance into the accelerated program through faculty nomination or student self-nomination, via submission of an *Accelerated Program Application Form*. Both B.A. and M.A. T. programs will review the applications and approve the nominations. All applications require the approval of the College of Education Graduate Program, the College of Arts and Sciences, and the USF Graduate School.
4. To be promoted to graduate status, students must meet all admission requirements of the M.A.T. in Science Education in the College of Education. Specifically, the following materials must be submitted:
   a. Undergraduate transcripts; and evidence of possessing a degree in a science discipline (biology, chemistry, physics, geology, etc.) that is taught in a middle or high school, or comparable coursework in a science teaching field acceptable to the program faculty. Note, to teach secondary biology the state of Florida requires: A bachelor’s or higher degree in biology or a bachelor’s or higher degree with thirty (30) semester hours in science to include twenty-one (21) semester hours in biology with associated laboratory experiences.
   d. Documentation of GKT scores.
5. Students must earn a minimum of a “B” (3.00) in all graduate courses. Failure to earn at least a “B” in a graduate course will result in academic review by the graduate program. Failure to maintain a minimum 3.0 GPA will result in academic probation, according to the procedures of the USF Office of Graduate Studies.

A comprehensive plan of study to complete the accelerated B.A./M.A.T program will be developed with the guidance of an advisor and a faculty member. A possible plan of study could be as follows. Summer sessions may also be included in the study plan.

**Accelerated B.S./M.A.T. in Interdisciplinary Sciences /Science Education**

The accelerated Bachelor’s to M.A.T. in Science Education program is a collaborative effort between the College of Arts and Sciences and the College of Education. This program is an attractive and viable career path for students in the College of Arts and Sciences degree programs that results in secondary science teacher certification. Students who complete this program receive the necessary science content and pedagogy coursework to be highly qualified science teachers at the secondary level.

This program intends for students to complete a B.S. in Interdisciplinary Natural Sciences (College of Arts and Sciences) and a M.A.T. in Secondary Science (College of Education) over the span of five years. Students completing this program will be eligible for high school and/or middle school science teacher certification. Completion of this program requires students to complete 12 credits toward the M.A.T. in Science Education during their senior year of their B.S. in Interdisciplinary Natural Sciences.

This accelerated program shares 12 credits between already existing degrees/concentrations:

- B.S. in Interdisciplinary Sciences
- M.A.T. in Science Education
Shared B.S./M.A.T. Requirements
According to the BOG Articulation Regulation 6A-10.030; earn a minimum of 48 semester hours of upper-level work (courses numbered 3000 and above), therefore, the B.S. in Interdisciplinary Sciences students will take 18 credits of additional 3000+ level coursework in addition to their required major and exit courses listed below. Of this 18 credits, 12 credits will be shared with the MAT Science Education program. The shared courses are listed below:

SCE 6938 Topics in Science Education: Field Practicum (3 credits)
SCE 5325 Methods for Middle Grades Science Education (3 credits)
SCE 5337 Methods for Secondary Science Education (3 credits)
SCE 6456 Teaching the Physical Sciences (3 credits)

Timeline and benchmarks:
1. To be considered for acceptance into the Accelerated B.S./M.A.T. Science Education students must have completed a minimum of 15 credit hours in the Interdisciplinary Natural Sciences undergraduate major.
2. Students must have a minimum undergraduate GPA of 3.0 overall, and a minimum GPA of 3.25 in the major and passing scores on all sections of the General Knowledge Test (GKT) to be eligible for the accelerated major. You can find information on the General Knowledge Test on the Florida Teacher Certification section of the following webpage:
   http://www.fl.nesinc.com/
3. Following completion of a minimum of 15 hours in the undergraduate major, students may be considered for acceptance into the accelerated program through faculty nomination or student self-nomination, via submission of an Accelerated Program Application Form. Both B.S. and M.A. T. programs will review the applications and approve the nominations. All applications require the approval of the College of Education Graduate Program, the College of Arts and Sciences, and the USF Graduate School.
4. To be promoted to graduate status, students must meet all admission requirements of the M.A.T. in Science Education in the College of Education. Specifically, the following materials must be submitted:
   a. Undergraduate transcripts; and evidence of possessing a degree in a science discipline (biology, chemistry, physics, geology, etc.) that is taught in a middle or high school, or comparable coursework in a science teaching field acceptable to the program faculty. A minimum of 21 hours in a major science content area of concentration (e.g., chemistry, biology, physics) plus 9 hours in minor science content area are required to teach secondary school. Note, to teach secondary science in a specialty area (e.g., chemistry, biology, physics, geology) the state of Florida requires: A bachelor’s or higher degree with thirty (30) semester hours in science to include twenty-one (21) semester hours in that specialty area with associated laboratory experiences.
   d. Documentation of GKT scores.
5. Students must earn a minimum of a “B” (3.00) in all graduate courses. Failure to earn at least a “B” in a graduate course will result in academic review by the graduate program. Failure to maintain a minimum 3.0 GPA will result in academic probation, according to the procedures of the USF Office of Graduate Studies.

A comprehensive plan of study to complete the integrated B.S./M.A.T program will be developed with the guidance of an advisor and a faculty member

Admission Requirements
For admission to the program a student must:

1. Have completed 15 hours in the B.S. in Interdisciplinary Sciences major upon applying and thirty (30) semester hours in science (includes twenty-one (21) semester hours in a science concentration (e.g. chemistry, biology, physics) plus 9 hours in minor science content area) with associated laboratory experiences to be fully admitted as a graduate student in the M.A.T. Science Education Program. Evidence of successfully completing all sections of the General Knowledge Test (GKT) is also required for full admission to the graduate program
2. Have a minimum 3.0 GPA overall; and
3. Have a minimum undergraduate 3.25 GPA in the major.
**Degree Requirements**

Students must satisfy the degree requirements for both the Undergraduate and Graduate Degree programs as posted in the respective Catalogs.

**BS Interdisciplinary Science - All INS students will complete FLENT and Summer Enrollment requirements as well as graduation requirements listed in the catalog:** [http://www.ugs.usf.edu/pdf/cat1213/08ACADEMICPOL.pdf](http://www.ugs.usf.edu/pdf/cat1213/08ACADEMICPOL.pdf)

Specifically, according to the BOG Articulation Regulation 6A-10.030; earn a minimum of 48 semester hours of upper-level work (courses numbered 3000 and above), therefore, INS students will take 21 credits of additional 3000+ level coursework in addition to their required major and exit courses listed below. Of this 21 credits, 12 credits will be shared with the M.A.T. Science Education program. The entire undergraduate program will total no more than 120 credits.

**Accelerated B.S./M.A.T. in Marine Biology /Science Education**

This program intends for students to complete a Biology B.S. Marine Biology major (College of Arts and Sciences) and a M.A.T. in Secondary Science (College of Education) over the span of five years. Students completing this program will be eligible for high school and/or middle school science teacher certification. Completion of this program requires students to complete 12 credits toward the M.A.T. in Science Education during the senior year of their Biology BS Marine Biology major.

**Target students and expected outcomes**

The accelerated Bachelor’s to M.A.T. in Science Education program is a collaborative effort between the College of Arts and Sciences and the College of Education. This program is an attractive and viable career path for students in the Department of Integrative Biology degree programs that results in secondary science teacher certification. Students who complete this program receive the necessary science content and pedagogy coursework to be highly qualified biology teachers at the secondary level.

**Admission Requirements**

For admission to the program a student must:

1. Have completed 15 hours in the Biology B.S. Marine Biology major upon applying and thirty (30) semester hours in science (includes twenty-five (25) semester hours in biology plus 5 hours of upper level work in math or supporting science content area) with associated laboratory experiences to be fully admitted as a graduate student in the M.A.T. Science Education Program. Evidence of successfully completing all sections of the General Knowledge Test (GKT) is also required for full admission to the graduate program.
2. Have a minimum 3.0 GPA overall; and
3. Have a minimum undergraduate 3.25 GPA in the major.

**Degree Requirements**

Students must satisfy the degree requirements for both the Undergraduate and Graduate Degree programs as posted in the respective Catalogs.

**Shared B.S./M.A.T. Requirements**

This accelerated program shares 12 credits between already existing degrees/concentrations:

- B.S. in Marine Biology
- M.A.T. in Science Education

Twelve credits of upper level unassigned 3000 or 4000 level electives will be replaced by the following:

- SCE 6938 Topics in Science Education: Field Practicum (3 credits)
- SCE 5325 Methods for Middle Grades Science Education (3 credits)
- SCE 5337 Methods for Secondary Science Education (3 credits)
- SCE 6456 Teaching the Physical Sciences (3 credits)

**Timeline and benchmarks:**

1. To be considered for acceptance into the Accelerated B.S./M.A.T. Biology (Marine Biology)/Science Education students must have completed a minimum of 15 credit hours in the Biology B.S. Marine Biology undergraduate major.
2. Students must have a minimum undergraduate GPA of 3.0 overall, and a minimum GPA of 3.25 in the major and passing scores on all sections of the General Knowledge Test (GKT) to be eligible for the accelerated major. You can find information on the General Knowledge Test on the Florida Teacher Certification section of the following webpage:
http://www.fl.nesinc.com/

3. Following completion of a minimum of 15 hours in the undergraduate major, students may be considered for acceptance into the accelerated program through faculty nomination or student self-nomination, via submission of an Accelerated Program Application Form. Both B.A. and M.A. T. programs will review the applications and approve the nominations. All applications require the approval of the College of Education Graduate Program, the College of Arts and Sciences, and the USF Graduate School.

4. To be promoted to graduate status, students must meet all admission requirements of the M.A.T. in Science Education in the College of Education. Specifically, the following materials must be submitted:
   a. Undergraduate transcripts; and evidence of possessing a degree in a science discipline (biology, chemistry, physics, geology, etc.) that is taught in a middle or high school, or comparable coursework in a science teaching field acceptable to the program faculty. Note, to teach secondary biology the state of Florida requires: A bachelor’s or higher degree in biology or a bachelor’s or higher degree with thirty (30) semester hours in science to include twenty-one (21) semester hours in biology with associated laboratory experiences.
   d. Documentation of GKT scores.

5. Students must earn a minimum of a “B” (3.00) in all graduate courses. Failure to earn at least a “B” in a graduate course will result in academic review by the graduate program. Failure to maintain a minimum 3.0 GPA will result in academic probation, according to the procedures of the USF Office of Graduate Studies.

A comprehensive plan of study to complete the accelerated B.A./M.A.T program will be developed with the guidance of an advisor and a faculty member. A possible plan of study could be as follows. Summer sessions may also be included in the study plan.

**Accelerated B.A./M.A.T. in Physics /Science Education**
This program intends for students to complete a B.A. in Physics (College of Arts and Sciences) and a M.A.T. in Secondary Science (College of Education) over the span of five years. Students completing this program will be eligible for high school and/or middle school science teacher certification. Completion of this program requires students to complete 12 credits toward the M.A.T. in Science Education during the senior year of their B.A. in Physics.

**Target students and expected outcomes**
The accelerated Bachelor’s to M.A.T. in Science Education program is a collaborative effort between the College of Arts and Sciences and the College of Education. This program is an attractive and viable career path for students in the Department of Physics degree programs that results in secondary science teacher certification. Students who complete this program receive the necessary science content and pedagogy coursework to be highly qualified physics teachers at the secondary level.

**Admission Requirements**
For admission to the program a student must:
1. Have completed 15 hours in the B.A. in Physics major upon applying and thirty (30) semester hours in science (includes twenty-five (25) semester hours in physics plus 5 hours of upper level work in math or minor science content area) with associated laboratory experiences to be fully admitted as a graduate student in the M.A.T. Science Education Program. Evidence of successfully completing all sections of the General Knowledge Test (GKT) is also required for full admission to the graduate program
2. Have a minimum 3.0 GPA overall; and
3. Have a minimum undergraduate 3.25 GPA in the major.

**Degree Requirements**
Students must satisfy the degree requirements for both the Undergraduate and Graduate Degree programs as posted in the respective Catalogs.

http://www.usf.edu/education/
Shared B.S./M.A.T. Requirements
This accelerated program shares 12 credits between already existing degrees/concentrations:

B.A. in Physics
M.A.T. in Science Education

Twelve credits of upper level unassigned 3000 or 4000 level electives will be replaced by the following:

- SCE 6938 Topics in Science Education: Field Practicum (3 credits)
- SCE 5325 Methods for Middle Grades Science Education (3 credits)
- SCE 5337 Methods for Secondary Science Education (3 credits)
- SCE 6456 Teaching the Physical Sciences (3 credits)

Timeline and benchmarks:
1. To be considered for acceptance into the Accelerated B.A./M.A.T. Physics/Science Education students must have completed a minimum of 15 credit hours in the Physics undergraduate major.
2. Students must have a minimum undergraduate GPA of 3.0 overall, and a minimum GPA of 3.25 in the major and passing scores on all sections of the General Knowledge Test (GKT) to be eligible for the accelerated major. You can find information on the General Knowledge Test on the Florida Teacher Certification section of the following webpage: http://www.fl.nesinc.com/
3. Following completion of a minimum of 15 hours in the undergraduate major, students may be considered for acceptance into the accelerated major through faculty nomination or student self-nomination, via submission of an Accelerated Major Application Form. Both B.A. and M.A. T. majors will review the applications and approve the nominations. All applications require the approval of the College of Education Graduate Major, the College of Arts and Sciences, and the USF Graduate School.
4. To be promoted to graduate status, students must meet all admission requirements of the M.A.T. in Science Education in the College of Education. Specifically, the following materials must be submitted:
   a. Undergraduate transcripts; and evidence of possessing a degree in a science discipline (biology, chemistry, physics, geology, etc.) that is taught in a middle or high school, or comparable coursework in a science teaching field acceptable to the graduate faculty. Note, to teach secondary physics the state of Florida requires: A bachelor’s or higher degree in physics or a bachelor’s or higher degree with thirty (30) semester hours in science to include twenty-one (21) semester hours in physics with associated laboratory experiences.
   d. Documentation of GKT scores.
5. Students must earn a minimum of a “B” (3.00) in all graduate courses. Failure to earn at least a “B” in a graduate course will result in academic review by the graduate major. Failure to maintain a minimum 3.0 GPA will result in academic probation, according to the procedures of the USF Office of Graduate Studies.

A comprehensive plan of study to complete the integrated B.A./M.A.T major will be developed with the guidance of an advisor and a faculty member. A possible plan of study could be as follows. Summer sessions may also be included in the study plan.

COURSES
See http://www.ugs.usf.edu/course-inventory/
SOCIAL SCIENCE EDUCATION

Master of Arts in Teaching (M.A.T.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines
Fall: June 1
Spring: October 15
Summer: February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 39
Level: Masters
CIP Code: 13.1317
Dept. Code: EDI
Major/College Codes: TSS ED
Effective: 2002

CONTACT INFORMATION

College: Education
Department: Teaching and Learning
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The MAT degree is for individuals with a bachelor's degree in a field other than education who wish to become certified teachers in social science at the middle or senior high school level. This major leads to teaching certification in grade 6-12 social sciences as part of the master’s degree program.

Accreditation
Accredited by the Florida State Department of Education.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

The requirements are as follows or as recommended by the graduate advisor and approved by the college and/or Office of Graduate Studies.

Prerequisites:
- Major: A bachelor's degree in a social studies field that is taught at the 6-12 grade level OR the equivalent bachelor's and/or graduate degrees from a foreign institution
- Survey of American History 1 & 2;
- Survey of Western Civilization, World History or Humanities 1 & 2; and
- Geography, economics, psychology, and either anthropology or sociology

Students who do not have these 8 courses can submit passing scores on the Florida 6-12 Social Sciences Subject Area Exam with their application.
Requirements for all applicants include:

- Minimum GPA of 3.0 in upper division coursework in the Baccalaureate degree or the equivalent bachelors and/or graduate degrees from a foreign institution
- 3.0 in graduate coursework can be used to augment the undergraduate GPA.
- Resume
- 250-word letter of interest stating your objectives in pursuing this course of study
- Two letters of recommendation attesting to the applicants’ potential success as a graduate student and his/her ability to work with adolescents.
- Disclosure of arrest and conviction information

For admission to a Master of Arts in Teaching Degree Program, the student must demonstrate mastery of general knowledge by one of the following:

* Passing the General Knowledge Test, a portion of the Florida Teacher Certification Exam (link to http://www.fldoe.org/accountability/assessments/postsecondary-assessment/ftce)

Or

* Effective for tests administered on or after July 1, 2015, achievement of passing scores, as identified in Rule 6A-4.0021(12), F.A.C., on test sections of the GRE® revised General Test GRE Analytical Writing combined score of 4 out of 6 acceptable for GK Essay GRE Quantitative Reasoning scaled score of 147 acceptable for GK Mathematics GRE Verbal Reasoning scaled score of 151 acceptable for both GK English Language Skills and GK Reading

During the 2014 Legislative Session, the passage of House Bill 433 amended s. 1012.56, FS, to eliminate the obsolete option of achieving a passing score on the CLAST earned prior to July 1, 2002, to satisfy the general knowledge requirement.

International Students
All applicants whose native language is other than English or who have earned a degree from an institution outside the United States must meet the University requirements relative to international graduate admission, (e.g. TOEFL scores, etc.). In addition to these university requirements, applicants to the College of Education must provide the following:

- A social security number in degree programs requiring practica or internships;
- Other information as required by the major of interest, (e.g. Graduate Record Exam scores, etc.)

CURRICULUM REQUIREMENTS

Total Minimum hours
39 hours Minimum
The requirements are as follows or as recommended by the graduate advisor and approved by the college and/or Office of Graduate Studies.

Core Requirements
12 hours
- ESE 5342 Teaching the Adolescent Learner 3
- TSL 5325 ESOL Strategies for Content Area Teachers 3
- EDF 6432 Foundations of Measurement 3
- ESE 5344 Classroom Management for the Diverse School & Society 3

Current Trends in teaching Concentration
3 hours
- SSE 6636 Trends in Social Science Education 3

Concentration Requirements
15 hours
- SSE 5331 Foundations, Curriculum & Instruction 3
- SSE 5332 Methods and Strategies in Social Science Education 3
- SSE 5641 Reading & Basic Skills 3
- SSE 6932 Special Topics 6

Practicum, Internship, Field Experiences, etc.
9 hours
- SSE 5946 Practicum in SSE (Prereq: SSE 5331) 3
SSE 6947 Internship 6
All sections of the GKT, the FTCE Prof., and Educ. & Subj. Area: Social Science 6-12 must be passed prior to internship.

Program of studies will be planned so that all course work will be completed prior to the internship. However, should there be a need for an exception; M.A.T. students may take one 3-credit course during internship—although this is unadvisable given the full-time nature of the teaching experience and one 3-credit course after internship. The only courses that can be taken during or after internship are:

SSE 6932: Selected Topics 3
SSE 6636: Trends in Social Science Education 3

All school districts require fingerprints and will conduct a background check prior to assignment of the final internship. Some districts also require drug testing.

Comprehensive examination
The Comprehensive exam is taken while enrolled in SSE 6636 Trends in Social Science Education.

COURSES
See http://www.ups.usf.edu/course-inventory/ or http://www.usf.edu/education/main/departments/seced/SocialS/SSEmahome.htm
SPECIAL EDUCATION, GIFTED

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines
Fall: February 15  
Spring: October 15  
Summer: February 15

International applicant deadlines:  
http://www.grad.usf.edu/majors

Minimum Total Hours: 36  
Level: Masters  
CIP Code: 13.1004  
Dept. Code: EDS  
Major/College Codes: AGI ED  
Approved: 1966

CONTACT INFORMATION

College: Education  
Department: Teaching and Learning  
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Master’s Degree Program in Gifted Education (Plan I) provides advanced training for certified teachers to work with gifted and talented students and with other teachers on a consultant or collaborative basis. The courses for this major are offered through an on-line format, though some courses may be taken on campus. Emphasis is placed on developing specific skills in identification of gifted students; focusing on the characteristics and needs of special populations; assessing students’ cognitive and affective strengths; modifying educational programs to develop gifted students’ potential; and consulting with gifted students, their families, and teachers. This Major qualifies students for the State of Florida Endorsement in Gifted Education.

After admission to a major, the candidate and the department advisor together chart a program of study incorporating major requirements. Courses stress field based experiences. Students provide their own transportation to practicum sites in K-12 education settings. The practicum experience requires candidates to access assessment information about K-12 students in their school setting, including performance on individualized intelligence tests, achievement tests, and educational programs (EPs). Practicum coursework also requires candidates to conduct extended projects focused on the development and educational progress of K-12 gifted students. Employment in a K-12 classroom as a licensed educator is required to successfully complete major coursework. The Major also incorporates coursework in Instructional Technology, and Teacher Leadership. Electives lead to the completion of a graduate certificate in Teacher Leadership, Instructional Technology, or Autism Spectrum Disorders.

Accreditation
Accredited by National Council for Accreditation of Teacher Education, and the Florida Department of Education

Plan III: Inactive
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

For admission, all majors require earned degrees from regionally accredited institutions or an international equivalent.

Admissions Requirements include the following:

- An earned bachelor’s degree or its equivalent from a regionally accredited college or university
- An undergraduate GPA of 3.00 on a 4.00 scale as an upper division student in a baccalaureate degree OR the following GRE preferred scores:
  - Verbal: 71st percentile or higher
  - Quantitative: 18th percentile or higher
- Two letters of recommendation from administrators familiar with applicant’s professional teaching experience and expertise that verify applicant’s K-12 employment status
- A written statement of intent to pursue degree in gifted education, including applicant’s professional goals
- Copy of professional teaching certificate (not a temporary certificate)
- Evidence that applicant currently holds a teaching position in a K-12 setting

All materials should be forwarded to Heather Van Allen at hvallen@usf.edu or to Department of Teaching and Learning, Gifted Education Admissions, EDU 105, College of Education, University of South Florida, Tampa, FL 33620

International Students

Applicants whose native language is not English or who have not earned a degree in the United States must also submit TOEFL scores earned within two (2) years of the desired term of entry. A minimum total score of 79 on the internet-based test, or 550 on the paper-based test, are required. Applications submitted with TOEFL scores that do not meet the minimum requirements will be denied. The TOEFL requirement may be waived if the applicant meets one of the following conditions:

- The applicant’s native language is English, or
- Has scored 71st percentile or higher on the GRE Verbal Test, or
- Has earned a college degree at a U.S. institution of higher learning, or
- Has earned a college degree from an institution whose language of instruction is English (must be noted on the transcript)

CURRICULUM REQUIREMENTS

Total Minimum Hours 36 hours

Core requirements – 9 hours minimum
Area of Study – 18 hours minimum
Electives – 9 hours minimum

Core Requirements - 9 hours
EDF 6481 3 Foundations of Educational Research
EDE 6486 3 Teacher Research for Student Learning

Instructional Technology: Any 1 of the following:
EME 6207 3 Web Design
EME 6208 3 Interactive Media
EME 7458 3 Research in Distance Learning
EME 6053 3 Internet in Education

Area of Study Requirements 18 hours minimum
EGI 5051 3 Nature and Needs of the Gifted
EGI 5307 3 Theory and Development of Creativity

http://www.usf.edu/education/
EGI 6232  3  Advanced Educational Strategies for Teaching the Gifted
EGI 6415  3  Seminar in Special Populations of the Gifted
EGI 6416  3  Consultation, Counseling, and Guidance of the Gifted
EGI 6943  3-6  Supervised Practicum in Gifted Education

Electives  -  9 hours minimum
Teacher Leadership (9 hours):
  • EDE 6486 Teacher Research for Student Learning (3 hours);
  • EDE 6556 Coaching for Student Learning (3 hours);
  • EDE 6366 Professional Development for Student Learning (3 hours)

  • Instructional Technology (FL Digital/Virtual Educator, Distance Learning, or Web Design) (9 hours):
    • Florida Digital/Virtual Educator
      o EME 6053 Internet in Education (May be taken As Core Requirement) (3 hours)
      o EME 5403 Computers in Education (3) (Spr) (This course include 7 week internship at FLVS. The course number and title is under revision consideration) (3 hours)
      o EME6457 Distance Learning OR EME 7458 Research in Distance Learning (May be taken as core requirement) (3 hours)
      o And 1 of the following: EME 6055 Current Trends in Educational Technology, or EME 6208 Interactive Media (may be taken as core requirement) (3 hours)

    • Web Design:
      ▪ EME 6215 Instructional Graphics (3 hours)
      ▪ EME 6930 Web Programming 1 (3 hours)
      ▪ 1 of the following: EME 6208 Interactive Media; EDF 6284 Problems in Instructional Design; or EME 6930 Web Programming 2 (3 hours)

    • Distance Education:
      o EME6053 Internet in Education (May be taken as core requirement) (3 hours)
      o EME6207 Web Design (May be taken as core requirement) (3 hours)
      o EME6457 Distance Learning OR EME 7458 Research in Distance Learning (May be taken as core requirement) (3 hours)

      And choose 1 of the following:
      o EME6235* Technology Project Management (3 hours) OR
      o EME 7631* Research in Technology Project Management (3 hours)
        *Prerequisite: EDF 6284: Problems in Instructional Design for Computers (3 hours)

      or

      • Autism Spectrum Disorders* (12 hours/requires only 3 hours of Supervised Practicum EGI 6943):
        • EEX 6234 - Identification and Assessment of Individuals with Low Incidence Disabilities (3 hours)
        • EED 6246 - Educating Students with Autism (3 hours)
        • EEX 6619 - Positive Behavior Support (3 hours)
        • EEX 6767 - Assistive Technology for Students with Low Incidence Disabilities in Special Education (3 hours)

Comprehensive Examination (Portfolio)
In lieu of a comprehensive examination, candidates will take the Praxis II Exam in Gifted Education and earn a score of 160/200 (80%) to pass. Candidates may take the exam after completing a minimum of 15 hours of coursework (EGI 5051, EGI 5307, EGI

COURSES
See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
SPECIAL EDUCATION, MOTOR DISABILITIES

Master of Arts (M.A.) Degree

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<th>DEGREE INFORMATION</th>
<th>CONTACT INFORMATION</th>
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<td>Department: Teaching and Learning</td>
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This major is Closed for Admissions
TECHNOLOGY IN EDUCATION AND SECOND LANGUAGE ACQUISITION (TESLA)

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines
Fall: January 15
Fall Admission Only

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 67 post-master’s
Level: Doctoral
CIP Code: 13.401
Dept. Code: EDI
Major/College Codes: TLD ED

CONTACT INFORMATION

Colleges: Education
Department: Secondary Education
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

This is a doctoral major in the College of Education. It combines the expertise of both faculties from Foreign Languages and Instructional Technology to provide a curriculum in pedagogy, second language acquisition, sociocultural theory, pragmatics, instructional technology, statistics, and research design. The goal of the major is to prepare students for careers in academia.

Major Research Areas
Second Language Acquisition, Instructional Technology, Foreign Language Education, Pragmatics, TESOL, ESOL, Distance Learning.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below. In addition to the general admission requirements under the advanced graduate education majors, applicants must do the following:

- Possess a Master’s degree (or equivalent academic level) from a regionally accredited institution or its international equivalent;
- present a minimum GPA of 3.5 at the Master’s level (or international equivalent);
- preferred score at or above 500 on the GRE verbal reasoning (or 153 on New GRE) and 4 on the GRE analytical writing section; and
- Submit a TOEFL score of minimum 550 (paper-based), 213 (computer-based), or 80 (internet-based), if applicable.
- Submit a “Statement of Purpose” relating their career goals specifically to this doctoral major and describing their experience with instructional technology and language teaching and offering evidence of research experience and/or scholarly promise;
- Supply a current curriculum vitae;
- Provide 3 letters of recommendation from professors or other individuals who can attest to the applicant’s experience and background;
- Meet with the graduate faculty for a personal/phone interview; and
- In addition to proficiency in their native language (L1), students must demonstrate proficiency in another world languages (L2). Proficiency in speaking the L2 must be at the “Advanced” level or higher, as measured on the Oral Proficiency Guidelines (OPI) of the American Council on the Teaching of Foreign Languages (ACTFL). For specific information, consult www.actfl.org. The graduate advisors will determine whether the students have met this requirement based on these as well as other criteria identified by the SLA/IT faculty.

The faculty will evaluate each applicant’s dossier based on a composite of variables and appropriateness of fit with the major.

http://www.usf.edu/education/
For international applicants
Applicants whose native language is not English or who have not earned a degree in the United States must also submit TOEFL scores earned within two (2) years of the desired term of entry. A minimum total score of 79 on the internet-based test, or 550 on the paper-based test, are required. Applications submitted with TOEFL scores that do not meet the minimum requirements will be denied. The TOEFL requirement may be waived if the applicant meets one of the following conditions:

- The applicant’s native language is English, or
- Has scored 500 or higher on the GRE Verbal Test, or
- Has earned a Master’s degree (or equivalent academic level) at a U.S. institution of higher learning in ESOL/TESOL Education, Second/Foreign Languages, Linguistics, Applied Linguistics, or related field, or
- Has earned a college degree from an institution whose language of instruction is English (must be noted on the transcript), or
- Has scored 6.5 on International English Language Testing System (IELTS) http://www.ielts.org/.

In addition to these university requirements, applicants to the College of Education must provide the following:
A social security number in degree programs requiring practica or internships; Other information as required by the major of interest.

CURRICULUM REQUIREMENTS

Total Minimum Hours 67 hours minimum post-masters

40 hours of core requirements (with suggested credit hours for different sub-categories); 18 credit hours of electives; and 9 hours of dissertation work.

Core Requirements - 40 hours

Technology in Education (9 hours)
EDF 6284 3 Problems in Instructional Design
EME 7938 3 Computer-Augmented Instructional Paradigms
And one of the following:
EME 6208 3 Interactive Media
EME 6613 3 Development of Technology-Based Instruction (pre-requisite: EDF 6284)
EME 7939 3 Research Methods in Technology-Based Education

Second Language Acquisition (15 hours)
SLA 7911 3 SLA Research Lab
SLA 7938 3 Advanced Seminar in SLA
FLE 7939 3 Advanced Seminar in FLE
FLE 7700 3 Applications of Technology to SLA/FLE
FLE 7367 3 Sociocultural Theory in SLA

Statistics/Measurement/Research Design (16 hours minimum)
EDF 6407 4 Statistical Analysis for Education I
EDF 7477 4 Qualitative Research I

And two of the following:
EDF 7408 4 Statistical Analysis II for Education II
EDF 7478 4 Qualitative Research II
EDF 7410 4 Design for Systematic Studies in Education (final semester)
Other relevant research course(s) as needed.

Electives - 18 hours

http://www.usf.edu/education/
Courses are selected with the approval of the student’s graduate advisor or committee with a minimum of nine (9) hours completed in the area of Second Language Acquisition. Elective coursework must be taken at the graduate and/or advanced graduate level.

Examples:

EDG 6931 3 Heritage Language Teaching & Learning
EME 6053 3 Internet in Education
EME 6055 3 Current Trends in Instructional Technology
EME 6613 3 Development of Technology-Based Instruction (pre-requisite: EDF 6284)
FLE 6639 3 Second Language Reading and Literacy

Qualifying Examination
All students will be required to pass a written qualifying examination (QE). The QE integrates work in the specialization, cognate, and foundations areas, in this case, in Technology Education, Second Language Acquisition, and Teacher Education.

Dissertation - 9 hours
SLA 7980 9 Dissertation

Residency requirements
Students must enroll in a minimum of nine hours for each of two semesters in a 12-month period to fulfill the residency requirements. Students in the Ph.D. major should be engaged in no more than half-time employment during the residency period.

Please be advised that major and/or course requirements are subject to change, per state legislative mandates, Florida Department of Education program approval standards and accreditation criteria.

COURSES
See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
COLLEGE OF ENGINEERING

http://www.eng.usf.edu/
## Changes to Note

The USF Graduate Council approved the following on the date noted:

### Administrative
- Creation of Medical Engineering Department: 2/6/17

### Accelerated Majors

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### Majors

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### Major Terminations

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<td>M.S.E.S.</td>
<td>CIP 14.0101- Major code: EGC and Concentrations CHB, PEE, EVE, TPE</td>
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MISSION STATEMENT
The mission of the USF College of Engineering is to improve the quality of life in our community by providing a high quality education for our engineering graduates and practicing professionals; by creating new knowledge and solving real world problems via innovative research; and by engaging in effective community service and outreach.

WHAT WE DO
At the graduate level students work in close collaboration with faculty, pursuing advanced topics within their disciplines, which will result in advancements in their fields and society-at-large.

Utilizing the expertise of its individual and collective faculty, the College is dedicated to the development of new fundamental knowledge and processes or procedures, which will benefit all humanity. The College promotes multi-disciplinary approaches, commitment to life-long learning and awareness of societal issues, which are requisite for meeting technological challenges.

The College provides technical assistance and technology transfer to the region, state and nation. In all facets of teaching, research and service, the College emphasizes close liaisons with industry and government to provide students and faculty with the skills and perspectives needed to ensure effective technological leadership.
Degrees, Majors, Concentrations:
See individual listings for current active status

<table>
<thead>
<tr>
<th>Degree</th>
<th>Major</th>
<th>Concentration</th>
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<tbody>
<tr>
<td>Master of Civil Engineering (M.C.E.)</td>
<td>Civil Engineering (ECE)</td>
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<tr>
<td>Master of Environmental Engineering (M.E.V.E.)</td>
<td>Environmental Engineering (EVE)</td>
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<tr>
<td>Master of Mechanical Engineering (M.M.E.)</td>
<td>Mechanical Engineering (EME)</td>
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<tr>
<td>Master of Science in Biomedical Engineering (M.S.B.E.)</td>
<td>Biomedical Engineering (EBI)</td>
<td>Pharmacy (PRMY)</td>
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<tr>
<td>Master of Science in Chemical Engineering (M.S.C.H.)</td>
<td>Chemical Engineering (ECH)</td>
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<tr>
<td>Master of Science in Civil Engineering (M.S.C.E.)</td>
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<td>Computer Science (ECC)</td>
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<td>Master of Science in Electrical Engineering (M.S.E.E.)</td>
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<td>Master of Science in Engineering Management (M.S.E.M.)</td>
<td>Engineering Management (EMA)</td>
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<td>Master of Science in Environmental Engineering (M.S.E.V.)</td>
<td>Environmental Engineering (EVE)</td>
<td>Engineering for International Development (EFD)</td>
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<tr>
<td>Master of Science in Industrial Engineering (M.S.I.E.)</td>
<td>Industrial Engineering (EIE)</td>
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<td>Master of Science in Information Technology (M.S.I.T.)</td>
<td>Information Technology (ITC)</td>
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<td>Master of Science in Materials Science and Engineering (M.S.M.S.E.)</td>
<td>Materials Science and Engineering (MSE)</td>
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<td>Master of Science in Mechanical Engineering (M.S.M.E.)</td>
<td>Mechanical Engineering (EME)</td>
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</table>
Doctor of Philosophy (Ph.D.)
Biomedical Engineering (EBI)
Chemical Engineering (ECH)
Civil Engineering
   Environmental Engineering (ENV)
   Geotechnical (GTL)
   Materials (MTL)
   Structures (STR)
   Transportation (TPT)
   Water Resources (WRS)
Computer Science and Engineering (CSE)
Electrical Engineering (EEL)
Engineering Science (EGC)
Environmental Engineering (EVE)
   Engineering for International Development (EFD)
Industrial Engineering (EIE)
Mechanical Engineering (EGR)

Accelerated Majors
BS/M.E. or BS/M.S. – Engineering
   BSCH – Chemical Engineering / MSBME – Biomedical Engineering
   BSCH – Chemical Engineering / MSCH – Chemical Engineering
   BSCH – Chemical Engineering / MSEM – Engineering Management
   BSCH – Chemical Engineering / MSMSE – Materials Science and Engineering
   BSCP – Computer Engineering / MSCP – Computer Engineering
   BSCP – Computer Engineering / MSCS – Computer Science
   BSCP – Computer Engineering / MSIT – Information Technology
   BSIE – Industrial Engineering / MSBME – Biomedical Engineering
   BSIE – Industrial Engineering / MSEM – Engineering Management
   BSME – Mechanical Engineering / MSBME – Biomedical Engineering
   BSME – Mechanical Engineering / MSEM – Engineering Management
   BSME – Mechanical Engineering / MSMSE – Materials Science and Engineering
   BSME – Mechanical Engineering / MME – Mechanical Engineering
   BSME – Mechanical Engineering / MSME – Mechanical Engineering

Concurrent Degrees:
   Concurrent Degrees in Biomedical Engineering (Ph.D.) and Medicine (M.D.)
   Concurrent Degrees in Biomedical Engineering (M.S.B.E.) and Entrepreneurship in Applied Technologies (M.S.)

Graduate Certificates Offered: See Graduate Certificates

COLLEGE REQUIREMENTS

General Major Requirements
The requirements for graduate degrees from the College of Engineering consist of University requirements, College requirements, and Major requirements. For University requirements refer to the Office of Graduate Studies Policies and Procedures. College requirements are listed below. Refer to the degree sections for other requirements.
Master’s Degree Programs
The Master’s degree is awarded for advanced study beyond the baccalaureate degree within an area of specialty. The College of Engineering offers several majors leading to degrees at the master’s level.

Master of Science in Designated Engineering Field - This degree is normally awarded to a Master’s graduate who holds a Bachelor’s degree in the designated field. Some majors offer this degree in two options: (1) thesis option (30 credits), and (2) non-thesis option (30 credits).

Master of Designated Discipline - This degree is normally awarded to a Master’s graduate who has an undergraduate degree in the discipline and who follows an all coursework major or a project major.

College of Engineering Requirements for Master’s Degree
1. A thesis major must contain a minimum of 24 credit hours of coursework and a minimum of 6 credit hours of thesis. (If a student transfers from a thesis major to an all coursework major, no thesis hours may be transferred, converted or counted toward the degree.)
2. Non-thesis major requirements vary according to department but must contain a minimum of 30 credits of approved coursework.
3. Students must maintain an overall grade point average of 3.00. No grade below “C” will be accepted in a graduate major. If a student’s average falls below 3.00, the student will be placed on probation.
4. Most majors require students to pass a final oral or written comprehensive examination prior to receiving the degree. These examinations are arranged and administered by the student’s department.

Accelerated Majors Leading to Accelerated Bachelor’s and Master’s Degrees
Students who are clearly interested in graduate study are invited to pursue an accelerated major leading to a Bachelor’s Degree and Master’s degree in the College of Engineering. Students in the Accelerated Major may apply up to 12 credit hours of graduate level coursework, which must be approved by the Graduate Coordinator, to count towards both degrees.

Students apply for admission to this major through their advisors, who should be consulted regarding additional requirements. Several factors, which vary by academic department, are considered for admission. However, all applicants must have a minimum GPA of at least 3.00.

Doctoral Degree Majors
The Doctor of Philosophy degree is awarded in recognition of demonstrated scholarly competence and ability to conduct and report original and significant research. Unlike the baccalaureate and Master’s degrees, the Ph.D. degree cannot be earned by an accumulation of course credits over a period of residence alone. After adequate fundamental preparation to gain competence, the student must demonstrate research capability through completion of an authoritative investigation in the chosen engineering field, culminating in a written dissertation. The dissertation must demonstrate that the student possesses the ability to reason logically, the talent for engaging in significant and original research, and the ability to organize and present conclusions in a professional manner.

Doctor of Philosophy in Designated Engineering Field - This degree is awarded to students pursuing a major in one of the following Engineering disciplines: Biomedical Engineering, Chemical Engineering, Civil Engineering, Computer Science and Engineering, Electrical Engineering, Environmental Engineering, Industrial Engineering, and Mechanical Engineering. Students receiving this degree must demonstrate a thorough foundation in the designated discipline.
Doctor of Philosophy in Engineering Science - This major is designed to meet the needs of students who wish to pursue doctoral studies in interdisciplinary areas closely related to engineering.

College of Engineering Requirements for Doctoral Degrees

1. **Supervisory Committee.** An advisor will be appointed by the chair of the appropriate department or major for each student during the first semester of registration at the University of South Florida. The advisor will help determine the student’s area of research interest and will delineate preliminary course assignments. At the earliest possible date, a major professor will be appointed and a supervisory committee formed. This committee will monitor the student’s program of studies and has full responsibility for conducting the student’s qualifying examination. The Supervisory Committee consists of a minimum of five members. One member of the committee must be outside the College of Engineering. (The requirement may be waived if special reasons exist and prior approval is obtained from the Engineering Associate Dean for Academic Affairs.) A majority of the committee will be from the College of Engineering, with at least two departments of the College represented.

2. **Credit Hours.** A minimum of 72 hours beyond the baccalaureate degree, including a minimum of 20 hours of dissertation, and a minimum of 30 hours of coursework (excluding independent study and directed research) is required by the College. Further requirements may be imposed by the candidate’s doctoral major and supervisory committee. See individual majors for specific requirements.

3. **Learning Focus.** Throughout the student’s program of study, independent learning will be emphasized. For the first time in the participant’s career, in most cases, the student will be responsible for mastering a new domain of knowledge without the aid of organized lectures and textbooks. The principal information source will be current literature. Such experience is a necessary preparation for a meaningful career in engineering and other fields where the professional must keep pace with a large, ever-changing body of knowledge.

4. **Qualifying Examination.** A written and oral qualifying examination, conducted by the supervisory committee, will be taken by each Ph.D. student as soon as a substantial majority of coursework is completed.

5. **Admission to Candidacy.** Students must be admitted to candidacy before they register for dissertation. Before admission to candidacy, students must have officially formed a Ph.D. Supervisory Committee and passed the qualifying examination of paragraph 4. Once admitted to candidacy students must enroll for a minimum of 2 credit hours each semester of the academic year until completion of major.

6. **Dissertation Research.** The student must carry out an investigation resulting in an original and significant contribution to the knowledge in the field of research. The requirement of uniqueness means that the dissertation research will provide an important creative experience for the student. As the final stage of the student’s major, the candidate must prepare a written dissertation covering the research. Students in the Ph.D. major must take an appropriate number of doctoral dissertation credits, but not less than 20 hours; the exact number is determined by department and/or individual requirements. The defense of the dissertation will conform to Office of Graduate Studies general rules.

7. **Residency.** Minimum residency requirements may be satisfied by completing the University’s minimal requirement at the University of South Florida. Any graduate work counted toward the
fulfillment of the requirement for the Ph.D. degree after admission to candidacy must be accomplished within 5 calendar years.

**Collaboration with Other Colleges and Departments**

Advanced study and research challenges exist at the interfaces between engineering and other academic disciplines. Examples include surface physics and chemistry applied to semiconductor processing technology; semiconductor physics applied to VLSI and analog integrated circuit design, manufacture and quality control; chemical processing and its relation to chemical principles; environmental engineering and chemical identification of minute impurities; environmental and transportation engineering and its relation to public health and public administration; water resources engineering and geo-hydrology; and biomedical engineering, to name only a few. The College collaborates with other academic units of the University in research activities and selectively educates students to become proficient in such interdisciplinary fields.
BIOMEDICAL ENGINEERING

Master of Science in Biomedical Engineering (M.S.B.E.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15
Spring: October 15
Summer: February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 30
Level: Masters
CIP Code: 14.0501
Dept. Code: DEA
Major/College Codes: EBI EN
Approved: 1999

Concentrations:
Pharmacy (PRMY)

Also offered as an Accelerated Major:
Chemistry (BS) / Biomedical Engineering (M.S.B.E.)*
Chemistry (BSCH) / Biomedical Engineering (MSBE)
Industrial Engineering (BSIE)/Biomedical Engineering (MSBE)
Mechanical Engineering (BSME)/Biomedical Engineering (MSBE)

*pending SACSCOC approval

CONTACT INFORMATION

College: Engineering
Department: Medical Engineering
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

Biomedical Engineering is a highly interdisciplinary Major that combines engineering and the medical sciences. The student works with an advisor to develop a graduate Major that draws on courses from engineering, medicine, public health, and the life sciences. Current active areas of research include: biomechanics, biomaterials, medical imaging, neuroengineering, tissue engineering, sensors, cellular-level drug delivery, and rehabilitation engineering. In addition to USF Health, participating institutions include the James Haley Veterans Administration Hospital, Florida Orthopedics Institute, and Tampa General Hospital. For more information, please contact the BME Major Advisor.

Major Research Areas: Biomechanics, Biomaterials, Neuroengineering, Photo Sensors, Cellular-level drug discovery and Tissue Engineering
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- Undergraduate GPA of 3.00 or higher;
- GRE with preferred Minimum scores of Quantitative >75% and Analytical Writing 4 or >;
- An undergraduate Bachelor’s degree in Engineering or Science;
- TOEFL 550 (paper-based total) for international students or 213 (computer-based total);
- Two (2) letters of recommendation; and
- A statement of purpose
- CV
- Applicants from countries where English is not the official language must demonstrate proficiency in English. See the Admissions Policy section of the Graduate Catalog for approved ways of demonstrating proficiency. http://www.grad.usf.edu/policies_Sect4_full.php

Note: Exceptionally qualified students with bachelor’s degrees in other disciplines may be admitted into the BME M.S. Major on a case-by-case evaluation of their credentials.

CURRICULUM REQUIREMENTS

Total Minimum Hours: 30 credit hours

Both the thesis and non-thesis options are available at the M.S. level.

Core Requirements
Currently there are five (5) required courses:
GMS 6440 (3) Basic Medical Physiology OR
BME 6410 (3) Engineering Physiology
GMS 6605 (3) Basic Medical Anatomy
PHC 6051 (3) Biostatistics II
BME 6000 (3) Biomedical Engineering I
BME 6931 (3) Biomedical Engineering II

Students may either opt for the General Track of the Concentration in Pharmacy, completing 15 hours as noted:

General Track Electives – 15 hours
Students select from additional approved courses to complete the 30 hour requirement. A minimum of 16 hours must be at the 6000 level. In addition, all of the elective courses must consist of engineering-prefix courses, although the Thesis Committee (thesis option) or the BME Major Advisor (non-thesis option) may approve courses in relevant areas such as chemistry, physics, pharmacy, communications sciences & disorders, public health or medicine, in their place.

Concentration in Pharmacy (PRMY) – 15 hours
Students may select from the following options, or other pharmacy courses, as approved by their Pharmacy and BME Advisors:

PHA 6140 3 Introduction to Nanotechnology (Online)
PHA 6116 3 Micro-Nano Drug Delivery Systems (Online)
PHA 6118 3 Nanomaterials and BioMEMS (Online)
PHA 6147 3 Nanotechnology and Risk Management (Online)
PHA 6148 3 Nanof ormulations and nanopharmaceutics (Online)
PHA 6xxx 3 Selected Topics: Introduction to Personalized medicine (Online)

Thesis Option
Thesis option students can count up to six hours of thesis research towards the elective requirements
Comprehensive Exam
Students in the non-thesis track will complete a comprehensive exam. For students in the thesis track, the thesis and oral defense serve as the comprehensive exam.

Accelerated Majors

Accelerated B.S. in Chemistry / M.S.B.E. in Biomedical Engineering – PENDING SACSCOC Approval

Description
This accelerated major intends for students to complete a Bachelor of Science in Chemistry and an M.S. in Biomedical Engineering over the span of five years. Completion of this program allows students to complete 9 credits toward the M.S. in during the junior or senior year of their B.S. degree.

The B.S. requires a total of 120 hours and the M.S.B.E. requires 30 hours. By sharing nine (9) credit hours, the total credit hours earned will be 141 hours.

Admission Requirements
For consideration of admission to the accelerated major a student must:
1. Have completed 15 credit hours in the B.S. Chemistry major, upon applying;
2. Have a minimum 3.33 GPA overall;
3. Have a minimum undergraduate 3.5 GPA in the major;
4. Have met with the Undergraduate Advisor and Graduate Director and/or Graduate Advisor to discuss a plan of study

Shared Courses (9 credit hours)
Students choose three (3) of the following five (5) courses to be shared between the two degrees:
BME 6000 Biomedical Engineering I
BME 6931 Biomedical Engineering II
GMS 6440 Basic Medical Physiology or BME 6410 Engineering Physiology
GMS 6605 Basic Medical Anatomy
PHC 6051 Biostatistics II

For the remaining Undergraduate Degree Requirements for the B.S. in Chemistry please see Undergraduate Catalog.

Accelerated Chemical Engineering (BSCH)/Biomedical Engineering (MSBE)

Description
Students pursuing a B.S.C.H. in Chemical Engineering will earn an M.S.B.E. in Biomedical Engineering in an accelerated manner by sharing three (3) core graduate courses (9 credit hours) taken as upper-level departmental electives as part of the undergraduate Chemical Engineering major.

The B.S.C.H. requires a total of 130 hours and the M.S.B.E. requires 30 hours. By sharing nine (9) credit hours, the total credit hours earned will be 151 hours.

This accelerated major shares six (6) credit hours between already existing degrees:
B.S.C.H. in Chemical Engineering
M.S.B.E. in Biomedical Engineering

Target Students and Expected Outcomes
Academically high achieving undergraduate students in the B.S.C.H. Major with high overall and major GPA will be targeted for the accelerated major. Expected outcomes are the increase in M.S.B.E. degrees granted, increase in graduate SCH, and enhancement of the quality of the graduate Major by addition of academically accomplished students.
Admission Requirements
For admission, a student must:

1. Have completed 15 hours in the undergraduate major
2. Have a minimum 3.33 GPA overall; and
3. Have a minimum undergraduate 3.50 GPA in the major.

Timeline and Benchmarks:
1. To be considered for acceptance into the Accelerated B.S.C.H. Chemical Engineering/M.S.B.E. Biomedical Engineering Major, students must have completed a minimum of 15 credit hours in the Chemical Engineering undergraduate major.
2. Students must have a minimum undergraduate GPA of 3.33 overall, and a minimum GPA of 3.50 in the major.
3. Following completion of a minimum of 15 hours in the undergraduate major, students may be considered for acceptance into the accelerated major through faculty nomination or student self-nomination, via submission of an Accelerated major Application Form. Both B.S.C.H. and M.S.B.E. majors will review the applications and approve the nominations. All applications require the approval of USF’s Office of Graduate Studies, the College of Engineering’s Graduate Major, and the Department of Chemical and Biomedical Engineering.
4. To be promoted to graduate status, students must meet all admission requirements of the M.S.B.E. Biomedical Engineering.
5. Students must earn a minimum of a “B” (3.00) in all shared graduate courses. Failure to earn at least a “B” in a shared graduate course will result in academic review by the graduate Major. Failure to maintain good standing as a graduate student will result in academic probation, according to the procedures of the USF Office of Graduate Studies.
6. A comprehensive plan of study to complete the Accelerated B.S.C.H. Chemical Engineering/M.S.B.E. Biomedical Engineering Major will be developed with the guidance of an advisor and a faculty member.

Shared Courses (9 credit hours)
Three (3) of the following five (5) core graduate courses replace nine (9) credit hours of upper-level departmental electives in Chemical Engineering:

- BME 6000 Biomedical Engineering I
- BME 6931 Biomedical Engineering II
- GMS 6440 Basic Medical Physiology or BME 6409 Engineering Physiology
- GMS 6605 Basic Medical Anatomy
- PHC 6051 Biostatistics II

For the remaining Undergraduate Degree Requirements for the B.S.C.H. in Chemical Engineering (107 credit hours) please see Undergraduate Catalog.

**Accelerated B.S.I.E. in Industrial Engineering and M.S.B.E. in Biomedical Engineering**

**Description**
Students pursuing a B.S.I.E. in Industrial Engineering will earn an M.S.B.E. in Biomedical Engineering in an accelerated manner by sharing two (2) graduate courses (6 credit hours) taken as upper-level departmental (Technical) electives as part of the undergraduate Industrial Engineering major.

The B.S.I.E. requires a total of 128 hours and the M.S.B.E. requires 30 hours. By sharing six (6) credit hours, the total credit hours earned will be 152 credit hours.

This accelerated major shares six (6) credit hours between already existing degrees:

- B.S.I.E. in Industrial Engineering
- M.S.B.E. in Biomedical Engineering

**Target Students and Expected Outcomes**
Academically high achieving undergraduate students in the B.S.I.E. Major with high overall and major GPA will be targeted for the accelerated major. Expected outcomes are the increase in M.S.B.E. degrees granted, increase in graduate SCH, and enhancement of the quality of the graduate Major by addition of academically accomplished students.
Admission Requirements
For admission to the program, a student must:
1. Have completed 15 hours in the undergraduate major
2. Have a minimum 3.33 GPA overall; and
3. Have a minimum undergraduate 3.50 GPA in the major.

Timeline and Benchmarks:
1. To be considered for acceptance into the Accelerated B.S.I.E. Industrial Engineering/M.S.B.E. Biomedical Engineering Major, students must have completed a minimum of 15 credit hours in the Industrial Engineering undergraduate major.
2. Students must have a minimum undergraduate GPA of 3.33 overall, and a minimum GPA of 3.50 in the major.
3. Following completion of a minimum of 15 hours in the undergraduate major, students may be considered for acceptance into the accelerated major through faculty nomination or student self-nomination, via submission of an Accelerated major Application Form. Both B.S.I.E. and M.S.B.E. majors will review the applications and approve the nominations. All applications require the approval of USF’s Office of Graduate Studies, the College of Engineering’s Graduate Major, the Department of Industrial and Management Systems Engineering’s Undergraduate Major, and the Department of Chemical and Biomedical Engineering’s Graduate Major.
4. To be promoted to graduate status, students must meet all admission requirements of the M.S.B.E. in Biomedical Engineering.
5. Students must earn a minimum of a “B” (3.00) in all shared graduate courses. Failure to earn at least a “B” in a shared graduate course will result in academic review by the graduate Major. Failure to maintain good standing as a graduate student will result in academic probation, according to the procedures of the USF Office of Graduate Studies.
6. A comprehensive plan of study to complete the Accelerated B.S.I.E. Industrial Engineering/M.S.B.E. Biomedical Engineering Major will be developed with the guidance of undergraduate and graduate advisors.

Shared Courses (6 credit hours)
Two (2) of the following five (5) core graduate courses replace six (6) credit hours of upper-level departmental (Technical) electives:

- BME 6000 Biomedical Engineering I
- BME 6931 Biomedical Engineering II
- GMS 6440 Basic Medical Physiology or BME 6409 Engineering Physiology
- GMS 6605 Basic Medical Anatomy
- PHC 6051 Biostatistics II

Undergraduate Degree Requirements for the B.S.I.E. in Industrial Engineering (107 credit hours)
*Please see Undergraduate Catalog for major-specific requirements

Accelerated B.S.M.E. in Mechanical Engineering and M.S.B.E. in Biomedical Engineering

Description
Students pursuing a B.S.M.E. in Mechanical Engineering will earn an M.S.B.E. in Biomedical Engineering in an accelerated manner by sharing two (2) core graduate courses (6 credit hours) taken as upper-level departmental electives as part of the undergraduate Mechanical Engineering major.

The B.S.M.E. requires a total of 128 hours and the M.S.B.E. requires 30 hours. By sharing six (6) credit hours, the total credit hours earned will be 152 hours.

This accelerated major shares six (6) credit hours between already existing degrees:
B.S.M.E. in Mechanical Engineering
M.S.B.E. in Biomedical Engineering

Target Students and Expected Outcomes
Academically high achieving undergraduate students in the B.S.M.E. Major with high overall and major GPA will be targeted for the accelerated major. Expected outcomes are the increase in M.S.B.E. degrees granted, increase in graduate SCH, and enhancement of the quality of the graduate Major by addition of academically accomplished students.

http://www.eng.usf.edu/
Admission Requirements
For admission to the program, a student must:
1. Have completed 15 hours in the undergraduate major
2. Have a minimum 3.33 GPA overall; and
3. Have a minimum undergraduate 3.50 GPA in the major.

Timeline and Benchmarks:
1. To be considered for acceptance into the Accelerated B.S.M.E. in Mechanical Engineering/M.S.B.E. in Biomedical Engineering Major, students must have completed a minimum of 15 credit hours in the Mechanical Engineering undergraduate major.
2. Students must have a minimum undergraduate GPA of 3.33 overall, and a minimum GPA of 3.50 in Mechanical Engineering the major.
3. Following completion of a minimum of 15 hours in the undergraduate major, students may be considered for acceptance into the accelerated major through faculty nomination or student self-nomination, via submission of an Accelerated major Application Form. Both B.S.M.E. and M.S.B.E. majors will review the applications and approve the nominations. All applications require the approval of USF’s Office of Graduate Studies, the College of Engineering’s Graduate Major, the Department of Mechanical Engineering’s Undergraduate Major, and the Department of Chemical and Biomedical Engineering’s Graduate Major.
4. To be promoted to graduate status, students must meet all admission requirements of the M.S.B.E. in Biomedical Engineering.
5. Students must earn a minimum of a “B” (3.00) in all shared graduate courses. Failure to earn at least a “B” in a shared graduate course will result in academic review by the graduate Major. Failure to maintain good standing as a graduate student will result in academic probation, according to the procedures of the USF Office of Graduate Studies.
6. A comprehensive plan of study to complete the Accelerated B.S.M.E. in Mechanical Engineering/M.S.B.E. in Biomedical Engineering Major will be developed with the guidance of an advisor and a faculty member.

Shared Courses (6 credit hours)
Two (2) of the following five (5) core graduate courses replace six (6) credit hours of undergrad technical electives in Mechanical Engineering:

BME 6000 Biomedical Engineering I
BME 6931 Biomedical Engineering II
GMS 6440 Basic Medical Physiology or BME 6409 Engineering Physiology
GMS 6605 Basic Medical Anatomy
PHC 6051 Biostatistics II

Undergraduate Degree Requirements for the B.S.M.E. in Mechanical Engineering (107 credit hours)
*Please see Undergraduate Catalog for major-specific requirements

COURSES
See [http://ugs.usf.edu/course-inventory](http://ugs.usf.edu/course-inventory)
BIOMEDICAL ENGINEERING

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15
Spring: October 15
Summer: February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours:
60 post-master’s
90 post-bachelor’s

Level: Doctoral
CIP Code: 14.0501
Dept. Code: ECH
Major/College Codes: EBI EN
Approved: 2005

CONTACT INFORMATION

College: Engineering
Department: Medical Engineering
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Ph.D. in Biomedical Engineering at the University of South Florida prepares individuals to contribute in this highly interdisciplinary field both as individuals and as members of interdisciplinary teams. Graduates are prepared to solve complex problems in areas such as diagnostic instrumentation, artificial organs, prosthetic devices, rehabilitation, and health care system design and operations, biomechanics, biomaterials, imaging, neuroengineering, tissue engineering, sensors, cellular-level drug delivery. The doctoral Major capitalizes on USF’s strong programs in Engineering and in the Health Sciences as well as the contiguously located H. Lee. Moffitt Cancer Center and Research Institute, and the James Haley Veterans Administration Hospital.

Students in the Major may choose to concentrate in one of several nationally recognized areas of Biomedical Engineering strength at USF including:

- Medical Imaging
- Rehabilitation Engineering
- Biomechanics and Biomaterials
- Molecular, Cellular and Tissue Engineering
- Drug and Gene Delivery
- Neuroengineering
- Photonics and Diagnostic Engineering

The Biomedical Engineering Program at USF provides students with an integrated knowledge of engineering, biomedical science and other appropriate disciplines to allow participation in and advancement of the interdisciplinary field of Biomedical Engineering. The major also facilitates biomedical engineering research at USF through interactions with USF faculty and with industry and other health care institutions and catalyzes the growth of biomedical product companies throughout the region by the development, dissemination, and commercialization of new biomedical technologies. Overall, the major strives to develop and promote technologies and processes that will lead to better health care and improved quality of life.

Major Research Areas: Neuroengineering, biomechanics, biomaterials, medical imaging, sensors, cellular-level drug delivery, and rehabilitation engineering and tissue engineering

http://www.eng.usf.edu/
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

Successful applicants to the Ph.D. degree program in biomedical engineering will typically have presented the following preferred qualifications:

- GRE required with preferred scores: Verbal >50% percentile and Quantitative > 75th percentile and Analytical Writing > 4.0.
- An undergraduate GPA of >3.50 (out of a possible 4.00) based on official transcripts.
- Completion of a Master’s degree in biomedical engineering or a related field.
- Evidence of sustained interest in biomedical engineering.
- A statement of purpose and CV.
- Three (3) Letters of recommendation.

Note: Admissions decisions will be made using multiple measures indicated above. We strongly encourage applicants to contact specific faculty conducting research related to the student’s interests. Such direct contact with individual faculty members can greatly strengthen an application.

CURRICULUM REQUIREMENTS

Total Minimum Hours: 90 hours
- For students with an approved master’s degree: 60 hours minimum post-master’s
- For students without a master’s degree: 90 hours minimum post-bachelor’s

Core courses – 15 hours
Specialization courses – 15 hours
Additional Electives or Directed Research for students without a master’s degree – 30 hours
Dissertation – 30 hours

Core Courses:
A minimum of 15 credits including:
- GMS 6440 3 Basic Medical Physiology OR
- BME 6410 3 Engineering Physiology
- GMS 6605 3 Basic Medical Anatomy
- PHC 6051 3 Biostatistics II
- BME 6000 3 Biomedical Engineering
- 6931 3 Selected Topics in Biomedical Engineering: Biomedical Engineering II

Specialization Courses:
A minimum of 15 graduate credit hours selected from one of these areas of specialization. Directed Research courses in these areas can count as a part of these credits:
- Medical Imaging
- Rehabilitation Engineering
- Biomechanics and Biomaterials
- Cardiovascular Engineering
- Neuroengineering
- Tissue Engineering

Qualifying Exam
Ph.D. Qualifying Examination, preferably to be completed by the end of the second year of study. The dissertation committee will evaluate a written dissertation proposal and an oral defense. Poor performance on the qualifying exam based on the judgment of the Committee may result in the student failing the exam. If a student does not pass on the first attempt, he/she may request in writing to repeat the Exam. Students who fail the Qualifying Examination the second time will be dismissed by the Major.
Dissertation (30 hours)
BME 7980 – Ph.D. Dissertation
30 credits of dissertation research are required. 6 hours of Directed Research may be substituted for 6 Dissertation hours. As with other engineering Ph.D. degrees, evidence of the significance of the conducted research is provided by publication in appropriate refereed journals; with a minimum of 1 publication in a peer-reviewed journal, with the student as primary author. The expectation is that Ph.D. students will have 3 or more publications. The required journal publication must be based on your Dissertation research. Presentation at a conference or publication in a proceeding (even if refereed) is not sufficient.

OTHER INFORMATION

Graduate Assistantships and Fellowships
Financially competitive teaching and research graduate assistantships and fellowships will be offered to incoming students. Of special importance are the research opportunities and support available through affiliated institutions including the H. Lee Moffitt Cancer Center and Research Institute, the James Haley VA Hospital. In addition, particularly outstanding applicants will be nominated for university fellowships including Presidential Fellowships which provide competitive stipends plus tuition, fees and Health Insurance renewable for five years.

Results
Doctoral graduates of this major have been prepared for and are successfully engaged in research careers in Government, Corporate, and University Laboratories. In addition, since much of Biomedical Engineering research translates directly into biomedical devices, drugs, and instrumentation, graduates have also been directly involved in technology transfer, including the establishment of new Biomedical Engineering related businesses.

Graduate Certificates
As a valuable complement to graduate training in Biomedical Engineering, students are encouraged to also consider earning a graduate certificate particularly in the areas of:

- Aging and Neuroscience
- Biochemistry and Molecular Biology
- Bioinformatics
- Biostatistics
- Biotechnology
- Clinical Epidemiology
- Entrepreneurship
- Health Management and Leadership
- Infection Control
- Materials Science & Engineering
- Regulatory Affairs – Medical Devices.
- Technology Management
- Total Quality Management

COURSES
See [http://ups.usf.edu/course-inventory](http://ups.usf.edu/course-inventory)
BIOMEDICAL ENGINEERING AND ENTREPRENEURSHIP IN APPLIED TECHNOLOGIES CONCURRENT DEGREES

Master of Science in Biomedical Engineering (M.S.B.E.) Degree and Master of Science (M.S.)

DEGREE INFORMATION

Priority Admission Application Deadlines:
- Fall: February 15
- Spring: October 15
- Summer: February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 30
Level: Masters
CIP Code: 14.0501 / 52.0701
Dept. Codes: ECH / DEA
Major/College Codes: EBI EN / EAT GS

CONTACT INFORMATION

Colleges: Engineering and Graduate Studies
Department: Chemical & Biomedical Engineering Entrepreneurship
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The M.S. Biomedical Engineering (BME) and M.S. Entrepreneurship In Applied Technologies (EAT) Concurrent Degree is designed to prepare students who can effectively function in the complex world of Biotechnology companies (“Biotechs”). The program’s objectives are to provide a strong BME foundation for technical product development and research and development along with the skill set to effectively participate in the entrepreneurship, venture capital, business and financial aspects of Biotechs. Students would pursue appropriate coursework within both the College of Engineering and the Center For Entrepreneurship, double counting a total of nine credit hours.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for each major. Students must satisfy the requirements for the two degrees separately. Refer to the individual major listings for the specific requirements for each degree.

CURRICULUM REQUIREMENTS

Course requirements:

Biomedical Engineering
- BME 6000 3 Biomedical Engineering I
- BME 6931 3 Biomedical Engineering II
- GMS 6440 3 Basic Medical Physiology OR
- BME 6410 3 Engineering Physiology
- GMS 6605 3 Basic Medical Anatomy
- BHC 6051 3 Biostatistics II

30 hours required
12 Additional approved BME courses
(can include up to 6 thesis hours for thesis option)

Common BME/EAT courses 9
30 hours total

Common Courses (counted towards both the BME and EAT degrees) 9 hrs total
BME 6000 Biomedical Engineering 3
GMS 7930 Principles of Intellectual Property 3
EIN 6391 New Product Development 3

Entrepreneurship in Applied Technologies 30 hours required
EIN 6324 Technical Entrepreneurship 3
EIN 6935 Technology Venture Strategies 3
EIN 6935 Strategic Marketing Assessments 3
EIN 6934 Venture Cap Private Equity 3
GMS 7930 Medical Ethics and Humanities 2
EIN 6430 Overview of Regulated Industries 3
MAN 6930 Entrepreneurship Research Seminar 1
EIN 6936 Strategies in Entrep Technology 3
Common BME/EAT courses 9

COURSES
See http://ups.usf.edu/course-inventory
# Biomedical Engineering and Medicine Concurrent Degrees

Doctor of Philosophy (Ph.D.) Degree in Biomedical Engineering and Doctor of Medicine (M.D.) Degree in Medicine

## Degree Information

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<td>Contact Information: <a href="http://www.grad.usf.edu">www.grad.usf.edu</a></td>
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International applicant deadlines: [http://www.grad.usf.edu/majors](http://www.grad.usf.edu/majors)

- **Minimum Total Hours:** 90
- **Level:** Doctoral/Professional
- **CIP Code:** 14.0501
- **Dept. Code:** ECH
- **Major/College Codes:** EBI EN

## Major Information

The Objectives of the M.D./Ph.D. Concurrent Degree are: 1) Produce Highly Trained Professionals who can work effective in the area of Biomedical Translational Research, more specifically Engineer-Physicians who can conduct research in a Biomedical Engineering Area that addresses a significant clinical problem, and bring that research through to Clinical application; and 2) provide an integrated educational experience leading to both the M.D. degree and the Ph.D.(BME) Degree. In order to accomplish the first objective, advances in health care increasingly involves the application of emerging science and technology (I.E., Engineering) to clinical problems, including problems in diagnostics treatment and the health care system itself. Unlike more basic research that often aims to increase science and technology knowledge in itself, translational research seeks to specifically address the science and technology needed to solve problems with the end product an actual application or product (of course, adding new significant knowledge in the process).

In order to conduct effective biomedical translational research, the investigator must be trained in both clinical science (i.e. the MD Degree) and Engineering (Specifically Biomedical Engineering). This need has been delineated by both academics and industry and is validated by the growing number of MD/PH.D. (BME) majors nationally. USF has the necessary educational components and research infrastructure for this endeavor; both degrees are currently available. The proposed major seeks to provide an integrated experience where the student really fells a part of both the medical/clinical and engineering worlds simultaneously, hence the need for an integrated concurrent degree.

**Major Research Areas:**
- Biomechanics
- Biomaterials
- Cellular and Tissue Engineering
- Cardiovascular Engineering
- Neuroengineering
- Photonics
- Rehabilitation Engineering
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for each major. Students must satisfy the requirements for the two degrees separately. Refer to the individual major listings for the specific requirements for each degree.

Students apply for the BME degree through the Office of Graduate Studies; Students apply separately for the M.D. Degree through the College of Medicine. Admissions are on the same time schedule as that for general M.D. students. Applicants should contact a major advisor prior to application.

For specific admission requirements, refer to the Ph.D. in Biomedical Engineering major page in the Graduate Catalog and refer to the M.D. major requirements in the College of Medicine.

CURRICULUM REQUIREMENTS

For specific degree requirements, refer to the Ph.D. in Biomedical Engineering major page in the Graduate Catalog and to the curriculum requirements for the M.D. as posted by the College of Medicine.

This is a seven (7) year major. Students initially complete a non-thesis M.S. in Biomedical Engineering. Then proceed to complete the first three (3) years of the Medical School Curriculum. The following two (2) years focus on the Ph.D. requirements, specifically the completion of coursework, qualifying exams, and dissertation research. In the seventh (7th) year, students complete the fourth (4th) year of Medical School and also complete any Ph.D. requirements as needed. Students must have at least one publication in an appropriate peer-reviewed journal prior to graduation.

Other Requirements

Students establish a Graduate Committee immediately after starting the major, with members from both Engineering and Medicine. This committee guides the student through the major until a formal Ph.D. committee is established, typically in year four or five.

COURSES

See [http://ugs.usf.edu/course-inventory](http://ugs.usf.edu/course-inventory)
CHEMICAL ENGINEERING

Master of Science in Chemical Engineering (M.S.Ch.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15
Spring: October 15
Summer: February 15

Minimum Total Hours: 30
Level: Masters
CIP Code: 14.0701
Dept. Code: ECH
Major/College Codes: ECH EN
Approved: 1981

Also offered as an Accelerated Major
Chemical Engineering (BSCH/MSCH)

CONTACT INFORMATION

College: Engineering
Department: Chemical & Biomedical Engineering
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Master of Science in Chemical Engineering degree is usually awarded to a student who has an undergraduate degree in Chemical Engineering or strong evidence of undergraduate chemical engineering experience.

Major Research Areas:
The Chemical & Biomedical Engineering faculty research and development interests cover a broad range of areas in reacting systems, thermodynamics, transport phenomena, systems engineering and characterization, all fundamental as well as applied in biomedical, materials including microelectronic, and environmental domains. Strong collaboration with the College of Medicine, Center of Microelectronic Research, as well as, Departments of Biology, Chemistry, Industrial Engineering, Civil Engineering, Mechanical Engineering, Electrical Engineering, and Computer Science and Engineering makes most majors in Chemical Engineering truly interdisciplinary.

The Department offers core courses in thermodynamics, transport phenomena, reacting systems, math, and process analysis and modeling. A rich variety of electives are available regularly within the department as well as the University. Chemical & Biomedical Engineering research facilities include modern laboratories for polymer synthesis and characterization, supercritical fluid technology, life sciences, process control, instrumentation, computer aided process design, and phase behavior.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- GRE required with preferred minimum scores of Verbal >50% percentile, Quantitative > 75th percentile, and Analytical Writing of 3.0 or greater. Applicants who have successfully completed the Fundamentals of Engineering (FE) Exam offered by the Society of Professional Engineers will be exempted from the GRE requirement.
- An undergraduate Bachelor’s degree or equivalent in Chemical Engineering;
- TOEFL score of 79 (internet-based test), 213 (computer-based test) or 550 (written test)
- Two (2) letters of reference; and
- Statement of research interests.

http://www.grad.usf.edu/
CURRICULUM REQUIREMENTS

Total Minimum Hours: 30 hours post-bachelors

Core Requirements – 12 hours
Course Requirements – 18 hours

This degree requires an undergraduate degree in Chemical Engineering or strong evidence of undergraduate chemical engineering experience.
A background with undergraduate chemical engineering courses is needed.

Course Requirements – 12 hours
ECH 6105 3 Advanced Thermodynamics OR
ECH 6107 3 Molecular Thermodynamics
ECH 6285 3 Advanced Transport Phenomena OR
BME 6634 3 Biotransport Phenomena
ECH 6515 3 Reacting Systems OR
ECH 6506 3 Chemical Engineering Kinetics
ECH 6840 3 Mathematical Methods for Chemical Engineering OR
ECH 6412 3 Processes Analysis and Modeling

Additional Course Requirements – 18 hours
Other 5000 or 6000 course or ECH 6907 Individual Study 3
Other 5000 or 6000 course or ECH 6907 Individual Study 3
Other 5000 or 6000 course or ECH 6907 Individual Study 3
Additional approved 5000 or 6000 ECH courses 9

Must have a minimum of 16 hours at 6000 level
Must have a minimum of 12 hours of ECH 6000 level
May include a maximum of 4 hours of independent study

Thesis Option- 6 hours minimum
ECH 6971 6 Thesis: Master’s

At least 2 members of the Thesis committee must be from tenured or tenure track Chemical & Biomedical Engineering faculty. All thesis option students are required to present a departmental seminar based on their research as part of their oral examination. The examination must be scheduled after the Thesis Supervisory Committee has approved the Thesis. The Graduate Coordinator should be notified so he can coordinate the seminar scheduling. Students in this major are also required to pass the FE (Fundamentals of Engineering Examination) offered by the Society of Professional Engineers.

Comprehensive Exam
Candidates who have at least one publication in a journal or proceedings or presentation at a conference (based on their M.S. Thesis research) may be exempted from this comprehensive examination requirement.

Students wishing to continue on for a Ph.D. must apply to the Office of Graduate Studies.

http://www.eng.usf.edu/
Accelerated Major

Accelerated BSCH in Chemical Engineering to MSCH in Chemical Engineering

Description
Students pursuing a B.S.C.H. in Chemical Engineering will earn an M.S.C.H. in Chemical Engineering in an accelerated manner by sharing two (2) ECH-prefixied graduate courses (6 credit hours) taken as upper-level departmental electives as part of the undergraduate Chemical Engineering major.

The B.S.C.H. requires a total of 131 hours and the M.S.C.H. requires 30 hours. By sharing six (6) credit hours, the total credit hours earned will be 155 hours.

This accelerated major shares six (6) credit hours between already existing degrees:
B.S.C.H. in Chemical Engineering
M.S.C.H. in Chemical Engineering

Admission Requirements
For admission to the program, a student must:
1. Have completed 15 hours in the undergraduate major
2. Have a minimum 3.33 GPA overall; and
3. Have a minimum undergraduate 3.50 GPA in the major.

Timeline and Benchmarks:
1. To be considered for acceptance into the Accelerated B.S.C.H. Chemical Engineering/M.S.C.H. in Chemical Engineering major, students must have completed a minimum of 15 credit hours in the Chemical Engineering undergraduate major.
2. Students must have a minimum undergraduate GPA of 3.33 overall, and a minimum GPA of 3.50 in the major.
3. Following completion of a minimum of 15 hours in the undergraduate major, students may be considered for acceptance into the accelerated major through faculty nomination or student self-nomination, via submission of an Accelerated major Application Form. Both B.S.C.H. and M.S.C.H. majors will review the applications and approve the nominations. All applications require the approval of USF’s Office of Graduate Studies, the College of Engineering’s Graduate Major, and the Department of Chemical and Biomedical Engineering.
4. To be promoted to graduate status, students must meet all admission requirements of the M.S.C.H. in Chemical Engineering.
5. Students must earn a minimum of a “B” (3.00) in all shared graduate courses. Failure to earn at least a “B” in a shared graduate course will result in academic review by the graduate major. Failure to maintain good standing as a graduate student will result in academic probation, according to the procedures of the USF Office of Graduate Studies.
6. A comprehensive plan of study to complete the Accelerated B.S.C.H. Chemical Engineering/M.S.C.H. in Chemical Engineering major will be developed with the guidance of an advisor and a faculty member.

Shared Courses (6 credit hours)
The following courses will satisfy six (6) credit hours of Chemical Engineering elective coursework:
Two (2) ECH courses at the 6000-level to count toward upper-level Chemical Engineering electives

For the full list of Undergraduate Degree Requirements for the B.S.C.H. in Chemical Engineering (107 credit hours) please see Undergraduate Catalog.

COURSES
See http://ugs.usf.edu/course-inventory
CHEMICAL ENGINEERING

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15
Spring: October 15
Summer: February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours:
- 60 post-master’s
- 90 post-bachelor’s

Level: Doctoral
CIP Code: 14.0701
Dept. Code: ECH
Major/College Codes: ECH EN
Approved: 1981

CONTACT INFORMATION

College: Engineering
Department: Chemical & Biomedical Engineering
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

Contact Department for Information

Major Research Areas:
The Chemical & Biomedical Engineering faculty research and development interests cover a broad range of areas in reacting systems, thermodynamics, transport phenomena, systems engineering and characterization, all fundamental as well as applied in biomedical, materials including microelectronic, and environmental domains. Strong collaboration with the College of Medicine, Center of Microelectronic Research, as well as, Departments of Biology, Chemistry, Industrial Engineering, Civil Engineering, Mechanical Engineering, Electrical Engineering, and Computer Science and Engineering makes most majors in Chemical Engineering truly interdisciplinary.

The Department offers core courses in thermodynamics, transport phenomena, reacting systems, math, and process analysis and modeling. A rich variety of electives are available regularly within the department as well as the University. Chemical & Biomedical Engineering research facilities include modern laboratories for polymer synthesis and characterization, supercritical fluid technology, life sciences, process control, instrumentation, computer aided process design, and phase behavior.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- GRE required with preferred scores: Verbal >50% percentile, Quantitative >75% percentile and Analytical Writing >4.0
- An undergraduate Bachelor’s degree or equivalent in Chemical Engineering.
- TOEFL 550 (paper-based total) for international students or 213 (computer-based total);
- Three (3) letters of reference.
- Statement of Research Interests.
CURRICULUM REQUIREMENTS

Total Minimum hours:
For students with an approved master’s degree 60 hours minimum post-master’s
For students without a master’s degree 90 hours minimum post-bachelor’s

Structured Coursework requirements – 45 hours
Electives – 25 hours
Dissertation hours – 20 hours minimum (30 hours maximum)

Requires an undergraduate degree in Chemical Engineering. Complete Background courses in Chemical Engineering as needed.

Structured Coursework Requirements (45 hours):
ECH 6105 Advanced Thermodynamics I OR 3
ECH 6107 Molecular Thermodynamics
ECH 6285 Advanced Transport 3
ECH 6840 Math Methods 3
ECH 6515 Advanced Reaction Engineering OR 3
ECH 6506 Chemical Engineering Kinetics
ECH 6412 Processes Analysis and Modeling 3
ECH6931 Graduate Seminar courses (1 hour each; at least three) 3
Other 5000 or 6000 level Courses 27
(The exact distribution of these hours will be determined by the student, graduate advisor, and the supervisory committee to provide the student with a stimulating educational experience)

Electives (25 hours)

Qualifying Examination
Qualifying Examination preferably to be completed by the end of the second year of study. The dissertation committee will evaluate a written dissertation proposal and an oral defense. Poor performance on the qualifying exam based on the judgment of the Committee may result in the student failing the exam. If a student does not pass on the first attempt, he/she may request in writing to repeat the exam. Students who fail the Qualifying Examination the second time will be dismissed by the Major.

Dissertation – 20 hours minimum
ECH 7980 Dissertation

Additional Requirements
Publication in a refereed journal with the student as the first and primary author. At least 1 is required with the expectation that most Ph.D. students will have 3 or more. The publication must be based on your Dissertation research. Presentation at a conference or publication in a proceeding (even if refereed) is not sufficient.

COURSES
See http://ugs.usf.edu/course-inventory
CIVIL ENGINEERING

Master of Civil Engineering (M.C.E.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15
Spring: October 15
Summer: February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 30
Level: Masters
CIP Code: 14.0801
Dept. Code: EGX
Major/College Codes: ECE EN
Approved: 1983

CONTACT INFORMATION

College: Engineering
Department: Civil and Environmental Engineering
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The field of Civil Engineering has long been known for its breadth and ability to adapt to the new technological needs of society. The traditional areas of public works, such as highways, bridges, water supply, building design, and wastewater treatment, remain very important. In addition, the modern area of managing the environment has been included in the Civil Engineering domain. Graduates of the major are prepared for careers with public agencies or private industry and firms involved in planning, design, research and development, or regulation.

The Department has a high bay structures laboratory, which includes an MTS 250 kip testing machine. There are also well-equipped environmental, soils, pavement and hydraulics laboratories. These laboratories include equipment such as an ion chromatograph, atomic absorption spectrometer, environmental chamber, constant rate of stress consolidometer, triaxial units and superpave testing equipment.

The M.C.E. degree provides a student with the opportunity to earn the advanced degree by coursework only. This degree is recommended for part-time students who find it difficult to do thesis research because of their work commitment or for those who wish to complete degree requirements quickly. Many of the department's graduate courses are offered online or on weekday evenings, which permits working students the opportunity to seek a graduate degree.
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- Undergraduate GPA ≥ 3.0 preferred.
- GRE with preferred minimum scores of V 145 (25th percentile), Q 155 (60th percentile), AW 3.0 (15th percentile); or valid fundamentals of engineering (FE) certificate. Verification of FE certification should be obtained from the professional engineering (PE) board where the FE certification was obtained. See the CEE department website for more information: http://www2.eng.usf.edu/cee/graduate/apply.htm.
- TOEFL (International applicants only) 79 (550 paper based exam) or IELTS 6.5 (IELTS).
- Two (2) Letters of Reference provided at the time of application.
- Statement of Purpose provided at the time of application
- Resume provided at the time of application.

CURRICULUM REQUIREMENTS

The minimum coursework requirement is 30 credit hours for students with an undergraduate engineering degree. Students without an engineering bachelor’s degree will be required to complete undergraduate engineering pre-requisite courses as determined by the Department.

Pre-requisites – 12 hours

All students must complete the following pre-requisites or equivalent courses:

- EGN 3311 3 Statics
- EGN 3343 3 Thermodynamics I
- EGN 3353 3 Basic Fluid Mechanics
- EGN 3615 3 Engineering Economics

Most entering students will have taken these courses (or equivalent versions) prior to admission to the M.C.E. major. Students who have not taken these courses prior to beginning the M.C.E. degree program are encouraged to do so as quickly as possible, as these may be pre-requisites for a number of graduate-level courses in the major.

Total Minimum Hours 30 hours

Core Courses – 3 hours
Coursework – 21 hours
Thesis – 6 hours

The minimum coursework requirement is 30 graduate level credit hours for students with an undergraduate engineering degree. For students pursuing a specialization area (as detailed below), the 30 credit hours will include at least 15 credit hours of specialization course requirements, with remaining credit hours to consist of core coursework and technical electives as approved by the Department. For students pursuing no specialization area, the 30 credit hours will consist wholly of core coursework and technical electives as approved by the Department, but with a minimum of 18 credit hours taken within the Department of Civil and Environmental Engineering. Students without an engineering bachelor’s degree will be required to complete undergraduate engineering pre-requisite courses as determined by the Department. Please contact the Graduate Director for more information.

Common Core Courses – 3 hours minimum

CGN 6933 2 Selected Topics in Civil and Environmental Engineering: Professional Practice for Civil Engineers

And at least one of the following:

CGN 6933 1 Selected Topics: Grad Structures/Materials Seminar
ENV 6935 1 Environmental/Water Resources Seminar
TTE 6930 1 Grad Transportation Seminar
Specialization Requirements - 15 hours
The Department supports M.C.E. specialization areas in Geotechnical Engineering (GTL), Materials Engineering and Science (MTL), Structures Engineering (STR), Transportation Engineering (TPT), and Water Resources (WRS). Students may select from one of these Specializations, or may select no specialization.

Geotechnical Engineering
CEG 5115 3  Foundation Engineering
CES 6118 3  Applied Finite Elements
9 Additional credit hours of graduate level coursework in Geotechnical engineering or closely related areas.

Materials Engineering and Science
At least 2 courses (6 credit hours) from the following list:
CGN 6933 3  Selected Topics: Advanced Construction Materials
CGN 6720 3  Electrochemical Diagnostic Techniques
CGN 6933 3  Selected Topics: Structural Life Prediction
EMA 5326 3  Corrosion Control
EMA 6510 3  Characterization of Materials
9 Additional credit hours of graduate level coursework in Materials Engineering and Science or closely related areas.

Structures Engineering
At least 1 course (3 credit hours) from the following list of design courses:
CES 6706 3  Advanced Concrete
CES 6835 3  Design of Masonry Structures
CES 5715C 3  Pre-stressed Concrete
At least 1 course (3 credit hours) from the following list of analysis courses:
CES 6118 3  Applied Finite element
CGN 6933 3  Selected Topics: Advanced Structural Mechanics
CGN 6933 3  Selected Topics: Advanced Structural Analysis
CES 5209 3  Structural Dynamics
9 Additional credit hours of graduate level coursework in Structures Engineering or closely related areas.

Transportation Engineering
TTE 5205 3  Traffic Systems Engineering
TTE 5501 3  Transportation Planning and Economics
TTE 6507 3  Travel Demand Modeling or CGN 6933 Selected Topics in Civil and Environmental Engineering: Statistical and Econometric Methods
6 Additional credit hours of graduate level coursework in Transportation Engineering or closely related areas.

Water Resources 4 courses (12 credit hours) from the following list:
CWR 6235 3  Free Surface Flow
CWR 6239 3  Waves and Beach Protection
CWR 6305 3  Urban Hydrology
CWR 6534 3  Coastal and Estuary Modeling
CWR 6535 3  Hydrologic Models
CGN 6933 1-3  Vadose Zone Hydrology
CGN 6933 1-3  Groundwater Hydraulics
CGN 6933 1-3  Advanced Computational Fluid Mechanics
CWR 6820 3  Coastal Waves and Structures
CWR 6538 3  Advanced Hydrologic Model
CGN 6933 3  Selected Topics: Advanced Numerical Methods
CGN 6933 3  Selected Topics: Global Water Sustainability
CGN 6933 3  Selected Topics: Ecological Engineering
3 Additional graduate credit hours in Water Resources engineering or closely related areas.
Portfolio / Comprehensive Exam
Portfolio and oral interview are used in lieu of a comprehensive exam. The purpose of the portfolio and interview is for students to demonstrate that they have achieved a minimum level of proficiency in stipulated competencies. Specifically, by the time they graduate, students will demonstrate

- an ability to plan, compose, and integrate verbal, written, virtual, and graphical communication of a project to technical and non-technical audiences, and
- an ability to formulate and solve complex problems in Civil Engineering using relevant data and techniques.

Additional details regarding portfolio requirements will be provided to students by the Department.

Other requirements
- A maximum of 12 graduate level credits taken outside the CEE department may be applied to meet the degree requirements.
- A maximum of 6 credits of independent study may be applied to meet the degree requirements.

COURSES
See http://ugs.usf.edu/course-inventory
CIVIL ENGINEERING

Master of Science in Civil Engineering (M.S.C.E.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:

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International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 30
Level: Masters
CIP Code: 14.0801
Dept. Code: EGX
Major/College Codes: ECE EN
Approved: 1981

CONTACT INFORMATION

College: Engineering
Department: Civil and Environmental Engineering
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The field of Civil Engineering has long been known for its breadth and ability to adapt to the new technological needs of society. The traditional areas of public works, such as highways, bridges, water supply, building design, and wastewater treatment, remain very important. In addition, the modern area of managing the environment has been included in the Civil Engineering domain. Graduates of the majors are prepared for careers with public agencies or private industry and with firms involved in planning, design, research and development, or regulation.

The Department has a high bay structures laboratory, which includes an MTS 250 kip testing machine. There are also well-equipped environmental, soils, pavement and hydraulics laboratories. These laboratories include equipment such as an ion chromatograph, atomic absorption spectrometer, environmental chamber, constant rate of stress consolidometer, triaxial units, and Superpave testing equipment.

The M.S.C.E. is a research-oriented degree in which the student writes, as a major part of the degree requirements, a thesis that defines, examines, and reports in depth on a subject area relevant to Civil Engineering. The purpose of the thesis is to instill in the student the ability to inspect, evaluate, and report on a subject of interest to the engineering profession.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- Undergraduate GPA ≥ 3.0 preferred.
- GRE with preferred minimum scores of V 145 (25th percentile), Q 155 (60th percentile), AW 3.0 (15th percentile); or valid Fundamentals of Engineering (FE) certificate. Verification of FE certification should be obtained from the professional engineering (PE) board where the FE certification was obtained. See the CEE department website for more information: http://www2.eng.usf.edu/cee/graduate/apply.htm.
- TOEFL (international applicants only) 79 (550 paper-based exam); or IELTS 6.5.
- Two Letters of Reference provided at the time of application (three required for EFD specialization).
- Statement of Purpose provided at the time of application.
- Resume provided at the time of application.

Exceptions made on a case-by-case basis where warranted.

http://www.eng.usf.edu/
CURRICULUM REQUIREMENTS

Pre-requisites – 12 hours
All students must complete the following pre-requisites or equivalent courses:

- EGN 3311 3 Statics
- EGN 3343 3 Thermodynamics I
- EGN 3353 3 Basic Fluid Mechanics
- EGN 3615 3 Engineering Economics

Most entering students will have taken these courses (or equivalent versions) prior to admission to the M.C.E. major. Students who have not taken these courses prior to beginning the M.C.E. degree program are encouraged to do so as quickly as possible, as these may be pre-requisites for a number of graduate-level courses in the major.

Total Minimum Hours 30 hours
Core Courses – 3 hours
Coursework – 21 hours
Thesis – 6 hours

The major consists of a minimum of 24 credit hours of coursework and 6 credit hours of thesis. For students pursuing a Specialization area (as detailed below), the 24 credit hours of coursework will include at least 12 credit hours of Specialization Requirements, with remaining credit hours to consist of core coursework and technical electives as approved by the Department. For students pursuing no Specialization area, the 24 credit hours of coursework will consist wholly of core coursework and technical electives as approved by the Department, but with a minimum of 15 credit hours taken within the Department of Civil and Environmental Engineering. Students without an Engineering undergraduate degree will be required to complete undergraduate engineering pre-requisite courses as determined by the Department.

Common Core Courses – 3 hours minimum
CGN 6945 2 Graduate Research Methods in Civil and Environmental Engineering

And at least one of the following:
- CGN 6933 1 Selected Topics: Grad Structures/Materials Seminar
- ENV 6935 1 Environmental/Water Resources Seminar
- TTE 6930 1 Grad Transportation Seminar

Specialization Requirements – 12 hours minimum
The Department supports M.S.C.E. specialization areas in Engineering for International Development (EFD), Geotechnical Engineering (GTL), Materials Engineering and Science (MTL), Structures Engineering (STR), Transportation Engineering (TPT), and Water Resources (WRS). Students may select from one of these Specializations, or may select no specialization.

Engineering for International Development (EFD)
This specialization acknowledges coursework and international field experience in the area of engineering for international development that considers issues of sustainable development, water, sanitation, and health (WaSH), gender, and society. This graduate specialization requires 1) coursework in global health, applied anthropology (medical, environmental, and development), and Water, Sanitation, Hygiene (WaSH) engineering, 2) a development-focused research component, and 3) a long-term overseas field experience in sustainable development as a WaSH engineer, which in most cases will form the basis of the student’s master’s thesis. The international field experience allows a student to remain enrolled as a full-time student (with zero tuition/fees) and gain development experience serving with Peace Corps and Non-governmental Development Organizations. Graduate s are competitive for employment in the global WaSH development field.

ENV 6510 Sustainable Development Engineering

A minimum of 1 course (3 credits) from the following applied anthropology courses:
- ANG 6766 3 Research Methods in Applied Anthropology
- ANG 6730 3 Socio-cultural Aspects of HIV/AIDS
- ANG 6469 3 Selected Topics: Health, Illness and Culture
A minimum of one course (3 credits) from the following global public health courses:

- PHC 6764  3  Global Health Principles & Contemporary Issues
- PHC 6761  3  Global Health Assessment Strategies

3 additional graduate level credit hours of coursework in international development engineering or closely related areas.

Students engaged in full-time global training and/or service as part of the EFD specialization (e.g., in the U.S. Peace Corps, with a non-governmental organization, UNESCO-IHE, or equivalent) may register for CST 6990 for 0 credit hours while in their country of service/research.

**Geotechnical Engineering**
- CEG 5115  Foundation Engineering
- CES 6118  Applied Finite Elements

6 additional credit hours of coursework in Geotechnical engineering or closely related areas.

**Materials Engineering and Science**
At least 2 courses (6 credit hours) from the following list:
- CGN 6933  Selected Topics: Advanced Construction Materials
- CGN 6720  Electrochemical Diagnostic Techniques
- CES 6010  Structural Life Prediction
- EMA 5326  Corrosion Control
- EMA 6510  Characterization of Materials

6 additional credit hours of coursework in Materials Engineering and Science or closely related areas.

**Structures Engineering**
At least 1 course (3 credit hours) from the following list of design courses:
- CES 6706  Advanced Concrete
- CES 6835  Design of Masonry Structures
- CES 5715C  Pre-Stressed Concrete

At least 1 course (3 credit hours) from the following list of analysis courses:
- CES 6118  Applied Finite element
- CES 6230  Advanced Structural Mechanics
- CES 6144  Advanced Structural Analysis
- CES 5209  Structural Dynamics

6 additional credit hours of coursework in Structures Engineering or closely related areas.

**Transportation Engineering**
- TTE 5205  Traffic Systems Engineering
- TTE 5501  Transportation Planning and Economics
- TTE 6507  Travel Demand Modeling or CGN 6933 Selected Topics: Statistical and Econometric Methods

3 additional credit hours of coursework in Transportation Engineering or closely related areas.

**Water Resources**
4 courses (12 credit hours) from the following list:
- CWR 6235  Free Surface Flow
- CWR 6239  Waves and Beach Protection
- CWR 6305  Urban Hydrology
- CWR 6534  Coastal and Estuary Modeling
- CWR 6535  Hydrologic Models
- CGN 6933  Selected Topics: Vadose Zone Hydrology
- CGN 6933  Selected Topics: Groundwater Hydraulics
- CGN 6933  Selected Topics: Advanced Computational Fluid Mechanics
- CWR 6820  Coastal Waves and Structures
- CWR 6538  Advanced Hydrologic Model
- CGN 6933  Selected Topics: Advanced Numerical Methods
CGN 6933  Selected Topics: Global Sustainability
CGN 6933  Selected Topics: Ecological Engineering

Comprehensive Exam
The thesis and defense are used in lieu of a comprehensive exam.

Thesis - 6 hours minimum
Students pursuing the M.S.C.E. are required to complete at least six (6) credits of Thesis. Students must conduct a suitable research project under the guidance of their thesis advisor, write an original thesis based upon the results of the research project, and defend the thesis to a committee that must subsequently approve the completed thesis. For students in the EFD Specialization, the thesis must be associated with research in a developing-world context.

Other Requirements
- A maximum of 9 graduate level credits taken outside the CEE department may be applied to meet the degree requirements.
- A maximum of 6 credits of independent study may be applied to meet the degree requirements.

COURSES
See http://ugs.usf.edu/course-inventory
# CIVIL ENGINEERING

## Doctor of Philosophy (Ph.D.) Degree

### DEGREE INFORMATION

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<td><strong>Fall:</strong> February 15</td>
<td><strong>College:</strong> Engineering</td>
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<td><strong>Spring:</strong> October 15</td>
<td><strong>Department:</strong> Civil and Environmental Engineering</td>
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<td><strong>Summer:</strong> February 15</td>
<td><strong>Contact Information:</strong> <a href="http://www.grad.usf.edu">www.grad.usf.edu</a></td>
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</table>

International applicant deadlines: <http://www.grad.usf.edu/majors>

**Minimum Total Hours:** 78 post-bachelor’s

**Level:** Doctoral

**CIP Code:** 14.0801

**Dept. Code:** EGX

**Major/College Codes:** ECE EN

**Approved:** 1982

### Concentrations:

- Engineering for International Development
- Environmental Engineering (EVE)
- Geotechnical Engineering (GTL)
- Materials Engineering and Science (MTL)
- Structures Engineering (STR)
- Transportation Engineering (TPT)
- Water Resources (WRS)

### MAJOR INFORMATION

The Ph.D. degree is awarded in recognition of demonstrated scholarly competence and ability to conduct and report original and significant research in Civil Engineering.

The field of Civil Engineering has long been known for its breadth and ability to adapt to the new technological needs of society. The traditional areas of public works, such as highways, bridges, water supply, building design, and wastewater treatment, remain very important. In addition, the modern area of managing the environment, including sustainable development, has been included in the Civil Engineering domain. Graduates of the major are prepared for careers in academia, with public agencies, or with private industry, including firms involved in planning, design, research and development, or regulation.

Ph.D. students may work in any of the areas of Civil Engineering, including Engineering Mechanics, Environmental Engineering, Geotechnical Engineering, Pavement Engineering, Materials Engineering and Science, Structures Engineering, Transportation Engineering and Planning, and Water Resources Engineering.

### Major Research Areas:


The department has a high bay structures laboratory, which includes an MTS 250 kip testing machine. There are also well-equipped environmental, soils, pavement and hydraulics laboratories. These laboratories include equipment for water and air quality analysis, bench and pilot scale reactor studies, field instrumentation for environmental and water resources studies, constant rate of stress consolidometer, triaxial units, and Superpave testing equipment.
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- Undergraduate GPA ≥ 3.3 preferred
- GRE with preferred minimum scores of V 150 (45th percentile), Q 159 (75th percentile), and AW 4.0 (55th percentile)
- TOEFL (International applicants only) 79 (550 paper based exam) or IELTS 6.5
- Resume provided at the time of application.
- Three (3) letters of reference provided at the time of application
- Statement of Purpose provided at the time of application
- Exceptions made on a case-by-case basis where warranted.

CURRICULUM REQUIREMENTS

Total Program Hours: 78 hours minimum post-bachelor’s 48 hours minimum post-master’s

Core requirement – 2 hours
Specialization/primary area of study – 15 hours
Electives – 33 hours
Dissertation – 20 hours
Other course requirement – 8 hours

Core Requirement 2 hours
CGN 6945 2 Graduate Research Methods

An additional 48 credit hours of coursework are required. The following requirements apply to the 48 credit hours of additional coursework:

- At least 15 credit hours must be in the student’s primary area of study (see also Specialization Requirements, below). These 15 credit hours must be structured coursework, i.e., may not include thesis credits or independent study.
- Up to 30 credit hours from a previously completed Master’s degree may be applied, pending course-by-course evaluation and transfer, approved by the Department, the College, and the Office of Graduate Studies. However, no more than 6 credits of Master’s Thesis may be applied to meet the coursework requirement.
- No more than 9 credit hours of Independent Study may be applied to meet the coursework requirement.
- Directed research and/or dissertation credits may not be counted towards the coursework requirement.

Specialization Requirements - 15 hours minimum

The Department supports Ph.D. specialization areas in

- Engineering for International Development (EFD)
- Environmental Engineering (ENV)
- Geotechnical Engineering (GTL)
- Materials Engineering and Science (MTL)
- Structures Engineering (STR)
- Transportation Engineering (TPT)
- Water Resources (WRS).

Students may select from one of these Specializations, or may select no specialization.
Engineering for International Development (EFD)
This concentration acknowledges coursework and international field experience in the area of engineering for international development that considers issues of sustainable development, water, sanitation, and health (WaSH), gender and society. This graduate concentration requires: 2) coursework in global health, applied anthropology (medical, environmental, and development), and Water, Sanitation, Hygiene (WaSH) engineering, 2) a development-focused research component; and 3) a long-term overseas field experience in sustainable development as a WaSH engineer, which in most cases will form part of the basis of the student's dissertation. The international field experience allows a student to remain enrolled as a full-time student (with zero-tuition/fees) and gain development experience serving with the Peace Corps and non-governmental Development Organizations. Graduates are competitive for employment in the global WaSH development field.

ENV 6510 Sustainable Development Engineering

A minimum of 1 course (3 credits) from the following applied anthropology courses:
ANG 6766 3 Research Methods in Applied Anthropology
ANG 6730 3 Socio-cultural Aspects of HIV/Aids
ANG 6469 3 Selected Topics: Health, Illness, and Culture

A minimum of 1 course (3 credits) from the following global public health courses:
PHC 6764 3 Global Health Principles and Contemporary Issues
PHC 6761 3 Global Health Assessment Strategies

3 additional credit hours of graduate level coursework in international development engineering or closely related areas.

Students engaged in full-time global training and/or service as part of the EFD concentration (e.g., in the U.S. Peace Corps, with a non-governmental organization, UNESCO-IHE, or equivalent) may register for CST 6990 for 0 credit hours while in their country of service/research.

ENVIRONMENTAL ENGINEERING (EVE) - 15 hours
ENV 6002 3 Physical Chemical Principles of Environmental Engineering
EES 6107 3 Biological Principles of Environmental Engineering
ENV 6666 3 Aquatic Chemistry

At least one course from the following:
ENV 6617 3 Green Engineering for Sustainability
CGN 6933 3 Selected Topics: Resilient Infrastructure
ENV 6510 3 Sustainable Development Engineering

Additional 3 credit hours of coursework in Environmental Engineering

GEOTECHNICAL ENGINEERING (GTL) - 15 hours
CEG 5115 3 Foundation Engineering
CES 6118 3 Finite Element Analysis

Additional 9 graduate level credit hours of coursework in Geotechnical Engineering or closely related areas

MATERIALS ENGINEERING AND SCIENCE (MTL) - 15 hours
At least 2 courses (6 credit hours) from the following list:
CGN 6933 3 Selected Topics: Concrete Construction Materials
CGN 6720 3 Electrochemical Diagnostic Techniques
CES 6010 3 Structural Life Prediction
EMA 5326 3 Corrosion Control
EMA 6510 3 Characterization of Materials

Additional 9 graduate level credit hours of coursework in Materials Engineering and Science or closely related areas

http://www.eng.usf.edu/
STRUCTURES ENGINEERING (STR) - 15 hours
1 course (3 credit hours) from the following list of courses:
CES 6706 3 Advanced Concrete
CES 6835 3 Design of Masonry Structures
CES 5715C 3 Pre-stressed Concrete

1 course (3 credit hours) from the following list:
CES 6118 3 Applied Finite Elements
CES 6230 3 Advanced Structural Mechanics
CES 6144 3 Advanced Structural Analysis
CES 5209 3 Structural Dynamics
EGN 6333 3 Continuum Mechanics

Additional 9 graduate level credit hours of coursework in Structures Engineering or closely related areas

TRANSPORTATION ENGINEERING (TPT) - 15 hours
TTE 5205 3 Traffic Systems Engineering
TTE 5501 3 Transportation Planning and Economics
TTE 6507 3 Travel Demand Modelling or CGN 6933 Selected Topics: Statistical and Econometric Methods

Additional 6 graduate level credit hours of coursework in Transportation Engineering or closely related areas

WATER RESOURCES (WRS) - 15 hours
A minimum of 4 courses (12 credit hours) from the following list:
CWR 6235 3 Free Surface Flow
CWR 6239 3 Waves and Beach Protection
CWR 6305 3 Urban Hydrology
CWR 6534 3 Coastal and Estuary Modeling
CWR 6535 3 Hydrologic Models
CGN 6933 3 Vadose Zone Hydrology
CGN 6933 3 Groundwater Hydraulics
CGN 6933 3 Advanced Computational Fluid Mechanics
GLY 6836 3 Numerical Modeling of Hydrogeologic Systems
GLY 6827C 4 Advanced Hydrogeology
CWR 6820 3 Coastal Waves and Structures
CWR 6538 3 Advanced Hydrologic Modeling

Additional 3 graduate level credit hours of coursework in Water Resources or closely related areas

Electives - 33 hours
Graduate level electives are selected in consultation with the student’s major research advisor and/or advisory committee

Qualifying Exam
Doctoral students are expected to pass a qualifying examination no later than the semester following the completion of 48 credits of coursework beyond a bachelor’s degree. At minimum, the exam will include a written dissertation proposal and oral defense by the dissertation committee. A written exam in the area of specialization may also be required. Poor performance on the qualifying exam based on the judgment of the committee may result in the student failing the exam. If a student does not pass on the first attempt, he/she may request in writing to repeat the exam. Students who fail the Qualifying examination the second time will be dismissed by the Major.
Dissertation Requirements - 20 hours minimum
CGN 7980 20 Dissertation
A minimum of 20 credits of dissertation, an approved PhD dissertation, and a dissertation defense are required. Students may not sign up for dissertation credits until they have defended their proposal and advanced to candidacy (see Qualifying Exam, above).

Additional Requirements - 9 hours minimum
Nine (9) credits of additional graduate level coursework, dissertation, or directed research are required.

Publication Requirement
Students must have at least one paper accepted to a peer-reviewed journal or peer-reviewed conference based on their research carried out during their doctoral studies at USF.

COURSES
http://ugs.usf.edu/course-inventory or http://www2.eng.usf.edu/cee/graduate/graduatecourses.htm
COMPUTER ENGINEERING

Master of Science in Computer Engineering (M.S.C.P.) Degree

DEGREE INFORMATION

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International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 30 thesis; 30 non-thesis
Level: Masters
CIP Code: 11.0701
Dept. Code: ESB
Major/College Codes: ECP EN
Approved: 1960

Also offered as an Accelerated Degree Program: Computer Engineering (BSCP/MSCP)

MAJOR INFORMATION

The Department of Computer Science and Engineering offers both a thesis and non-thesis option for the degree of Master of Science in Computer Engineering (M.S.C.P.). The thesis option requires students to pursue a more concentrated range of topics, while the non-thesis option allows students to explore various areas of computer engineering. There is considerable freedom in the choice of the courses.

The breadth of subjects that comprise computer engineering together with the immense diversity of its applications, make it imperative that students in the Master’s major maintain close contact with the Graduate Director, or, if choosing the thesis option, with their major professor to achieve a coherent plan of study directed towards a specific goal. In particular, selection of courses should only be made with prior consultation and approval of the major professor or the Graduate Director.

Major Research Areas:
An excellent selection of courses and laboratories support graduate studies in algorithms, artificial intelligence, machine learning, data mining, computer architecture, graphics, networks, computer vision, distributed systems, embedded systems, expert systems, formal verification, image processing, pattern recognition, robotics, databases, software engineering, computer security, compilers, programming languages, and VLSI design and CAD.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- The GRE is required for all Ph.D. and M.S. applicants. The median GRE scores of recently admitted students include 770 on the Quantitative portion and a Verbal Total of 450. For GRE tests taken after August 1, we require a minimum of 161 on the Quantitative portion (81 percentile) and a minimum of 150 (44 percentile) on the Verbal. If a candidate is admitted to the M.S. major and later decides to apply to the Ph.D. major, the GRE requirement
must be met by the candidate as part of the application process. The GRE will be waived for M.S. degree applicants with an undergraduate degree from an ABET-accredited United States university.

- Minimum grade point average (GPA) of B or equivalent for all coursework completed during the last two years of undergraduate major.

- Submission of TOEFL scores with an Internet-based score of 79 or higher for applicants from non-English speaking countries. If consideration of an assistantship is desired, the speaking score component of the TOEFL must be 26 or above, or a score of 6.5 on the International English Language Testing System, (IELTS).

- The TOEFL requirements may be waived if the applicant meets one of the following conditions:
  - Has scored 500 or higher on the GRE Verbal Test, (Old Scores) or 153 with the New GRE scoring.
  - Has earned a college degree at a U.S. institution of higher learning.
  - Has earned a college degree from an institution whose language of instruction is English, (must be noted on the transcript).
  - Has scored 6.5 on International English Language Testing System, (IELTS).

- Three letters of recommendation

- Statement of purpose

- The applicant must also have mathematical preparation equivalent to that obtained from courses in Calculus through Differential Equations; knowledge of computer science and computer engineering, including logic design, computer architecture, data structure, operating systems and analysis of algorithms. The majority of students accepted to the major possess an undergraduate degree in Computer Science, Computer Engineering, Electrical Engineering, or Mathematics; however, students who hold an undergraduate degree in a related field are encouraged to apply.

**CURRICULUM REQUIREMENTS**

**Total Minimum Hours:** 30 hours

**Core Requirements:** 9 hours

Successful completion of three core graduate-level courses is required:

- EEL 6764 Principles of Computer Architecture 3
- COP 6611 Operating Systems 3
- COT 6405 Introduction to the Theory of Algorithms 3

**Electives:**

Thesis option students must select at least 15 hours and non-thesis students must select at least 21 hours from the list of available graduate elective courses below in consultation with the Graduate Director of individual advisor:

- CAP 5400 Digital Image Processing 3
- CDA 5416 Computer System Verification 3
- CAP 5625 Introduction to Artificial Intelligence 3
- CAP 5771 Data Mining 3
- EEL 5771 Introduction to Computer Graphics I 3
- CNT 6215 Computer Networks 3
- CAP 6415 Computer Vision 3
- CAP 6455 Advanced Robotic Systems 3
- CAP 6615 Neural Networks 3
- COP 6621 Programming Languages and Translation 3
- EEL 6706 Testing and Fault Tolerance in Digital Systems 3
- CAP 6736 Geometric Modeling 3
- CIS 6900 Independent Study 1-19
- CIS 6930 Special Topics 1-5
CIS 6940  Graduate Instruction Methods  1-4
CIS 6946  Internships/Practicums/Clinical Practice  0-3
CIS 6971  Thesis: Master’s  2-19

With prior permission from the Graduate Director, students can take a maximum of 3 hours of Independent Study or Internship, a maximum of 3 hours of one-hour seminar courses, and up to one graduate level course (3 credit hours) outside the department.

**Thesis Option:**
CIS 6971 Thesis
The thesis option requires completion of 24 credit hours of CSE graduate-level courses (9 credit hours core and 15 hours of electives) and 6 credit hours of thesis in computer engineering related problems, as determined by the Major Professor and documented in the Plan of Work. At least 16 credit hours must be at the 6000 level.

**Non-Thesis Option:**
The non-thesis option requires 30 credit hours, with 9 credit hours of core courses and 21 hours of graduate level electives. At least 16 credit hours must be at the 6000 level. At least 6 hours of electives should be in the following topic areas: CMOS VLSI Design, Digital Circuit Synthesis, Formal Verification, Testing and Fault Tolerance, Low-Power VLSI, Robotics, or Computer Networks, as determined by the Graduate Coordinator and documented in the Plan of Work.

**Comprehensive Exam**
For students taking the thesis option, the requirement for a comprehensive exam is satisfied by the successful completion of the thesis. For non-thesis option students, the requirement for a comprehensive exam is satisfied by the successful completion of a comprehensive exam that students will take in the semester prior to the semester in which the student intends to graduate.

**Graduation Requirements:**
For the thesis option, students must defend and pass the thesis and have a GPA of 3.0 or better. Non-Thesis Option students must pass the Comprehensive Exam, obtain a letter “B” or better in the core graduate courses and have a GPA of 3.0 or better. No grade below “C” will be accepted in a graduate major. If a student’s average falls below 3.00, the student will be placed on probation.

**Accelerated Major**
**Accelerated B.S.C.P. in Computer Engineering and M.S.C.P. in Computer Engineering**

**Description**
Students pursuing a B.S.C.P. in Computer Engineering will earn an M.S.C.P. in Computer Engineering in an accelerated manner by sharing two (2) graduate courses (6 credit hours) taken as upper-level departmental (Technical) electives as part of the undergraduate Computer Engineering major.

The B.S.C.P. requires a total of 128 hours and the M.S.C.P. requires 30 hours. By sharing six (6) credit hours, the total credit hours earned will be 152 credit hours.

This accelerated major shares six (6) credit hours between already existing degrees:
B.S.C.P. in Computer Engineering
M.S.C.P. in Computer Engineering

**Target Students and Expected Outcomes**
Academically high achieving undergraduate students in the B.S.C.P. major with high overall and major GPA will be targeted for the accelerated major. Expected outcomes are the increase in M.S.C.P. degrees granted, increase in graduate SCH, decrease time to graduation, decrease in tuition dollars for the student, increase in the research productivity, increase in the number of US students receiving M.S.C.P. degrees, including minorities and students from under-represented groups in Computer Science and Engineering, close the national gap of computer scientists needed to satisfy the market demand, and enhance of the quality of the graduate major by addition of academically accomplished students. In addition, some of these M.S.C.P. students will continue on to the Ph.D. major and enhance the doctoral major as well.
Admission Requirements
For admission to the program, a student must:
1. Have completed 15 hours in the undergraduate major
2. Have a minimum 3.33 GPA overall; and
3. Have a minimum undergraduate 3.50 GPA in the major.

Timeline and Benchmarks:
1. To be considered for acceptance into the Accelerated B.S.C.P. Computer Engineering/M.S.C.P. Computer Engineering major, students must have completed a minimum of 15 credit hours in the Computer Science undergraduate major.
2. Students must have a minimum undergraduate GPA of 3.33 overall, and a minimum GPA of 3.50 in the major.
3. Following completion of a minimum of 15 hours in the undergraduate major, students may be considered for acceptance into the accelerated major through faculty nomination or student self-nomination, via submission of an Accelerated major Application Form. Both B.S.C.P. and M.S.C.P. majors will review the applications and approve the nominations. All applications require the approval of USF’s Office of Graduate Studies, the College of Engineering’s Graduate Major, and the Department of Computer Science and Engineering Majors.
4. To be promoted to graduate status, students must meet all admission requirements of the M.S.C.P. in Computer Science.
5. Students must earn a minimum of a “B” (3.00) in all shared graduate courses. Failure to earn at least a “B” in a shared graduate course will result in academic review by the graduate major. Failure to maintain good standing as a graduate student will result in academic probation, according to the procedures of the USF Office of Graduate Studies.
6. A comprehensive plan of study to complete the Accelerated B.S.C.P. Computer Engineering/M.S.C.P. Computer Engineering major will be developed with the guidance of undergraduate and graduate advisors.

Shared Courses (6 credit hours)
Two (2) of the following three (3) core graduate courses replace six (6) credit hours of upper-level departmental (Technical) electives, including Independent Study and Industry Internship:
- EEL 6764 Principles of Computer Architecture
- COP 6611 Operating Systems
- COT 6405 Introduction to the Theory of Algorithms

Undergraduate Degree Requirements for the B.S.C.P. in Computer Chemical (107 credit hours)
*Please see Undergraduate Catalog for major-specific requirements

COURSES
See [http://ugs.usf.edu/course-inventory](http://ugs.usf.edu/course-inventory)
COMPUTER SCIENCE

Master of Science in Computer Science (M.S.C.S.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall:        February 15
Spring:     October 15
Summer:    No admit

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 30 thesis; 30 non-thesis
Level:        Masters
CIP Code:     11.0701
Dept. Code:   ESB
Major/College Codes: ECC EN
Approved:     1960

Also offered as an Accelerated Degree Program:
Computer Engineering (BSCP) / Computer Science (MSCS)

CONTACT INFORMATION

College:    Engineering
Department: Computer Science and Engineering
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Department of Computer Science and Engineering offers a thesis and non-thesis option for the degree of Master of Science in Computer Science (M.S.C.S.) The thesis option requires students to pursue a more concentrated range of topics. The non-thesis option offers students some experience in many areas of computer science. There is considerable freedom in the choice of the courses.

The breadth of subjects which are part of computer science together with the immense diversity of its applications, make it imperative that students in the Master's major maintain close contact with the Graduate Director, or, if choosing the thesis option, with their major professor in order to achieve a coherent plan of study directed towards a specific goal. In particular, election of courses should only be made with prior consultation and approval of the Major Professor or the Graduate Director.

Major Research Areas:
An excellent selection of courses and laboratories support graduate studies in algorithms, artificial intelligence, machine learning, data mining, computer architecture, graphics, networks, computer vision, distributed systems, embedded systems, expert systems, formal verification, image processing, pattern recognition, robotics, databases, software engineering, computer security, compilers, programming languages, and VLSI design and CAD.
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- The GRE is required for all Ph.D. and M.S. applicants. The median GRE scores of recently admitted students include 770 on the Quantitative portion and a Verbal Total of 450. For GRE tests taken after August 1, we require a minimum of 161 on the Quantitative portion (81 percentile) and a minimum of 150 (44 percentile) on the Verbal. If a candidate is admitted to the M.S. major and later decides to join the Ph.D. major, the GRE requirement must be met by the candidate as part of the application process. The GRE will be waived for M.S. degree applicants with an undergraduate degree from an ABET-accredited United States university.

- Minimum grade point average (GPA) of “B” (or equivalent) for all coursework completed during the last two years of undergraduate major.

- Submission of TOEFL scores with an Internet-based score of 79 or higher for applicants from non-English speaking countries. If consideration of an assistantship is desired, the speaking score component of the TOEFL must be 26 or above. The TOEFL requirements may be waived if the applicant meets one of the following conditions:
  - Has scored 500 or higher on the GRE Verbal Test, (Old Scores) or 153 with the New GRE scoring.
  - Has earned a college degree at a U.S. institution of higher learning.
  - Has earned a college degree from an institution whose language of instruction is English, (must be noted on the transcript).
  - Has scored 6.5 on International English Language Testing System, (IELTS).

- Three letters of recommendation.

- Statement of purpose.

- The applicant must also have mathematical preparation equivalent to that obtained from courses in Calculus through Differential Equations; knowledge of computer science and computer engineering, including logic design, computer architecture, data structure, operating systems and algorithms. The majority of students accepted to the Major possess an undergraduate degree in Computer Science, Computer Engineering, Electrical Engineering, or Mathematics. However, students who hold an undergraduate degree in a related field are encouraged to apply.

CURRICULUM REQUIREMENTS

Total Minimum hours: 30 hours

Core Requirements: 9 hours
Successful completion of three core graduate-level courses is required.
- COP 6611 Operating Systems 3
- EEL 6764 Principles of Computer Architecture 3
- COT 6405 Introduction to the Theory of Algorithms 3

Electives:
Thesis option students must select at least 15 hours and non-thesis option students must select at least 21 hours from the list of available graduate elective courses below in consultation with the Graduate Director or individual advisor:
- CAP 5400 Digital Image Processing 3
- CDA 5416 Computer System Verification 3
- CAP 5625 Introduction to Artificial Intelligence 3
- CAP 5771 Data Mining 3
- EEL 5771 Introduction to Computer Graphics I 3
- CNT 6215 Computer Networks 3
- CAP 6415 Computer Vision 3

http://www.eng.usf.edu/
CAP 6455  Advanced Robotic Systems  3
CAP 6615  Neural Networks  3
COP 6621  Programming Languages and Translation  3
EEL 6706  Testing and Fault Tolerance in Digital Systems  3
CAP 6736  Geometric Modeling  3
CIS 6930  Special Topics  1-5
CIS 6940  Graduate Instruction Methods  1-4
CIS 6946  Internships/Practicums/Clinical Practice  0-3

With prior permission from the Graduate Director, students can take a maximum of 3 hours of Independent Study or Internship, a maximum of 3 hours of one-hour seminar courses, and up to one graduate level course (3 credit hours) outside of the department.

**Thesis Option:**
CIS 6971  Thesis: Master’s  2-19

The thesis option requires the completion of 24 credit hours of CSE graduate-level courses (9 credit hours of core courses and 15 hours of electives) and 6 credit hours of thesis in computer science related problems, as determined by the Major Professor and documented in the Plan of Work. At least 16 credit hours must be at the 6000 level.

**Non-Thesis Option:**
The non-thesis option requires 30 credit hours, with 9 credit hours of core courses and 21 hours of graduate level electives. At least 16 credit hours must be at the 6000 level. At least 6 hours of electives should be in the following topic areas: advanced algorithms, compilers, databases, parallel computing and distributed systems, computer security, data mining, machine learning, programming languages, or software engineering, as determined by the Graduate Director and documented in the Plan of Work.

**Comprehensive Exam**
For students taking the thesis option, the requirement for a comprehensive exam is satisfied by the successful completion of the thesis. For non-thesis option students, the requirement for a comprehensive exam is satisfied by the successful completion of a comprehensive exam that students will take in the semester prior to the semester in which the students intends to graduate.

**Graduation Requirements:**
For the thesis option, students must defend and pass the thesis and have a GPA of 3.00 or better. Non-Thesis Option students must pass the Comprehensive Exam, obtain a letter “B” or better in the core graduate courses and have a GPA of 3.00 or better. No Grade below “C” will be accepted in a graduate major. If a student’s average falls below 3.00, the student will be placed on probation.

**Accelerated Major**

**Accelerated B.S.C.P. in Computer Engineering and M.S.C.S. in Computer Science**

**Description**
Students pursuing a B.S.C.P. in Computer Engineering will earn an M.S.C.S. in Computer Science in an accelerated manner by sharing two (2) graduate courses (6 credit hours) taken as upper-level departmental (Technical) electives as part of the undergraduate Computer Engineering major.

The B.S.C.P. requires a total of 128 hours and the M.S.C.S. requires 30 hours. By sharing six (6) credit hours, the total credit hours earned will be 152 hours.

This accelerated major shares six (6) credit hours between already existing degrees:
B.S.C.P. in Computer Engineering
M.S.C.S. in Computer Science

http://www.eng.usf.edu/
Target Students and Expected Outcomes
Academically high achieving undergraduate students in the B.S.C.P. major with high overall and major GPA will be targeted for the accelerated major. Expected outcomes are the increase in M.S.C.S. degrees granted, increase in graduate SCH, decrease time to graduation, decrease in tuition dollars for the student, increase in the research productivity, increase in the number of US students receiving M.S.C.S. degrees, including minorities and students from under-represented groups in Computer Science and Engineering, close the national gap of computer scientists needed to satisfy the market demand, and enhance the quality of the graduate major by addition of academically accomplished students. In addition, some of these M.S.C.S. students will continue on to the Ph.D. major and enhance the doctoral major as well.

Admission Requirements
For admission to the program, a student must:
1. Have completed 15 hours in the undergraduate major
2. Have a minimum 3.33 GPA overall; and
3. Have a minimum undergraduate 3.50 GPA in the major.

Timeline and Benchmarks:
1. To be considered for acceptance into the Accelerated B.S.C.P. Computer Engineering/M.S.C.S. Computer Science major, students must have completed a minimum of 15 credit hours in the Computer Science undergraduate major.
2. Students must have a minimum undergraduate GPA of 3.33 overall, and a minimum GPA of 3.50 in the major.
3. Following completion of a minimum of 15 hours in the undergraduate major, students may be considered for acceptance into the accelerated major through faculty nomination or student self-nomination, via submission of an Accelerated major Application Form. Both B.S.C.P. and M.S.C.S. majors will review the applications and approve the nominations. All applications require the approval of USF’s Office of Graduate Studies, the College of Engineering’s Graduate Major, and the Department of Computer Science and Engineering Majors.
4. To be promoted to graduate status, students must meet all admission requirements of the M.S.C.S. in Computer Science.
5. Students must earn a minimum of a “B” (3.00) in all shared graduate courses. Failure to earn at least a “B” in a shared graduate course will result in academic review by the graduate major. Failure to maintain good standing as a graduate student will result in academic probation, according to the procedures of the USF Office of Graduate Studies.
6. A comprehensive plan of study to complete the Accelerated B.S.C.P. Computer Engineering/M.S.C.S. Computer Science major will be developed with the guidance of undergraduate and graduate advisors.

Shared Courses (6 credit hours)
Two (2) of the following three (3) core graduate courses replace six (6) credit hours of upper-level departmental (Technical) electives, including Independent Study, Supervised Research, and Industry Internship:
EEL 6764 Principles of Computer Architecture
COP 6611 Operating Systems
COT 6405 Introduction to the Theory of Algorithms

Undergraduate Degree Requirements for the B.S.C.P. in Computer Engineering (107 credit hours)
*Please see Undergraduate Catalog for major-specific requirements

COURSES
See http://ugs.usf.edu/course-inventory
COMPUTER SCIENCE AND ENGINEERING

Doctor of Philosophy (Ph.D.) Degree

**DEGREE INFORMATION**

Priority Admission Application Deadlines:

- **Fall:** February 15
- **Spring:** October 15
- **Summer:** No admit

International applicant deadlines:
http://www.grad.usf.edu/majors

**Minimum Total Hours:**
- 72 post-bachelors
- 42 post-master’s

**Level:** Doctoral

**CIP Code:** 14.0901

**Dept. Code:** ESB

**Major/College Codes:** CSE EN

**Approved:** 1984

**CONTACT INFORMATION**

**College:** Engineering

**Department:** Computer Science and Engineering

**Contact Information:** www.grad.usf.edu

**MAJOR INFORMATION**

The degree of Doctor of Philosophy is conferred in recognition of a candidate’s highest level of scholarly competence and demonstrated capability to independently conduct and report significant research in computer science and engineering. This achievement requires more than an accumulation of course credits over a stated period of residence. Scholarly competence is achieved through systematic study and investigation in the chosen discipline at an advanced level. The major professor and at least two committee members will be from the Computer Science and Engineering department. Research capability is developed during the course of study and is achieved through the completion of significant and independent research. The results of this research must be formally presented in a written dissertation and successfully defended before an examining committee. The dissertation must demonstrate the significance of the research as well as the candidate’s ability to organize and present her/his results in a professional manner.

**Major Research Areas:**

An excellent selection of courses and laboratories support graduate studies in algorithms, artificial intelligence, machine learning, data mining, computer architecture, graphics, networks, computer vision, distributed systems, embedded systems, expert systems, formal verification, image processing, pattern recognition, robotics, databases, software engineering, computer security, compilers, programming languages, VLSI design, and CAD.

**ADMISSION INFORMATION**

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- The GRE is required for all Ph.D. applicants. The median GRE scores of recently admitted students include 770 on the Quantitative portion and a Verbal Total of 450. For GRE tests taken after August 1, we require a minimum of 161 on the Quantitative portion (81 percentile) and a minimum of 150 (44 percentile) on the Verbal.

- Minimum grade point average (GPA) of B average (or equivalent) for all coursework completed during the last two years of undergraduate major.
• Submission of TOEFL scores with an Internet-based score of 79 or higher for applicants from non-English speaking countries. If consideration of an assistantship is desired, the speaking score component of the TOEFL must be 26 or above.

• The TOEFL requirements may be waived if the applicant meets one of the following conditions:
  • Has scored 500 or higher on the GRE Verbal Test, (Old Scores) or 153 with the New GRE scoring.
  • Has earned a college degree at a U.S. institution of higher learning.
  • Has earned a college degree from an institution whose language of instruction is English, (must be noted on the transcript).
  • Has scored 6.5 on International English Language Testing System, (IELTS).

• Three letters of recommendation

• Statement of purpose

• The applicant must also have mathematical preparation equivalent to that obtained from courses in Calculus through Differential Equations; knowledge of computer science and computer engineering, including logic design, computer architecture, data structures, operating systems, and analysis of algorithms. Students are assumed to have good programming skills. The majority of students accepted to the major possess an undergraduate degree in Computer Science, Computer Engineering, Electrical Engineering, or Mathematics; however, students who hold an undergraduate degree in a related field are encouraged to apply.

CURRICULUM REQUIREMENTS

Total Program hours:  72 minimum (post-bachelor’s)  
42 minimum (post-master’s)

A minimum of 72 semester hours including dissertation hours beyond the baccalaureate degree are required of all Ph.D. students.

Post-Bachelor’s: 72 hours minimum
Core – 9 credit hours
Coursework – 24 credit hours
Independent Study/Dir Research – Up to 15 hours
Dissertation – At least 20 credit hours

Post-Master’s: 42 hours minimum
Core – 9 credit hours
Independent Study/Dir Research – Up to 15 hours
Dissertation – At least 20 credit hours

Core Requirements – 9 credit hours
COP 6611  3  Operating Systems
EEL 6764  3  Principles of Computer Architecture
COT 6405  3  Introduction to the Theory of Algorithms

Coursework – 33 credit hours
At least 33 credit hours in coursework excluding independent study and directed research. The exact distribution of these hours in the Computer Science and Engineering discipline will be determined by the student and the supervisory committee to provide the student with a stimulating educational experience.

Departmental Course Options (examples)
CAP 5400  3  Digital Image Processing
CAP 5625  3  Introduction to Artificial Intelligence
CAP 5771  3  Data Mining
CAP 6415  3  Computer Vision
CAP 6455  3  Advanced Robotic Systems  
CAP 6615  3  Neural Networks  
CAP 6736  3  Geometric Modeling  
CDA 5416  3  Computer System Verification  
CNT 6215  3  Computer Networks  
COP 6621  3  Programming Languages and Translation  
EEL 5771  3  Introduction to Computer Graphics I  
EEL 6706  3  Testing and Fault Tolerance in Digital Systems  

CIS 6900  1-19  Independent Study  
CIS 6930  1-5  Special Topics  
CIS 6940  1-4  Graduate Instruction Methods  
CIS 6946  0-3  Internships/Practicums/Clinical Practice  
CIS 6971  2-19  Thesis: Master’s  

Independent Study/Directed Research – 1-15 credit hours  
Up to 15 credit hours of independent study/directed research.  
CIS 6900  1-15  Independent Study  
CIS 7910  1-15  Directed Research  

Qualifying Examination  
Students must pass the Ph.D. Qualifying examinations in Computer Architecture, Operating Systems, and Theory of Algorithms. The qualifying examination is a two-step process. First, students must get a GPA of 3.60 or better in these three courses within one year of enrollment, otherwise they will have to re-take only the necessary course(s) and get a GPA of 3.60 or better using the best three grades. If a student does not meet these requirements by the end of the second year, he or she will be withdrawn from the Ph.D. program. Second, students must take the qualifying exam and pass it. Students are required to take the exam as soon as they meet the requirements of the first step.  

Major Research-Area Paper and Future Research Directions  
To fulfill this milestone, students are required to write a survey or research paper on his/her area of research as the lead author. A journal or conference paper already published will count towards this requirement. The student is then required to give an oral presentation on the subject to his/her major professor and a doctoral evaluating committee. The oral presentation must also contain a section on future research directions, a draft plan of research activities towards graduation. The presentation will be open to the public. The paper and presentation is to be completed within one year of passing the Qualifying Examinations and will have to be formally approved by his/her major professor the doctoral evaluating committee before applying for Candidacy.  

Admission to Candidacy  
A student will not be admitted to candidacy until a Doctoral committee has been appointed, and the committee has certified that the student has successfully completed the qualifying examination and the Major Research Area Paper and Future Research Directions presentation, and demonstrated the qualifications necessary to successfully complete the requirements for the degree. The admission to Candidacy form must be approved by the Dean of the college and forwarded to the Dean of Graduate Studies for final approval. The student may elect to enroll in dissertation credits in the semester following approval of the Admission to Candidacy form by Graduate Studies.  

The student’s progress in the program is monitored by a supervisory doctoral committee, which is usually appointed at an early stage in the student’s major. This committee consists of at least five members, one of whom is outside the College of Engineering. The Major Professor will be a member of the Computer Science and Engineering Department. Normally, two more Computer Science and Engineering faculty serve on the committee with a member in another department in the college.  

The student must conduct research of sufficient quality that demonstrates an independent and original contribution to the field of computer science and engineering. Students must take at least 20 semester hours of doctoral dissertation credits; the exact number of credits is determined by the candidate’s supervisory committee. It is strongly recommended that doctoral students submit journal articles for publication relevant to dissertation research.
Dissertation hours - At least 20 credit hours
CIS 7980 2-19 Dissertation

Student are required to take at least 20 hours of dissertation hours until they accumulate a minimum number of 72 hours in the major.

Dissertation Defense
A doctoral candidate must defend her/his research before her/his committee. The defense is usually open to the university community and conducted in accordance with the university's general rules and regulations. The defense involves a formal presentation of the dissertation followed by a critical exchange between the candidate and the committee. The committee chairman moderates the proceedings and determines procedure, originality of the research, and contributions made by the candidate.

COURSES
See http://ugs.usf.edu/course-inventory
ELECTRICAL ENGINEERING

Master of Science in Electrical Engineering (M.S.E.E.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:

Fall: February 15
Spring: October 15
Summer: February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 30
Level: Masters
CIP Code: 14.1001
Dept. Code: EGE
Major/College Codes: EEL EN
Approved: 1981

CONTACT INFORMATION

College: Engineering
Department: Electrical Engineering
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Department of Electrical Engineering offers both doctoral and masters level degrees. The major areas of research and instruction in the Department are: semiconductor materials, microelectronic manufacturing, MEMS, nanotechnology, VLSI design, digital signal processing, communication theory, wireless communications, microwave engineering, power systems and controls, and biomedical materials and imaging. The Department’s research efforts are supported by well-equipped laboratories in the areas of silicon processing, compound semiconductors, electro-optics, IC design, thin dielectric films, communications and signal processing, power systems, nanotechnology, MEMS, micro/millimeter waves, biomedical materials and imaging, and bioengineering.

Current and previous Ph.D. dissertations explored the areas of microelectronics (materials and devices of elemental and compound semiconductors, circuit design, modeling, testing, and reliability); communications and signal processing (communication networks, packet switching, satellite communications, communications software, and VLSI for signal processing); systems and controls; solid state material and device processing and characterization; electro-optics, electromagnetic, microwave and millimeter-wave engineering (antennas, devices, systems); and biomedical engineering. Master’s majors include options in semiconductor materials and processes, VLSI design, communications and signal processing, power systems and controls, microwave and millimeter-wave engineering, and biomedical engineering.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- Minimum 3.00 GPA
- Three Letters of Recommendation
- Resume
- Statement of Purpose
- TOEFL score of 550; 213 on computerized test; 79 on internet based exam
CURRICULUM REQUIREMENTS

Thesis Option – 30 hours total
Required Courses (24) hours
Include Major Core below, 18 hours including 6 hours of depth or capstone coursework, and 6 hours of elective coursework.
Required Thesis Hours (6 hours)

Course work only – 30 hours total
Required Courses (30 hours)
Include Major Core below, 18 hours including 6 hours of depth or capstone coursework, and 12 hours of elective coursework.

Major Core:

Students must take two of the following applied mathematics courses as part of the degree program:

- EGN 5421 Engineering Applications of Vector Analysis 3
- EGN 5422 Engineering Applications of Partial Differential Equations 3
- EGN 5423 Mathematics for Communications Engineering 3
- EGN 5424 Engineering Applications of Complex Analysis 3
- EGN 5425 Matrix Theory 3
- EEL 6542 Random Processes 3
- PHC 6050 Bio-Statistics 3

Students must take two of the following approved in depth sequences as part of their degree program:

- EEL-6426 RF/MW Circuits I and EEL-6427 RF/MW Circuits II
- EEL-6486C EM Field Theory and EEL-6487 Adv. EM Field Theory or EEL-6481 Num. Techniques in Electromagnetics
- EEL-5462 Antenna Theory and EEL-6463 Adv. Antenna Theory or EEL-6481 Num. Techniques in Electromagnetics
- EEL-6935 Monolithic MW Circuits and EEL-6936 Adv. Monolithic MW Circuits
- BME 6000 Intro to Biomedical Eng. and GM-7930 Anatomy for Bio Engineers or EEL-6936 Bio Image Processing
- EEL-6935 Bioelectricity and EEE-6273 Chemical and Bio Sensor Microsystems
- EEL-6502 DSP-I and EEL-6752 DSP-II or EEL-6586 Speech Signal Processing
- EEE-5344 Digital CMOS VLSI Design and EEE-6936 VHDL or EEE-6936 Low Power VLSI Design
- EEE-5382 Physical Basis of Microelectronics and EEE-6353 Semiconductor Device Theory I
- EEE-6353 Semi-Conductor Device Theory I and EEE-6358 Semi-Conductor Device Theory II
- EEE 5356 Integrated Circuit Technology and EEE-6936 Adv. Integrated Circuit Technology
- EEE-6355 Compound Semiconductor Technology and EEE-6318 Characterization of Semiconductors
- EEL-5631 Digital Control Systems and EEL-6613 Modern Control Theory
- EEE-6936 VHDL and EEL-6936 Rapid System Prototyping
- EEL-5250 Electric Power Systems I and EEL-6935 Electric Power Systems II
- EEL-6935 Industrial Power Distribution I and EEL-6936 Industrial Power Distribution II
- EEL-5935 Utility Power Distribution I and EEL-6935 Utility Power Distribution II
- EEL-6935 Electric Machines and Drives and EEL-6936 Power Electronics
- EEL-6425 Intro to Nanotechnology and EEL-6936 Nanotechnology II
- EEL-6935 Micro Electro Mechanical Systems I and EEL-6936 Micro Electro Mechanical Systems II

*Other sequence must be approved by the Graduate Director
Electives:
Minimum elective hours:
  Thesis – 6 hours
  Coursework only – 12 hours
Students may adopt suggested electives from the Department Graduate Handbook, by track or emphasis area of their choice. All courses must be graduate level. Students should refer to university requirements when choosing courses bearing in mind allowed quantities of 5000 and 6000 level coursework. Special selections must be approved by the Coordinator.

Comprehensive Exam
The University requires all Master’s students to be assessed by a comprehensive examination. The Department maintains two versions of this exam according to the student pathway to degree, i.e. Thesis or Non-Thesis as follows:

Thesis students:
Student’s written thesis and Public Defense of same constitute the comprehensive exam. Student is provided a rubric that they will be assessed by relative to their written document and presentation. The Committee reports this assessment to the Department for final approval.

Non-Thesis Students:
In lieu of the Comprehensive Exam, a portfolio addressing the content from a capstone course in the primary area of study, content from a course in a secondary area of study, and content from a core mathematics course will be submitted upon graduation. The graduate coordinator, chair of the department, and the vice chair of the department will evaluate the submissions according to the overall quality of the writing, the clarity of the explanation of how the outcomes were achieved, and the quality of the examples that are included.

Thesis – 6 hours
EEL 6971 Thesis (6)

COURSES
See http://ups.usf.edu/course-inventory
ELECTRICAL ENGINEERING

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15
Spring: October 15
Summer: February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours:
72 (Post-bacc)
42 (post-master’s)

Level: Doctoral

CIP Code: 14.1001

Dept. Code: EGE

Major/College Codes: EEL EN

CONTACT INFORMATION

College: Engineering
Department: Electrical Engineering

Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Department of Electrical Engineering offers both doctoral and masters level degrees. The major areas of research and instruction in the Department are: semiconductor materials, microelectronic manufacturing, MEMS, nanotechnology, VLSI design, digital signal processing, communication theory, wireless communications, microwave engineering, power systems and controls, and biomedical materials and imaging. The Department’s research efforts are supported by well-equipped laboratories in the areas of silicon processing, compound semiconductors, electro-optics, IC design, thin dielectric films, communications and signal processing, power systems, nanotechnology, MEMS, micro/millimeter waves, biomedical materials and imaging, and bioengineering.

Current and previous Ph.D. dissertations explored the areas of microelectronics (materials and devices of elemental and compound semiconductors, circuit design, modeling, testing, and reliability); communications and signal processing (communication networks, packet switching, satellite communications, communications software, and VLSI for signal processing); systems and controls; solid state material and device processing and characterization; electro-optics, electromagnetic, microwave and millimeter-wave engineering (antennas, devices, systems); and biomedical engineering. Master’s majors include options in semiconductor materials and processes, VLSI design, communications and signal processing, power systems and controls, microwave and millimeter-wave engineering, and biomedical engineering.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- Minimum 3.00 GPA
- GRE (with preferred minimum scores of Q>155 (61%), V>146 (28%))
- TOEFL score of 550; 213 on computerized test; 79 internet based exam.
- Three (3) Letters of Reference
- Statement of Purpose

http://www.eng.usf.edu/
CURRICULUM REQUIREMENTS

Total Minimum Hours: 72 post-bacc
42 post-masters

The student’s supervisory committee is responsible for evaluating his/her overall transcript to ensure that the following distributional requirements are met:

Program of Study

Core Requirements 30 hours
Minimum 30 hours formal regularly scheduled graduate course work in the engineering area of study, or other graduate courses associated with electrical engineering as approved by the Graduate Director. (not necessarily electrical engineering courses)

Mathematics and Statistics 9 hours
Minimum 9 hours in graduate level mathematics or statistics courses (not necessarily math department courses).

Electives/Directed Research/Independent Study 13 hours

Dissertation 20 hours minimum
EEL 7980 Dissertation
Each Professor will have his/her own section for dissertation hours.

Total hours: Minimum 72 hours total beyond B.S. degree.

Note: Students entering the doctoral major with an earned master’s degree from another institution, other than USF, must take at least nine (9) credit hours of 6000 level EE courses at USF. The student’s supervisory committee is responsible for evaluating his/her overall transcript to ensure that the distributional requirements are met.

Please contact Electrical Engineering for additional information

COURSES
See http://ugs.usf.edu/course-inventory
ENGINEERING MANAGEMENT

Master of Science in Engineering Management (M.S.E.M.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15
Spring: October 15
Summer: February 15

Minimum Total Hours: 30
Level: Masters
CIP Code: 15.1501
Dept. Code: EGS
Major/College Codes: EMA EN
Approved: 1982

Also offered as an Accelerated Major:
Chemical Engineering (BSCH)/ Engineering Management (MSEM)
Industrial Engineering (BSIE) / Engineering Management (MSEM)
Mechanical Engineering (BSME)/Engineering Management (MSEM)

CONTACT INFORMATION

College: Engineering
Department: Industrial & Management Systems Engineering
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

This major is designed to prepare engineers from various disciplines to make the transition to technical management. Courses in the major involve concepts in engineering management, resource management, strategic planning, and productivity. They combine qualitative approaches with quantitative techniques. Courses are available on campus or through distance learning.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- BS in Engineering or equivalent.
- Minimum 3.00 GPA upper level
- GRE may be required
- Letter of recommendation.
- TOEFL score of 79 or higher on internet-based test, 213 or higher on computer-based test, or 550 or higher on paper-based test
- Resume
- Two years professional experience or internship may be required as part of the major
CURRICULUM REQUIREMENTS

A minimum of 30 credits of approved graduate level coursework beyond the bachelor level is required, 18 credits of core work and 12 credits of electives. Up to 6 hours of advanced courses in the student’s area of specialty may be taken as electives. A thesis option is available to M.S.E.M. students who are interested in applied research. In the thesis option, 18 credits of core work, 6 credits of electives, and 6 credits of thesis are the minimum required.

The required 18 credits of core work are divided into three components: 12 credits in the general core area, 3 credits in the quantitative core area, and 3 credits in the job design core area. An undergraduate statistics course with a grade of C or higher is a prerequisite for the quantitative core area. Otherwise students must additionally take EGN 3443 Probability & Statistics for Engineers as a prerequisite.

General Core Area: 12 credits

EIN 5182 Principles of Engineering Management
EIN 6386 Management of Technological Change
EIN 5350 Technology and Finance
EIN 6183 Engineering Management Policy & Strategy (Capstone: must be taken after all core work requirements have been fulfilled)

Quantitative Core Area: 3 credits must be selected from the following options, as approved by advisor. The other courses may be taken as electives.

ESI 5306 Operations Research for Engineering Managers
ESI 5219 Statistical Methods for Engineering Managers
ESI 6247 Statistical Design Models

Job Design Core Area: 3 credits must be selected from the following options, as approved by advisor. The other course may be taken as an elective.

EIN 6108 Engineering Management: Human Relations
EIN 6319 Work Design, Motivation & Productivity

Electives: 12 credits minimum must be selected from the following options, as approved by advisor. (Other Graduate Courses may be taken, with approval of the Graduate Director.)

EIN 6179 Advanced TQM Methods: Six Sigma
EIN 6936 Benchmarking
ESI 5522 Computer Simulation
EIN 6217 Construction Safety Engineering
EIN 5201 Creativity in Technology
EIN 6275 Design Controls for Medical Devices
EIN 5452 Engineering a Lean Enterprise
EIN 6215 Engineering Systems Safety
ESI 6605 Engineering Data Mining
EIN 6324 Engineering the Supply Chain
EIN 6936 Graduate Research Seminar
EIN 6433 Human Factors Engineering in Medical Devices
EIN 6112 Information Systems Design for Engineering
ESI 6448 Integer Programming
EIN 6934 International Project Management
EIN 6435 International Regulations for Medical Devices
EIN 6178 ISO 9000/14000
ESI 6491 Linear Programming & Network Optimization
EIN 5510 Manufacturing Systems Analysis
EIN 6392 New Product Development
EIN 6420 Non-Linear Programming
EIN 6216 Occupation Safety Engineering
Accelerated Majors

Accelerated BSCH in Chemical Engineering / MSEM in Engineering Management

Description
Students pursuing a B.S.C.H. in Chemical Engineering will earn an M.S.E.M. in Engineering Management in an accelerated manner by sharing 2 EIN graduate courses (6 credit hours) taken as upper-level Technical electives as part of B.S.C.H. major.

The B.S.C.H. requires a total of 131 hours and the M.S.E.M. requires 30 hours. By sharing six (6) credit hours, the total credit hours earned will be 155 hours.

Target Students and Expected Outcomes
Academically high achieving undergraduate students in the B.S.C.H. major with high overall and major GPA will be targeted for the accelerated major. Expected outcomes are the increase in M.S.E.M. degrees granted, increase in graduate SCH, and enhancement of the quality of the graduate major by addition of academically accomplished students.

Admission Requirements
For admission to the program, a student must:
1. Have completed 15 hours in the undergraduate major
2. Have a minimum 3.33 GPA overall; and
3. Have a minimum undergraduate 3.50 GPA in the major.

Timeline and Benchmarks:
1. To be considered for acceptance into the Accelerated B.S.C.H. Chemical Engineering / M.S.E.M. Engineering Management major, students must have completed a minimum of 15 credit hours in the Chemical Engineering undergraduate major.
2. Students must have a minimum undergraduate GPA of 3.33 overall, and a minimum GPA of 3.50 in the major.
3. Following completion of a minimum of 15 hours in the undergraduate major, students may be considered for acceptance into the accelerated major through faculty nomination or student self-nomination, via submission of an Accelerated Program Application Form. Both B.S.C.H. and M.S.E.M. majors will review the applications and approve the nominations. All applications require the approval of USF’s Office of Graduate Studies, the College of Engineering’s Graduate Major, the Department of Chemical and Biomedical Engineering’s Undergraduate Major, and the Industrial and Management Systems Engineering’s Graduate Major.
4. To be promoted to graduate status, students must meet all admission requirements of the M.S.E.M. in Engineering Management.
5. Students must earn a minimum of a “B” (3.00) in all shared graduate courses. Failure to earn at least a “B” in a shared graduate course will result in academic review by the graduate major. Failure to maintain good standing as a graduate student will result in academic probation, according to the procedures of the USF Office of Graduate Studies.
6. A comprehensive plan of study to complete the Accelerated B.S.C.H. Chemical Engineering / M.S.E.M.
7. Engineering Management major will be developed with the guidance of an advisor and a faculty member.

Shared Courses
The following courses will satisfy six (6) credit hours of Industrial Engineering elective coursework:
EIN 5182 Principles of Engineering Management
EIN 6386 Management of Technological Change

For the complete list of Undergraduate Degree Requirements for the B.S.C.H. in Chemical Engineering (107 credit hours) please see Undergraduate Catalog for major-specific requirements

Accelerated B.S.I.E. in Industrial Engineering and M.S.E.M. in Engineering Management

Description
Students pursuing a B.S.I.E. in Industrial Engineering will earn an M.S.E.M. in Engineering Management in an accelerated manner by sharing two (2) graduate courses (6 credit hours) taken as upper-level departmental (Technical) electives as part of the undergraduate Industrial Engineering major.

The B.S.I.E. requires a total of 128 hours and the M.S.E.M. requires 30 hours. By sharing six (6) credit hours, the total credit hours earned will be 152 credit hours.

This accelerated major shares six (6) credit hours between already existing degrees:
B.S.I.E. in Industrial Engineering
M.S.E.M. in Engineering Management

Target Students and Expected Outcomes
Academically high achieving undergraduate students in the B.S.I.E. major with high overall and major GPA will be targeted for the accelerated major. Expected outcomes are the increase in M.S.E.M. degrees granted, increase in graduate SCH, and enhancement of the quality of the graduate major by addition of academically accomplished students.

Admission Requirements
For admission to the program, a student must:
1. Have completed 15 hours in the undergraduate major
2. Have a minimum 3.33 GPA overall; and
3. Have a minimum undergraduate 3.50 GPA in the major.

Timeline and Benchmarks:
1. To be considered for acceptance into the Accelerated B.S.I.E. Industrial Engineering/M.S.E.M. Engineering Management major, students must have completed a minimum of 15 credit hours in the Industrial Engineering undergraduate major.
2. Students must have a minimum undergraduate GPA of 3.33 overall, and a minimum GPA of 3.50 in the major.
3. Following completion of a minimum of 15 hours in the undergraduate major, students may be considered for acceptance into the accelerated major through faculty nomination or student self-nomination, via submission of an Accelerated major Application Form. Both B.S.I.E. and M.S.E.M. majors will review the applications and approve the nominations. All applications require the approval of USF’s Office of Graduate Studies, the College of Engineering’s Graduate Major, and the Department of Industrial and Management Systems.
4. To be promoted to graduate status, students must meet all admission requirements of the M.S.E.M. in Engineering Management.
5. Students must earn a minimum of a “B” (3.00) in all shared graduate courses. Failure to earn at least a “B” in a shared graduate course will result in academic review by the graduate major. Failure to maintain good standing as a graduate student will result in academic probation, according to the procedures of the USF Office of Graduate Studies.
6. A comprehensive plan of study to complete the Accelerated B.S.I.E. Industrial Engineering/M.S.E.M. Engineering Management major will be developed with the guidance of undergraduate and graduate advisors.
Shared Courses (6 credit hours)
The following courses will satisfy six (6) credit hours of Industrial Engineering elective coursework:
EIN 5182 Principles of Engineering Management
EIN 6386 Management of Technological Change

Undergraduate Degree Requirements for the B.S.I.E. in Industrial Engineering (107 credit hours)
*Please see Undergraduate Catalog for major-specific requirements

Accelerated B.S.M.E. in Mechanical Engineering and M.S.E.M. in Engineering Management

Description
Students pursuing a B.S.M.E. in Mechanical Engineering will earn an M.S.E.M. in Engineering Management in an accelerated manner by sharing two (2) 6000-level EIN or ESI courses (6 credit hours) taken as upper-level departmental electives as part of the undergraduate Mechanical Engineering major.

The B.S.M.E. requires a total of 128 hours and the M.M.E. requires 30 hours. By sharing six (6) credit hours, the total credit hours earned will be 152 hours.

This accelerated major shares six (6) credit hours between already existing degrees:
B.S.M.E. in Mechanical Engineering
M.S.E.M. in Engineering Management

Target Students and Expected Outcomes
Academically high achieving undergraduate students in the B.S.M.E. major with high overall and major GPA will be targeted for the accelerated major. Expected outcomes are that the increase in M.S.E.M. degrees granted, increase in graduate SCH, and enhancement of the quality of the graduate major by addition of academically accomplished students.

Admission Requirements
For admission to the program, a student must:
1. Have completed 15 hours in the undergraduate major
2. Have a minimum 3.33 GPA overall; and
3. Have a minimum undergraduate 3.50 GPA in the major.

Timeline and Benchmarks:
1. To be considered for acceptance into the Accelerated B.S.M.E. in Mechanical Engineering/M.S.E.M. in Engineering Management major, students must have completed a minimum of 15 credit hours in the Mechanical Engineering undergraduate major.
2. Students must have a minimum undergraduate GPA of 3.33 overall, and a minimum GPA of 3.50 in the Mechanical Engineering major.
3. Following completion of a minimum of 15 hours in the undergraduate major, students may be considered for acceptance into the accelerated major through faculty nomination or student self-nomination, via submission of an Accelerated major Application Form. Both B.S.M.E. and M.S.E.M. majors will review the applications and approve the nominations. All applications require the approval of USF’s Office of Graduate Studies, the College of Engineering’s Graduate Major, and Department of Mechanical Engineering’s Undergraduate Major, and the Department of Industrial and Management System Engineering’s Graduate Major.
4. To be promoted to graduate status, students must meet all admission requirements of the M.S.E.M. in Materials Science and Engineering.
5. Students must earn a minimum of a “B” (3.00) in all shared graduate courses. Failure to earn at least a “B” in a shared graduate course will result in academic review by the graduate major. Failure to maintain good standing as a graduate student will result in academic probation, according to the procedures of the USF Office of Graduate Studies.
6. A comprehensive plan of study to complete the Accelerated B.S.M.E. in Mechanical Engineering/M.S.E.M. in Engineering Management major will be developed with the guidance of an advisor and a faculty member.
Shared Courses (6 credit hours)
The following courses will satisfy six (6) credit hours of Industrial Engineering elective coursework:
EIN 5182 Principles of Engineering Management
EIN 6386 Management of Technological Change

Undergraduate Degree Requirements for the B.S.M.E. in Mechanical Engineering (107 credit hours)
*Please see Undergraduate Catalog for major-specific requirements

COURSES
See http://ugs.usf.edu/course-inventory
ENGINEERING SCIENCE

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15
Spring: October 1
Summer: February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 72
Level: Doctoral
CIP Code: 14.0101
Dept. Code: DEA
Major/College Codes: EGC EN
Approved: 1973

CONTACT INFORMATION

College: Engineering
Department:
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

This major is designed to meet the needs of students who wish to pursue studies in interdisciplinary engineering areas.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

The student should have a strong background in scientific and engineering principles. At least one major professor in the College of Engineering should agree to guide the student by approving the admission.

CURRICULUM REQUIREMENTS

Total Minimum Hours: 72 hours

The student’s Ph.D. major must meet University and College requirements (see main College of Engineering section), but is individually designed by the student’s two Co-Major Professors based on the student’s main areas of interest. While the student is hosted by a department, major approvals and the degree are authorized by the Co-Major Professors and the College of Engineering.

COURSES

See http://ugs.usf.edu/course-inventory
ENVIRONMENTAL ENGINEERING

Master of Environmental Engineering (M.E.V.E.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15
Spring: October 15
Summer: February 15

International applicant deadlines: http://www.grad.usf.edu/majors

Minimum Total Hours: 30
Level: Masters
CIP Code: 14.1401
Dept. Code: EGX
Major/College Codes: EVE EN
Approved: 1997

CONTACT INFORMATION

College: Engineering
Department: Civil and Environmental Engineering
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The M.E.V.E. degree provides a student with the opportunity to earn the advanced degree by coursework only. Students must have an accredited first degree in engineering or complete a list of makeup engineering coursework. Graduates of the major are prepared for careers with governmental agencies, nongovernmental organizations (NGOs), or private industry and firms involved in planning, design, research and development, or policy.

Major Research Areas:
Water quality engineering; air quality engineering; fate and transport of contaminants in the environment; environmental biotechnology and nanotechnology; waste management; sustainability and ecological engineering; surface water hydrology and hydraulics; groundwater hydrology; water reuse; green engineering; renewable energy; fate of emerging contaminants; and humanitarian engineering with a focus on the developing world.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- Undergraduate GPA ≥ 3.0 preferred.
- GRE with preferred minimum scores of V 145 (25th percentile), Q 155 (60th percentile), AW 3.0 (15th percentile); or valid Fundamentals of Engineering (FE) certificate. Verification of FE certification should be obtained from the professional engineering (PE) board where the FE certification was obtained. See the CEE department website for more information: http://www2.eng.usf.edu/cee/graduate/apply.htm.
- TOEFL (international applicants only) 79 (550 paper-based exam); or IELTS 6.5.
- Two Letters of Reference provided at the time of application.
- Statement of Purpose provided at the time of application.
- Resume provided at the time of application.
- Exceptions made on a case-by-case basis where warranted.
CURRICULUM REQUIREMENTS

Total Major Minimum Hours  30 hours
The minimum coursework requirement for the Master of Engineering in Environmental Engineering degrees is 30 credit hours. No research thesis is required. All students must take three “principles” courses (Physical/Chemical Principles; Biological Principles; Aquatic Chemistry), at least one “sustainability” course, and at least two environmental engineering “process” elective courses.

Core Courses (required) - 12 hours minimum
ENV 6002  3  Physical & Chemical Principles of Environmental Engineering
EES 6107  3  Biological Principles of Environmental Engineering
ENV 6666  3  Aquatic Chemistry

And at least one of the following:
ENV 6617  3  Green Engineering for Sustainability or
CGN 6933  3  Selected Topics: Resilient Infrastructure for Sustainable Communities or
ENV 6510  3  Sustainable Development Engineering

Elective Courses-18 hours minimum
(≥18 hours, at least two courses must be from this list)
ENV 6105  3  Air Pollution Fundamentals
ENV 6438  3  Phys & Chemical Processes for Treatment of Drinking Water
ENV 6519  3  Phys & Chemical Processes for Groundwater Remediation
ENV 6564  3  Environmental Engineering Design
ENV 6667  3  Environmental Biotechnology

Comprehensive Exam
Portfolio and oral interview are used in lieu of a comprehensive exam. The purpose of the portfolio and interview is for students to demonstrate that they have achieved a minimum level of proficiency in stipulated competencies. Specifically, by the time they graduate, students will demonstrate
- an ability to plan, compose, and integrate verbal, written, virtual, and graphical communication of a project to technical and non-technical audiences, and
- an ability to formulate and solve complex problems in Environmental Engineering using relevant data and techniques.
Additional details regarding portfolio requirements will be provided to students by the Department.

COURSES
See http://ugs.usf.edu/course-inventory
ENVIRONMENTAL ENGINEERING

Master of Science in Environmental Engineering (M.S.E.V.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15
Spring: October 15
Summer: February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 30
Level: Masters
CIP Code: 14.1401
Dept. Code: EGX
Major/College Codes: EVE EN
Approved: 1996

Concentration
Engineering for International Development (EFD)

CONTACT INFORMATION

College: Engineering
Department: Civil and Environmental Engineering
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The M.S.E.V. degree provides a student with the opportunity to earn the advanced degree with coursework and a required research thesis. Students must have an accredited first degree in engineering or complete a list of makeup engineering coursework. An optional concentration in Engineering for International Development allows students to combine their graduate education and research with engineering service in the Peace Corps. The M.S.E.V. is a research-oriented degree in which the student writes, as a major part of the degree requirements, a thesis that defines, examines, and reports in depth on a subject area relevant to Environmental Engineering.

Major Research Areas:
The field of Environmental Engineering has long been known for its breadth and ability to adapt to the new technological, societal, and global problems facing the environment. Major research areas include water quality engineering; air quality engineering; fate and transport of contaminants in the environment; environmental biotechnology and nanotechnology; waste management; sustainability and ecological engineering; surface water hydrology and hydraulics; groundwater hydrology; water reuse; green engineering; renewable energy; fate of emerging contaminants; and humanitarian engineering with a focus on the developing world. Graduates of the major are prepared for careers in academia, governmental agencies, nongovernmental organizations (NGOs), or private industry and firms involved in planning, design, research and development, or policy.

The environmental engineering laboratories provide state-of-the-art analytical and experimental equipment for chemical and biological research. Equipment includes an ion chromatograph, atomic absorption spectrophotometer, several gas chromatographs (including with mass spectometry), HPLC, TOC machine, and environmental chambers. Field research sites are available locally and in several international settings that include developing world communities.
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- Undergraduate GPA ≥ 3.0 preferred.
- GRE with preferred minimum scores of V 145 (25th percentile), Q 155 (60th percentile), AW 3.0 (15th percentile); or valid Fundamentals of Engineering (FE) certificate. Verification of FE certification should be obtained from the professional engineering (PE) board where the FE certification was obtained. See the CEE department website for more information: http://www2.eng.usf.edu/cee/graduate/apply.htm.
- TOEFL (international applicants only) 79 (550 paper-based exam); or IELTS 6.5.
- Two (2) Letters of Reference provided at the time of application. EFD students must submit 3 Letters of Reference.
- Statement of Purpose provided at the time of application.
- Resume provided at the time of application.
- Exceptions made on a case-by-case basis where warranted.

CURRICULUM REQUIREMENTS

Total Minimum Hours - 30 hours
Core courses – 12 hours
Concentration/Electives– 12 hours
Thesis – 6 hours

The major consists of a minimum of 24 credit hours of coursework and 6 credit hours of thesis. All students must take three “principles” courses (Physical/Chemical Principles; Biological Principles; Aquatic Chemistry), and at least one “sustainability” course. Students should consult their research advisors for guidance in selecting other coursework.

Core Courses -12 hours minimum
ENV 6002 3  Physical Chemical Principles
EES 6107 3  Biological Principles of Environmental Engineering
ENV 6666 3  Aquatic Chemistry

And at least one of the following:
ENV 6617 3  Green Engineering for Sustainability
CGN 6933 3  Selected Topics: Resilient Infrastructure for Sustainable Communities
ENV 6510 3  Sustainable Development Engineering

Engineering for International Development (EFD) Concentration (Optional) - 9 hours
This concentration acknowledges coursework and international field experience in the area of engineering for international development that considers issues of sustainable development, water, sanitation, and health (WaSH), gender, and society. This graduate concentration requires: 1) coursework in global health, applied anthropology (medical, environmental, and development), and Water, Sanitation, Hygiene (WaSH) engineering, 2) a development-focused research component, and 3) a long-term overseas field experience in sustainable development as a WaSH engineer, which in most cases will form the basis of the student’s master’s thesis. The international field experience allows a student to remain enrolled as a full-time student (with zero tuition/fees) and gain development experience serving with Peace Corps and Nongovernmental Development Organizations. Graduates are competitive for employment in the global WaSH development field.

ENV 6510 3  Sustainable Development Engineering

A minimum of 1 course (3 credits) from the following applied anthropology courses:
ANG 6766 3  Research Methods in Applied Anthropology
ANG 6730 3  Selected Topics in Medical Sciences: Socio-cultural Aspects of HIV/AIDS
ANG 6469 3  Health, Illness and Culture

A minimum of 1 course (3 credits) from the following global public health courses:
BHC 6764 3  Global Health Principles & Contemporary Issues
PHC 67613 Global Health Assessment Strategies

Students engaged in full-time global training and service as part of the EFD concentration (e.g., in the U.S. Peace Corps, with a nongovernmental organization, UNESCO-IHE, or equivalent) may register for CST 6990 for 0 credit hours while in their country of service.

Elective Courses - 12 hours minimum
Beyond the core coursework, 12 additional credit hours are required, based on approval of the student’s graduate committee. Students in the EFD Concentration complete the concentration requirements and then one elective course.

Thesis - 6 hours minimum
Students pursuing the M.S.E.V. are required to complete at least six (6) credits of Thesis. Students must conduct a suitable research project under the guidance of their thesis advisor, write an original thesis based upon the results of the research project, and defend the thesis to a committee that must subsequently approve the completed thesis. For students in the EFD Concentration, the thesis must be associated with research in a developing-world context.

Comprehensive Exam
The thesis and defense are used in lieu of a comprehensive exam.

COURSES
See [http://ugs.usf.edu/course-inventory](http://ugs.usf.edu/course-inventory)
ENVIRONMENTAL ENGINEERING

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15
Spring: October 15
Summer: February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 48/78
Level: Doctoral
CIP Code: 14.1401
Dept. Code: EGX
Major/College Codes: ECE EN
Approved: 2013
Concentration: Engineering for International Development (EFD)

CONTACT INFORMATION

College: Engineering
Department: Civil and Environmental Engineering
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Ph.D. degree is awarded in recognition of demonstrated scholarly competence and ability to conduct and report original and significant research in Environmental Engineering.

The field of Environmental Engineering has long been known for its breadth and ability to adapt to the new technological, societal, and global problems facing the environment. Major research areas include water quality engineering; air quality engineering; fate and transport of contaminants in the environment; environmental biotechnology and nanotechnology; waste management; sustainability and ecological engineering; surface water hydrology and hydraulics; groundwater hydrology; water reuse; green engineering; renewable energy; fate of emerging contaminants; and humanitarian engineering with a focus on the developing world. Graduates of the major are prepared for careers in academia, governmental agencies, nongovernmental organizations (NGOs), or private industry and firms involved in planning, design, research and development, or policy.

Major Research Areas:
Water quality engineering; air quality engineering; fate and transport of contaminants in the environment; environmental biotechnology and nanotechnology; waste management; sustainability and ecological engineering; surface water hydrology and hydraulics; groundwater hydrology; water reuse; green engineering; renewable energy; fate of emerging contaminants; and humanitarian engineering with a focus on the developing world.

The environmental engineering laboratories provide state-of-the-art analytical and experimental equipment for chemical and biological research. Equipment includes an ion chromatograph, atomic absorption spectrophotometer, several gas chromatographs (including with mass spectrometry), HPLC, TOC machine, and environmental chambers. Field research sites are available locally and in several international settings that include developing world communities.
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- Undergraduate GPA ≥ 3.3 preferred;
- GRE with preferred minimum scores of V 150 (45th percentile), Q 159 (75th percentile) AW 4.0 (55th percentile).
- TOEFL (International applicants only) 79 (550 paper based exam) or IELTS 6.5
- Resume provided at the time of application
- Three (3) letters of reference provided at the time of application
- Statement of Purpose provided at the time of application
- Exceptions made on a case-by-case basis where warranted.

CURRICULUM REQUIREMENTS

Total Hours: 78 hours minimum post-bachelors
48 hours minimum post-masters

Core course requirements – 14 credit hours
Concentration- 9 credit hours
Other courses – 36 credit hours minimum
Dissertation - 20 credit hours’ minimum
Directed Research/Dissertation/Other – 8 credit hours minimum

Coursework requirements - 50 hours minimum

Core Courses – 14 hours
CGN 6945  2  Graduate Research Methods
ENV 6002  3  Physical & Chemical Principles in Environmental Engineering
EES 6107  3  Biological Principles
ENV 6666  3  Aquatic Chemistry
1 course (3 credits) from the following list of sustainability courses:
ENV 6617  3  Green Engineering for Sustainability
CGN 6933  3  Resilient Infrastructure for Sustainable Communities
ENV 6510  3  Sustainable Development Engineering

Students may opt to complete the concentration, or an additional 9 hours of coursework as noted below.

Concentration Requirements - 9 hours minimum
The Department supports Ph.D. concentration area in Engineering for International Development (EFD)

Engineering for International Development (EFD)
This concentration acknowledges coursework and international field experience in the area of engineering for international development that considers issues of sustainable development, water, sanitation, and health (WaSH), gender, and society. This graduate concentration requires: 1) coursework in global health, applied anthropology (medical, environmental, and development), and Water, Sanitation, Hygiene (WaSH) engineering, 2) a development-focused research component, and 3) a long-term overseas field experience in sustainable development as a WaSH engineer, which in most cases will form part of the basis of the student’s dissertation. The international field experience allows a student to remain enrolled as a full-time student (with zero tuition/fees) and gain development experience serving with Peace Corps and Nongovernmental Development Organizations. Graduates are competitive for employment in the global WaSH development field.

ENV 6510  Sustainable Development Engineering

A minimum of 1 course (3 credits) from the following applied anthropology courses:
ANG 6766  3  Research Methods in Applied Anthropology
AN 6730 3 Socio-cultural Aspects of HIV/AIDS
AN 6469 3 Health, Illness and Culture

A minimum of 1 course (3 credits) from the following global public health courses:
PHC 6764 3 Global Health Principles & Contemporary Issues
PHC 6761 3 Global Health Assessment Strategies

Students engaged in full-time global training and/or service as part of the EFD concentration (e.g., in the U.S. Peace Corps, with a nongovernmental organization, UNESCO-IHE, or equivalent) may register for CST 6990 for 0 credit hours while in their country of service/research.

Additional Courses – 27-36 hours
Students complete an additional 27 credits of coursework if in the Concentration, or an additional 36 credits of coursework if not in the Concentration, in Environmental Engineering or related areas, of which at least 3 credits must be structured coursework in Environmental Engineering specifically. These credits may include up to 9 credits of Independent Study and/or 6 units of Master’s Thesis, pending the approval of the Department, the College, and the Office of Graduate Studies. Directed research and/or dissertation credits may not be counted towards this coursework requirement.

Qualifying Exam
Doctoral students are expected to pass a qualifying examination no later than the semester following the completion of 48 credits of coursework beyond a bachelor’s degree. At minimum, the Exam will include a written dissertation proposal and oral defense by the Dissertation Committee. A written exam in the area of concentration may also be required. Poor performance on the Qualifying Exam based on the judgment of the Committee may result in the student failing the exam. If a student does not pass on the first attempt, he/she may request in writing to repeat the Exam. Students who fail the Qualifying Examination the second time will be dismissed by the Major.

Dissertation Requirements - 20 hours minimum
CGN 7980 20 Dissertation
A minimum of 20 credits of dissertation, an approved PhD dissertation, and a dissertation defense are required. Students may not sign up for dissertation credits until they have defended their proposal and advanced to candidacy (see Qualifying Exam, above).

Additional Requirements - 8 hours minimum
Eight (8) credits of additional coursework, dissertation, or directed research are required.

Publication Requirement
Students must have at least one paper accepted to a peer-reviewed journal or peer-reviewed conference based on their research carried out during their doctoral studies at USF.

COURSES
See http://ugs.usf.edu/course-inventory
INDUSTRIAL ENGINEERING

Master of Science in Industrial Engineering (M.S.I.E.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall:             February 15
Spring:          October 15
Summer:         February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 30
Level: Masters
CIP Code: 14.3501
Dept. Code: EGX
Major/College Codes: EVE EN
Approved: 1981

CONTACT INFORMATION

College: Engineering
Department: Industrial and Management Systems Engineering
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The department participates in the College’s M.S.E. majors. The department offers advanced degrees in areas of study pertinent to the design, evaluation, and operation of a variety of industrial systems, ranging from the analysis of public systems, to the service industry, to the operation of manufacturing concerns. Course topics and research opportunities include engineering analytics, production planning, production control, facilities design, applied engineering statistics, quality control and reliability, operations research, engineering economic analysis, human factors engineering, productivity analysis, manufacturing systems, robotics, automation, and computer applications. The department has advanced laboratory facilities that support class projects and research in microcomputer applications, computer-aided design and manufacturing, flexible automation, quality control, and applications in robotics.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- An undergraduate degree in Industrial Engineering or a related field with a strong background in mathematics with a 3.00/4.00 GPA; non engineering degrees will be required to take supplemental undergraduate courses
- GRE Required
- TOEFL for international students 213 (550 paper version)
- Three letters of reference
- Statement of purpose including evidence of research potential
## CURRICULUM REQUIREMENTS

### Total Minimum Hours: 30 credit hours

**Thesis option:** minimum of 24 credit hours of approved course work, including three core courses and five IE elective courses, and six credit hours of thesis.

**Non-thesis option:** minimum of 30 credit hours of approved course work, including three core courses, five IE elective courses, and two general elective courses.

### Required Core Courses: 9 credit hours

- ESI 6410 Optimization in Operations Research 3
- ESI 6247 Statistical Design Models 3
- ESI 6340 Probabilistic Systems Analysis 3

### IE Elective Courses: 15 credit hours

- ESI 4333 Production Control 3
- ESI 4221 Industrial Statistics & Quality Control 3
- EIN 4364 Facilities Design 3
- EIN 5350 Technology & Finance 3
- ESI 5522 Computer Simulation 3
- ESI 5236 Reliability Engineering 3
- ESI 5306 OR for Engineering Management 3
- EIN 6145 Project Management 3
- EIN 6935 Lean Six Sigma 3
- ESI 6324 Engineering the Supply Chain 3
- EIN 6336 Production Control Systems 3
- ESI 6448 Integer Programming 3
- EIN 6936 Nonlinear Programming 3
- ESI 6447 Large-scale Optimization 3
- EIN 6319 Work Design & Productivity 3
- EIN 6112 Information Systems Design 3
- EIN 6934 Engineering Analytics I 3
- EIN 6934 Engineering Analytics II 3
- EIN 6608 Advanced Analytics I 3
- EIN 6609 Advanced Analytics II 3

### General Elective Courses

Any College of Engineering 5000+ level course, including IMSE courses, except for the courses listed as IE elective courses above. Examples include:

- EIN 5182 Principles of Engineering Management 3
- EIN 6386 Management of Technological Change 3
- EIN 6934 Systems Integration 3
- EIN 6936 Advanced Lean Six Sigma 3
- EIN 6178 ISO 9000/14000 3
- EIN 6179 Advanced TQM Methods. 3

In addition, students can choose electives from other department and/or non-departmental courses, with the approval of major advisor or graduate director. Contact the department for information. Also visit [http://imse.eng.usf.edu](http://imse.eng.usf.edu)

### Thesis: 6 credit hours

COURSES

See [http://ugs.usf.edu/course-inventory](http://ugs.usf.edu/course-inventory)
INDUSTRIAL ENGINEERING

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15
Spring: October 15
Summer: February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 90
Level: Doctoral
CIP Code: 14.3501
Dept. Code: EGS
Major/College Codes: EIE EN
Approved: 1983

CONTACT INFORMATION

College: Engineering
Department: Industrial and Management Systems Engineering

Contact Information: www.grad.usf.edu

MAJOR INFORMATION

Contact the department for information, http://imse.eng.usf.edu/academics/phd.asp.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

Although USF only requires Ph.D. students to complete two consecutive semesters as full-time students, the IMSE Dept. policy is for Ph.D. students to complete their total doctoral major as full-time Tampa campus students. Other requirements include:

- GRE Required
- TOEFL for international students 213 (550 paper version)
- Three letters of reference
- Statement of Purpose including evidence of research potential

CURRICULUM REQUIREMENTS

Total Minimum Hours 90 hours post bachelor’s

Minimum of 90 credit hours beyond BS degree. Minimum of 60 credit hours of approved course work and 20 credit hours of dissertation research. Total hours of credit must equal or exceed 90 hours. Contact the department for additional information.

Must have 2 (at least one accepted, the other submitted) referred journal publications before graduation.
Must take the following 4 core courses:

**Required Core Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESI 6213</td>
<td>Stochastic Decision Models I</td>
<td>3</td>
</tr>
<tr>
<td>EIN 6935</td>
<td>Systems Modeling and Performance Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ESI 6245</td>
<td>Advanced Statistical Design Models</td>
<td>3</td>
</tr>
<tr>
<td>ESI 6491</td>
<td>Linear Programming and Network Optimization</td>
<td>3</td>
</tr>
</tbody>
</table>

In addition a minimum of 8 hours of mathematics or statistics is required (the choice of such courses must be approved by the student’s doctoral committee). Further requirements may be imposed by the candidate’s committee.

**Elective Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESI 5522</td>
<td>Computer Simulation</td>
<td>3</td>
</tr>
<tr>
<td>EIN 6119</td>
<td>Decision Support Systems</td>
<td>3</td>
</tr>
<tr>
<td>ESI 6324</td>
<td>Engineering the Supply Chain</td>
<td>3</td>
</tr>
<tr>
<td>EIN 6433</td>
<td>Human Factors in Engineering Medical Devices</td>
<td>3</td>
</tr>
<tr>
<td>EIN 6112</td>
<td>Information Systems Design</td>
<td>3</td>
</tr>
<tr>
<td>ESI 6448</td>
<td>Integer Programming</td>
<td>3</td>
</tr>
<tr>
<td>EIN 6435</td>
<td>International Regs for Med Devices</td>
<td>3</td>
</tr>
<tr>
<td>EIN 6386</td>
<td>Management of Technology Change</td>
<td>3</td>
</tr>
<tr>
<td>EIN 6420</td>
<td>Non-Linear Programming</td>
<td>3</td>
</tr>
<tr>
<td>EIN 6336</td>
<td>Production Control Systems</td>
<td>3</td>
</tr>
<tr>
<td>EIN 6145</td>
<td>Project Management</td>
<td>3</td>
</tr>
<tr>
<td>ESI 5236</td>
<td>Reliability Engineering</td>
<td>3</td>
</tr>
<tr>
<td>EIN 6319</td>
<td>Work Design and Productivity</td>
<td>3</td>
</tr>
<tr>
<td>EIN 6608</td>
<td>Advanced Analytics I</td>
<td>3</td>
</tr>
<tr>
<td>EIN 6609</td>
<td>Advanced Analytics II</td>
<td>3</td>
</tr>
</tbody>
</table>

**Directed Research**

<table>
<thead>
<tr>
<th></th>
<th>9 hours</th>
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</table>

**Dissertation**

<table>
<thead>
<tr>
<th></th>
<th>11 hours</th>
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</tbody>
</table>

In addition, students may choose electives from other department and/or non-departmental courses, with the approval of major advisor or graduate director. Contact the department for information. Also visit [http://imse.eng.usf.edu](http://imse.eng.usf.edu)

**COURSES**

See [http://ugs.usf.edu/course-inventory](http://ugs.usf.edu/course-inventory)
INFORMATION TECHNOLOGY

Master of Science in Information Technology (M.S.I.T.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall Semester: February 15
Spring Semester: October 15
Summer: No admit

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 30 (non-thesis)
Level: Masters
CIP Code: 11.0103
Dept Code: EIT
Major/College Codes: ITC / EN
Approved: Spring 2014

Also offered as an Accelerated Major:
Computer Engineering (BSCP) / Information Technology (MSIT)

MAJOR INFORMATION

The Department of Computer Science and Engineering offers a non-thesis option for the degree of Master of Science in Information Technology (M.S.I.T). The MSIT graduate will demonstrate strong information technology skills as well as problem solving skills needed for the deployment of technology solutions to achieve business and organizational goals. The degree is available in an hybrid mode (online and face to face), and provides students with a broad and integrative understanding of both technology and operational and strategic business and organizational applications. There is considerable freedom in the choice of the courses.

The breadth of subjects which are part of information technology together with the immense diversity of its applications, make it imperative that students in the Master’s major maintain close contact with the Graduate Director, in order to achieve a coherent plan of study directed towards a specific goal. In particular, election of courses should only be made with prior consultation and approval of the Major Professor or the Graduate Director.
ADMISSIONS INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- The GRE is required for all MSIT applicants. For GRE tests taken after August 1, 2011, we require a minimum of 161 on the Quantitative portion (81 percentile) and a minimum of 150 (44 percentile) on the Verbal. The GRE will be waived for M.S. degree applicants with an undergraduate degree from an ABET-accredited United States university or for those applicants that show a minimum of 3 years of relevant and recent full-time professional experience in the U.S.
- Minimum grade point average (GPA) of "B" (or equivalent) for all coursework completed during the last two years of undergraduate major.
- Submission of TOEFL scores with an Internet-based score of 79 or higher for applicants from non-English speaking countries. If consideration of an assistantship is desired, the speaking score component of the TOEFL must be 26 or above. The TOEFL requirements for admission may be waived if the applicant meets one of the following conditions:
  - Has scored 500 or higher on the GRE Verbal Test, (Old Scores) or 153 with the New GRE scoring.
  - Has earned a college degree at a U.S. institution of higher learning.
  - Has earned a college degree from an institution whose language of instruction is English, (must be noted on the transcript).
  - Has scored 6.5 on International English Language Testing System, (IELTS).
- Three letters of recommendation.
- Statement of purpose.
- Bachelor’s Degree in Information Technology, Computer Science, or a closely related field; or a bachelor’s degree in another field, plus satisfactory completion of the courses listed below under “Undergraduate Prerequisites.”
- Evidence of completion of a defined subset of the required core courses found in the University of South Florida’s Bachelor of Science in Information Technology degree program or their equivalent (see “Undergraduate Prerequisites” below).

Undergraduate Prerequisites

To be successful in this major, an applicant should have certain base knowledge in the discipline demonstrated from undergraduate-level pre-requisite courses including:

- COP2513 Object-Oriented Programming for Information Technology
- COP2512 Programming Fundamentals for Information Technology
- COP 3515 Programming Design for Information Technology
- CEN 4031 Software Engineering Concepts for Information Technology
- COP 4703 Database Systems for Information Technology
- EEL 4854/4935 Selected Topics: IT Data Structures & Algorithms for Information Technology

The student should have taken these courses or their equivalent prior to beginning graduate coursework. All prerequisite courses are available online. Professional experience in information technology is typically focused on specific projects or systems, and is not as broad as the treatment of a topic one receives in a course. Therefore, except in unusual circumstances, professional experience cannot substitute for any of the above prerequisite courses.
CURRICULUM REQUIREMENTS

Total Minimum Hours: 30 hours

Core Requirements – 9 hours
CIS 6930 3 Selected Topics: Ethical Hacking for IT
ISM 6218 3 Advanced Database Administration
CEN 6084 3 Advances in Object Oriented Programming for Information Technology

Elective Courses – 21 hours
Select six of the following courses, or other graduate course as approved by the Graduate Director:
CIS 6930 3 Selected Topics: Human Computer Interaction
CTS 6716 3 Network Programming for Information Technology
CIS 6930 3 Selected Topics: Cloud Computing for Information Technology
CIS 6930 3 Selected Topics: Practical Cybersecurity
CIS 6930 3 Selected Topics: Networks II
CIS 6930 3 Selected Topics: Introduction to Hadoop and Big Data
CIS 6930 3 Selected Topics: Software Development for Mobile Devices
ISM 6136 3 Data Mining
ISM 6137 3 Statistical Data Mining
ISM 6145 3 Seminar on Software Testing
ISM 6155 3 Enterprise Information Systems Management
ISM 6266 3 Software Architecture
CAP 6663 3 IT Robotics Applications
CGS 6842 3 IT & Systems for E-Business
CIS 6900 1-19 Independent Study
CIS 6946 0-3 Internships/Practicums/Clinical Practice

With prior permission from the Graduate Director, students can take a maximum of 3 hours of Independent Study or Internship and up to twelve credit hours outside of the major, as follows: three credit hours from the MSCS/MSCE majors; three credit hours outside of the department (e.g. EE, IE, Math); three credit hours on business practice, project management, leadership, entrepreneurship, or similar; three credit hours on big data, data analytics, data mining or similar.

Note: ISM prefix courses are offered by the Department of Information Systems / Decision Sciences (College of Business).

Comprehensive Exam
The requirement for a comprehensive exam is satisfied by the successful completion of the comprehensive exam, an exam that students will take in the semester prior to the semester in which they intend to graduate.

Thesis / Non-Thesis
This is a non-thesis major.

Graduation Requirements
Students must obtain a letter “B” or better in the core graduate courses, have a GPA of 3.00 or better, and pass the comprehensive exam.

Accelerated Majors

Accelerated B.S.C.P. in Computer Engineering and M.S.I.T. in Information Technology

Description
Students pursuing a B.S.C.P. in Computer Engineering will earn an M.S.I.T. in Information Technology in an accelerated manner by sharing two (2) graduate courses (6 credit hours) taken as upper-level departmental (Technical) electives as part of the undergraduate Computer Engineering major.

The B.S.C.P. requires a total of 128 hours and the M.S.I.T. requires 30 hours. By sharing six (6) credit hours, the total credit hours earned will be 152 hours.
This accelerated major shares six (6) credit hours between already existing degrees:
B.S.C.P. in Computer Engineering
M.S.I.T. in Information Technology

Target Students and Expected Outcomes
Academically high achieving undergraduate students in the B.S.C.P. major with high overall and major GPA will be targeted for the accelerated major. Expected outcomes are the increase in M.S.I.T. degrees granted, increase in graduate SCH, decrease time to graduation, decrease tuition dollars for the student, increase in the number of US students receiving M.S.I.T. degrees, including minorities and students from under-represented groups in Computer Science and Engineering, close the national gap of IT graduates needed to satisfy the market demand and enhance of the quality of the graduate major by addition of academically accomplished students.

Admission Requirements
For admission to the program, a student must:
1. Have completed 15 hours in the undergraduate major
2. Have a minimum 3.33 GPA overall; and
3. Have a minimum undergraduate 3.50 GPA in the major.

Timeline and Benchmarks:
4. To be considered for acceptance into the Accelerated B.S.C.P. Computer Engineering/M.S.I.T. Information Technology major, students must have completed a minimum of 15 credit hours in the Computer Science undergraduate major.
5. Students must have a minimum undergraduate GPA of 3.33 overall, and a minimum GPA of 3.50 in the major.
6. Following completion of a minimum of 15 hours in the undergraduate major, students may be considered for acceptance into the accelerated major through faculty nomination or student self-nomination, via submission of an Accelerated major Application Form. Both B.S.C.P. and M.S.I.T. majors will review the applications and approve the nominations. All applications require the approval of USF’s Office of Graduate Studies, the College of Engineering’s Graduate Major, and the Department of Computer Science and Engineering majors.
7. To be promoted to graduate status, students must meet all admission requirements of the M.S.I.T. major.
8. Students must earn a minimum of a “B” (3.00) in all shared graduate courses. Failure to earn at least a “B” in a shared graduate course will result in academic review by the graduate major. Failure to maintain good standing as a graduate student will result in academic probation, according to the procedures of the USF Office of Graduate Studies.
9. A comprehensive plan of study to complete the Accelerated B.S.C.P. Computer Engineering/M.S.I.T. Information Technology major will be developed with the guidance of undergraduate and graduate advisors.

Shared Courses (6 credit hours)
Two (2) of the following three (3) core graduate courses replace six (6) credit hours of upper-level departmental (Technical) electives, including Independent Study and Industry Internship:
CEN 6084 Advances in Object Oriented Programming for Information Technology
CIS 6930 Selected Topics: Ethical Hacking for IT
ISM 6218 Advanced Database Administration

Undergraduate Degree Requirements for the B.S.C.P. in Computer Chemical (107 credit hours)

*Please see Undergraduate Catalog for major-specific requirements

COURSES

See http://ugs.usf.edu/course-inventory
MATERIALS SCIENCE AND ENGINEERING

Master of Science in Materials Science and Engineering (M.S.M.S.E.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
- Fall: February 15
- Spring: October 15
- Summer: February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 30
Level: Masters
CIP Code: 14.1801
Dept. Code: All Engineering Depts. except Computer Science and Engineering
Major/College Codes: MSE EN
Approved: 2001

Also offered as an Accelerated Majors
Chemical Engineering (BSCH)/Materials Science and Engineering (MSMSE)

CONTACT INFORMATION

Colleges: Engineering
Departments: Chemical & Biomedical Eng
Civil Engineering
Electrical Engineering
Industrial Engineering
Mechanical Engineering

Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The field of Materials Science and Engineering (MSE) applies the fundamental principles of physics and chemistry to engineering materials, with a focus on the interrelationship between material structure, their properties, and the means by which they are processed. MSE impacts multiple facets of our economy, such as aerospace, electronics, transportation, communication, construction, recreation, entertainment, environment and energy. It is, by its very nature, an interdisciplinary field. The goal of the M.S.M.S.E. major in Materials Science and Engineering is to provide a route for well-qualified undergraduate students who desire in-depth graduate-level work including structured courses and research experience, in preparation for work in industry or for entrance into a relevant science or engineering Ph.D. major.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- Bachelor’s degree in Engineering (Chemical, Mechanical, Industrial, Civil, Materials Science, Ceramic, Metallurgy, Manufacturing, Polymer and other related engineering disciplines) or Natural Sciences (Physics, Chemistry or Biology) from a regionally accredited institution.
- Minimum undergraduate GPA of 3.00
- GRE with preferred minimum scores of V 50%, Q 50% and AW 50%.
- TOEFL score of 550 (paper-based test) or 213 (computer-based test) or 79 (internet-based test) for international students
- Three letters of recommendation
- Statement of purpose

http://www.eng.usf.edu/
CURRICULUM REQUIREMENTS

Total Minimum Hours: 30 credit hours

Core Requirements
EMA 6510 Characterization of Materials 3 credit hours
ECH 6931 Graduate Seminar or PHY 6938 Graduate Seminar 2 credit hours

Electives
19 credit hours minimum

Comprehensive Exam is not required.

Thesis Option
The thesis option requires the completion of 24 credit hours of graduate level courses (5 credit hours core and 19 hours of electives) and 6 credit hours of thesis. At least 16 credit hours must be at 6000 level with a maximum of 2 hours of Independent Study.

ECH 6971 Thesis

Non-Thesis Option:
The non-thesis option requires 30 credit hours, with 5 credit hours core and 25 credit hours of electives. At least 26 hours must be at the 6000 level with a maximum of 2 hours of Independent Study. For Non-thesis Option six additional credit hours of elective courses is required in lieu of thesis hours.

Accelerated Major

Chemical Engineering (BSCH) / Materials Science and Engineering (MSMSE)

Description
Students pursuing a B.S.C.H. in Chemical Engineering will earn an M.S.M.S.E. in Materials Science and Engineering in an accelerated manner by sharing two (2) ECH-prefixed graduate courses (6 credit hours) taken as upper-level departmental electives as part of the undergraduate Chemical Engineering major.

The B.S.C.H. requires a total of 131 hours and the M.S.M.S.E. requires 30 hours. By sharing six (6) credit hours, the total credit hours earned will be 155 hours.

This accelerated major shares six (6) credit hours between already existing degrees:
B.S.C.H. in Chemical Engineering
M.S.M.S.E. in Materials Science and Engineering

Target Students and Expected Outcomes
Academically high achieving undergraduate students in the B.S.C.H. major with high overall and major GPA will be targeted for the accelerated major. Expected outcomes are the increase in M.S.M.S.E. degrees granted, increase in graduate SCH, and enhancement of the quality of the graduate major by addition of academically accomplished students. In addition, some of these M.S.M.S.E. students will continue on to Ph.D. majors in Engineering and Physical Science and enhance the doctoral majors as well.

Admission Requirements
For admission to the program, a student must:
4. Have completed 15 hours in the undergraduate major
5. Have a minimum 3.33 GPA overall; and
6. Have a minimum undergraduate 3.50 GPA in the major.

http://www.eng.usf.edu/
Timeline and Benchmarks:

10. To be considered for acceptance into the Accelerated B.S.C.H. Chemical Engineering/M.S.M.S.E. Materials Science and Engineering major, students must have completed a minimum of 15 credit hours in the Chemical Engineering undergraduate major.

11. Students must have a minimum undergraduate GPA of 3.33 overall, and a minimum GPA of 3.50 in the major.

12. Following completion of a minimum of 15 hours in the undergraduate major, students may be considered for acceptance into the accelerated major through faculty nomination or student self-nomination, via submission of an Accelerated major Application Form. Both B.S.C.H. and M.S.M.S.E. majors will review the applications and approve the nominations. All applications require the approval of USF’s Office of Graduate Studies, the College of Engineering’s Graduate Major, and the Department of Chemical and Biomedical Engineering.

13. To be promoted to graduate status, students must meet all admission requirements of the M.S.M.S.E. Materials Science and Engineering.

14. Students must earn a minimum of a “B” (3.00) in all shared graduate courses. Failure to earn at least a “B” in a shared graduate course will result in academic review by the graduate major. Failure to maintain good standing as a graduate student will result in academic probation, according to the procedures of the USF Office of Graduate Studies.

15. A comprehensive plan of study to complete the Accelerated B.S.C.H. Chemical Engineering/ M.S.M.S.E. Materials Science and Engineering major will be developed with the guidance of an advisor and a faculty member.

Shared Courses (6 credit hours)
The following courses will satisfy six (6) credit hours of Chemical Engineering undergraduate elective coursework:
EML 6105
EML 6713

For the remaining Undergraduate Degree Requirements for the B.S.C.H. in Chemical Engineering (107 credit hours) please see Undergraduate Catalog.

Courses See [http://ugs.usf.edu/course-inventory](http://ugs.usf.edu/course-inventory)
MECHANICAL ENGINEERING

Master of Mechanical Engineering (M.M.E.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15
Spring: October 15
Summer: ----

Minimum Total Hours: 30
Level: Masters
CIP Code: 14.1901
Dept. Code: EGR
Major/College Codes: EME EN
Approved: 1994

Also offered as an Accelerated Major:
Mechanical Engineering (BSME/MME)

CONTACT INFORMATION

College: Engineering
Department: Mechanical Engineering
Contact Information: www.grad.usf.edu
Other Resources: www.usf4you.usf.edu

MAJOR INFORMATION

The Department offers graduate majors leading to the M.S. and Ph.D. in Mechanical Engineering.


ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- As a rule, only students with a B.S. in Mechanical Engineering or a closely related field from an accredited engineering major will be considered for admission.
- All applicants must take the GRE.
- GRE required, with minimum percentile rank of 50% on the quantitative portion and a minimum average percentile rank of 50% in verbal and quantitative and the student must have a grade point average (GPA) of 3.00/4.00 for the last two years of coursework from an ABET accredited engineering major for admission to the Master’s Major. Graduates of non-ABET accredited majors are evaluated on a case-by-case basis.
- International students must score a minimum of 550 on the TOEFL paper-based examination, 79 on the internet-based test, or 213 on the computer-based test.
- A one-page Statement of Purpose must also be included in the application package.
CURRICULUM REQUIREMENTS

Total Minimum Hours: 30 credit hours

Core Requirements – 12 credit hours
Specialization areas – 9credit hours
All Master’s Major students must complete a total of 9 core credit hours from each of the following specialization areas.

Fluid and Thermal Science - 3credit hours
EML 6105: Advanced Thermodynamics and Statistical Mechanics
EML 6154: Advanced Conduction Analysis
EML 6713: Advanced Fluid Mechanics
EML 6930: Special Problems I: Convection Heat Transfer

Mechanics, Manufacturing, and Materials - 3 credit hours
EML 6653: Applied Elasticity
EML 6930: Special Problems I: Advanced Manufacturing
EML 6930: Special Problems I: Advanced Materials
EML 6570: Principles of Fracture Mechanics
EML 6290: Micro and Nano Manufacturing

Dynamical Systems and Controls - 3 credit hours
EML 6273: Advanced Dynamics of Machinery
EML 6930: Special Problems I: Advanced Controls
EML 6930: Special Problems I: Advanced Vibrations
EML 6801: Robotic Systems

All students must also complete either
EML 6931: Special Problems II: Advanced Mathematics or
EML 6930: Special Problems I: Advanced Mathematics II in order to satisfy core requirements.

Additional Coursework - 18 credit hours
In addition to the 12 credit hours, the MME degree requires a minimum of 18 credit hours of approved graduate level coursework, for a total of 30 semester hours.

Comprehensive Exam
MME students must also pass a final Comprehensive Oral Examination.

The Department of Mechanical Engineering has available, on request, the Mechanical Engineering Graduate Handbook, which delineates the Department’s entrance requirements, programs of study, supervisory committee formation, and major completion requirements. The M.M.E is a non-thesis major and the M.S.M.E. is a thesis major.

Non-Thesis
This is a non-thesis major.

Accelerated Major- B.S.M.E. in Mechanical Engineering and M.M.E. in Mechanical Engineering

Description
Students pursuing a B.S.M.E. in Mechanical Engineering will earn an M.M.E. in Mechanical Engineering in an accelerated manner by sharing two (2) core graduate courses (6 credit hours) taken as upper-level departmental electives as part of the undergraduate Mechanical Engineering major.

The B.S.M.E. requires a total of 128 hours and the M.M.E. requires 30 hours. By sharing six (6) credit hours, the total credit hours earned will be 152 hours.

This accelerated major shares six (6) credit hours between already existing degrees:
B.S.M.E. in Mechanical Engineering
M.M.E. in Mechanical Engineering

Target Students and Expected Outcomes
Academically high achieving undergraduate students in the B.S.M.E. major with high overall and major GPA will be targeted for the accelerated major. Expected outcomes are the increase in M.M.E. degrees granted, increase in graduate SCH, and enhancement of the quality of the graduate major by addition of academically accomplished students.

Admission Requirements
For admission to the program, a student must:
7. Have completed 15 hours in the undergraduate major
8. Have a minimum 3.33 GPA overall; and
9. Have a minimum undergraduate 3.50 GPA in the major.

Timeline and Benchmarks:
1. To be considered for acceptance into the Accelerated B.S.M.E. in Mechanical Engineering/M.M.E. in Mechanical Engineering major, students must have completed a minimum of 15 credit hours in the Mechanical Engineering undergraduate major.
2. Students must have a minimum undergraduate GPA of 3.33 overall, and a minimum GPA of 3.50 in the Mechanical Engineering major.
3. Following completion of a minimum of 15 hours in the undergraduate major, students may be considered for acceptance into the accelerated major through faculty nomination or student self-nomination, via submission of an Accelerated major Application Form. Both B.S.M.E. and M.M.E. majors will review the applications and approve the nominations. All applications require the approval of USF’s Office of Graduate Studies, the College of Engineering’s Graduate Major, and the Department of Mechanical Engineering.
4. To be promoted to graduate status, students must meet all admission requirements of the M.M.E. in Mechanical Engineering.
5. Students must earn a minimum of a “B” (3.00) in all shared graduate courses. Failure to earn at least a “B” in a shared graduate course will result in academic review by the graduate major. Failure to maintain good standing as a graduate student will result in academic probation, according to the procedures of the USF Office of Graduate Studies.
6. A comprehensive plan of study to complete the Accelerated B.S.M.E. in Mechanical Engineering/M.M.E. in Mechanical Engineering major will be developed with the guidance of an advisor and a faculty member.

Shared Courses (6 credit hours)
The following courses will satisfy six (6) credit hours of Mechanical Engineering undergraduate elective coursework:
EML 6653 Applied Elasticity
EML 6713 Advanced Fluid Mechanics

Undergraduate Degree Requirements for the B.S.M.E. in Mechanical Engineering (107 credit hours)
*Please see Undergraduate Catalog for major-specific requirements

COURSES
See http://ugs.usf.edu/course-inventory
MECHANICAL ENGINEERING

Master of Science in Mechanical Engineering (M.S.M.E.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
- Fall: February 15
- Spring: October 15
- Summer: February 15

International applicant deadlines: http://www.grad.usf.edu/majors

Minimum Total Hours: 30
Level: Masters
CIP Code: 14.1901
Dept. Code: EGR
Major/College Codes: EME EN
Approved: 1981

Also offered as an Accelerated Major:
Mechanical Engineering (BSME) / Mechanical Engineering (MSME)

CONTACT INFORMATION

College: Engineering
Department: Mechanical Engineering
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Department offers graduate majors leading to the M.S. and Ph.D. in Mechanical Engineering.


ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- As a rule, only students with a B.S. in Mechanical Engineering or a closely related field from an accredited engineering major will be considered for admission.
- All applicants must take the GRE.
- GRE required, with minimum percentile rank of 50% on the quantitative portion and a minimum average percentile rank of 50% in verbal and quantitative and the student must have a grade point average (GPA) of 3.00/4.00 for the last two years of coursework from an ABET accredited engineering major for admission to the Master’s Major. Graduates of non-ABET accredited majors are evaluated on a case-by-case basis.
International students must score a minimum of 550 on the TOEFL paper-based examination, 79 on the internet-based test, or 213 on the computer-based test.

A one-page Statement of Purpose/Research Interest must also be included in the application package.

CURRICULUM REQUIREMENTS

Total Minimum Hours: 30 credit hours

Core Requirements – 12 credit hours

Specialization – 9 hours
All Master’s Major students must complete a total of 9 core credit hours from two categories. Students should choose 3 credit hours of course work from each of the following specialization areas:

**Fluid and Thermal Science - 3 credit hours**
- EML 6105: Advanced Thermodynamics and Statistical Mechanics
- EML 6154: Advanced Conduction Analysis
- EML 6713: Advanced Fluid Mechanics
- EML 6930: Special Problems I: Convection Heat Transfer

**Mechanics, Manufacturing, and Materials - 3 credit hours**
- EML 6653: Applied Elasticity
- EML 6930: Special Problems I: Advanced Manufacturing
- EML 6930: Special Problems I: Advanced Materials
- EML 6570: Fracture Mechanics
- EML 6290: Micro and Nano Manufacturing

**Dynamical Systems and Controls - 3 credit hours**
- EML 6273: Advanced Dynamics of Machinery
- EML 6930: Special Problems I: Advanced Controls
- EML 6930: Special Problems I: Advanced Vibrations
- EML 6801: Robotic Systems

All students must also complete either
- EML 6931: Special Problems II: Advanced Mathematics
- EML 6930: Special Problems I: Advanced Mathematics II in order to satisfy core requirements.

Additional Coursework – 12 credit hours
In addition to these 12 credit hours, the MSME degree requires a minimum of 12 credit hours of approved graduate level coursework and a minimum of 6 thesis hours for a total of 30 semester hours. MSME students must present a typed final draft to the Supervisory Committee and Graduate Advisor one week before the final oral examination.

Comprehensive Exam
A student must pass the final Oral Comprehensive Examination after the student has presented his/her thesis to the Supervisory Committee.

Thesis – 6 credit hours
EML 6971 Thesis: Master’s

The Department of Mechanical Engineering has available, on request, the Mechanical Engineering Graduate Handbook, which delineates the Department’s entrance requirements, programs of study, supervisory committee formation, and major completion requirements. The M.M.E. is a non-thesis major and the M.S.M.E. is a thesis major.
Accelerated B.S.M.E. in Mechanical Engineering and M.S.M.E. in Mechanical Engineering

Description
Students pursuing a B.S.M.E. in Mechanical Engineering will earn an M.S.M.E. in Mechanical Engineering in an accelerated manner by sharing two (2) core graduate courses (6 credit hours) taken as upper-level departmental electives as part of the undergraduate Mechanical Engineering major.

The B.S.M.E. requires a total of 128 hours and the M.S.M.E. requires 30 hours. By sharing six (6) credit hours, the total credit hours earned will be 152 hours.

This accelerated major shares six (6) credit hours between already existing degrees:
B.S.M.E. in Mechanical Engineering
M.S.M.E. in Mechanical Engineering

Target Students and Expected Outcomes
Academically high achieving undergraduate students in the B.S.M.E. major with high overall and major GPA will be targeted for the accelerated major. Expected outcomes are the increase in M.S.M.E. degrees granted, increase in graduate SCH, and enhancement of the quality of the graduate major by addition of academically accomplished students.

Admission Requirements
For admission to the program, a student must:
1. Have completed 15 hours in the undergraduate major
2. Have a minimum 3.33 GPA overall; and
3. Have a minimum undergraduate 3.50 GPA in the major.

Timeline and Benchmarks:
1. To be considered for acceptance into the Accelerated B.S.M.E. in Mechanical Engineering/M.S.M.E. in Mechanical Engineering major, students must have completed a minimum of 15 credit hours in the Mechanical Engineering undergraduate major.
2. Students must have a minimum undergraduate GPA of 3.33 overall, and a minimum GPA of 3.50 in the Mechanical Engineering major.
3. Following completion of a minimum of 15 hours in the undergraduate major, students may be considered for acceptance into the accelerated major through faculty nomination or student self-nomination, via submission of an Accelerated major Application Form. Both B.S.M.E. and M.S.M.E. majors will review the applications and approve the nominations. All applications require the approval of USF’s Office of Graduate Studies, the College of Engineering’s Graduate Major, and the Department of Mechanical Engineering.
4. To be promoted to graduate status, students must meet all admission requirements of the M.S.M.E. in Mechanical Engineering.
5. Students must earn a minimum of a “B” (3.00) in all shared graduate courses. Failure to earn at least a “B” in a shared graduate course will result in academic review by the graduate major. Failure to maintain good standing as a graduate student will result in academic probation, according to the procedures of the USF Office of Graduate Studies.
6. A comprehensive plan of study to complete the Accelerated B.S.M.E. in Mechanical Engineering/M.S.M.E. in Mechanical Engineering major will be developed with the guidance of an advisor and a faculty member.

Shared Courses (6 credit hours)
The following courses will satisfy six (6) credit hours of Mechanical Engineering elective coursework:
EML 6653 Applied Elasticity
EML 6713 Advanced Fluid Mechanics

Undergraduate Degree Requirements for the B.S.M.E. in Mechanical Engineering (107 credit hours)
*Please see Undergraduate Catalog for major-specific requirements

COURSES
See http://ugs.usf.edu/course-inventory
MECHANICAL ENGINEERING

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15
Spring: October 15
Summer: February 15

Minimum Total Hours: 72
Level: Doctoral
CIP Code: 14.1901
Dept. Code: EGR
Major/College Codes: EME EN
Approved: 1982

CONTACT INFORMATION

College: Engineering
Department: Mechanical Engineering
Contact Information: www.grad.usf.edu

INTERNATIONAL APPLICANT DEADLINES:
http://www.grad.usf.edu/majors

MAJOR INFORMATION

The Department offers graduate majors leading to the M.S. and Ph.D. in Mechanical Engineering.


ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- As a rule only students with an M.S. in Mechanical Engineering or a closely related field will be admitted into the Ph.D. Major.
- Students without an M.S. in Mechanical Engineering may also be admitted but will be required to take
  - a minimum of 6 credit hours from the Fluid and Thermal Sciences area and
  - a minimum of 6 credit hours from the Mechanics and Systems area.
- GRE required, with minimum percentile rank of 60% on the quantitative portion and a minimum average percentile rank of 60% in verbal and quantitative and the student must have a grade point average (GPA) of 3.00/4.00 for the last two years of coursework from an ABET accredited engineering major for admission to the PhD Major. Graduates of non-ABET accredited majors are evaluated on a case-by-case basis.
- International students must score a minimum of 550 on the TOEFL paper-based examination, 79 on the internet-based test, or 213 on the computer-based test.
- A one-page Statement of Purpose/Research Interest must also be included in the application package.
CURRICULUM REQUIREMENTS

Total Minimum Hours: 72 credit hours (post-bacc)  
48 credit hours (post-masters)

Core – 9 credit hours
Math req – 6 credit hours
Coursework – 21 credit hours
Dissertation – 20 credit hours
Additional coursework or dissertation – 16 credit hours

A minimum of 72 credit hours beyond the baccalaureate degree, of which there must be a minimum of 36 hours of coursework at the 6000 level without counting Independent Study or Special Topics courses and a minimum of 20 hours of dissertation. A minimum of 21 hours of graduate level coursework is required in the student’s area of specialization and there must be at least 6 hours of mathematics or statistics and 6 hours of graduate level coursework outside the major area of specialization. All students are required to fulfill the 9 credit hours of core course requirements as outlined below. Courses completed for a Master’s degree from another institution may count towards a maximum of 24 credit hours of coursework for the Ph.D. degree only if the transcript shows that the degree requirements were similar to USF and the student did not already get credit for the identical courses at USF. A qualifying examination must be passed before admission to doctoral candidacy.

Core Requirements - 9 credit hours
All Ph.D. Major students must complete a total of 9 core credit hours from each of the following specialization areas.

Fluid and Thermal Science - 3 credit hours
EML 6105: Advanced Thermodynamics and Statistical Mechanics
EML 6154: Advanced Conduction Analysis
EML 6713: Advanced Fluid Mechanics
EML 6930: Special Problems I: Convection Heat Transfer

Mechanics, Manufacturing, and Materials - 3 credit hours
EML 6653: Applied Elasticity
EML 6930: Advanced Manufacturing
EML 6930: Special Problems I: Advanced Materials
EML 6570: Principles of Fracture Mechanics
EML 6290: Micro and Nano Manufacturing

Dynamical Systems and Controls - 3 credit hours
EML 6273: Advanced Dynamics of Machinery
EML 6930: Special Problems I: Advanced Controls
EML 6930: Special Problems I: Advanced Vibrations
EML 6801: Robotic Systems

Mathematics Requirement - 6 credit hours
EML 6931: Special Problems II: Advanced Mathematics
EML 6930: Special Problems I: Advanced Mathematics II

Additional Graduate Level Coursework - 21 credit hours minimum

Qualifying Examination
The purpose of the Qualifying Examination is to determine if the student has acquired sufficient mastery of the subject matter in all relevant fields on his/her program of study to warrant admission to candidacy for the Ph. D. degree. It should be taken as soon as a student has completed a major portion of the coursework requirements. Students must apply to take the qualifying examination no later than the fourth semester after admission into the doctoral major.
In order to take the qualifying examination a doctoral student must satisfy the following requirements:
1. Satisfactorily complete (C or better) in departmental coursework on Mathematics and two other areas of specialization (1 major and 1 minor) as described below.

   a) Mathematics:
      a. EML 6069: Advanced Mathematics,
      b. EML 6930: Advanced Mathematics II
   b) Heat Transfer:
      a. EML 6154: Advanced Conduction Analysis
      b. EML 6930: Convection Heat Transfer
   c) Fluid Mechanics:
      a. EML6713: Advanced Fluid Mechanics
   d) Thermodynamics:
      a. EML6105: Advanced Thermodynamics and Statistical Mechanics
   e) Dynamics:
      a. EML6273: Advanced Dynamics of Machinery
      b. EML6223: Synthesis of Vibrating Systems
   f) Solid Mechanics:
      a. EML6653: Applied Elasticity
   g) Materials:
      a. EML 6930: Advanced Materials
   h) Controls:
      a. EML6930: Advanced Controls

2. Apply in writing to the Graduate Coordinator for permission to take the examination. The application must include a detailed statement of the courses taken, major and minor areas of specialization and must be submitted before October 15th.

3. Students may request an exemption from any required coursework if they have satisfactorily completed (B or better) equivalent coursework at an accredited institution other than USF.

No student will be allowed to take the examination if the cumulative GPA of all courses taken at USF is below 3.0, have not chosen a major professor and formed a supervisory committee, or is holding conditional or provisional admission status in the major.

The examination will be administered by a Departmental Qualifying Examination Committee once a year (in the first two weeks of February), as needed.

1. Written Examination
   a. Examinations will be given on Mathematics, and student’s chosen major and minor areas of specialization. Examinations will be prepared by the qualifying examination committee and will be administered by the graduate coordinator. Composition of the committee will be rotated among all faculty members and determined by the exam areas to be offered. If at all possible, a Ph.D. advisor will not be involved in the evaluation of her/his students. The length of each examination will be approximately three hours of duration.
   b. The type of written examination, i.e., open book etc., is at the discretion of the assessor.

2. Passing and Advancement to Candidacy
   a. A student is required to pass the written examination in all 3 areas (Mathematics, major area of specialization, minor area of specialization) for advancement to candidacy.
   b. In case a student passes in 2 areas and fails in 1 area, a make-up written or oral examination may be requested by the student. The make-up examination will be given during the last two weeks of March.
   c. In case a student fails the written examination in more than one area or fails the written or oral make-up examination, he or she will need to re-take the entire qualifying examination in the following year.
   d. Students will be given a maximum of two attempts to pass the qualifying examination. Failure in the second year will result in being dropped from the doctoral major.
Dissertation - 20 credit hours minimum

Additional Coursework or Dissertation - 16 credit hours
Students will select additional coursework or Dissertation hours to complete the remaining 16 credit hours.

The Department of Mechanical Engineering has available, on request, the Mechanical Engineering Graduate Handbook, which delineates the Department’s entrance requirements, programs of study, supervisory committee formation, and major completion requirements.

COURSES
See http://ugs.usf.edu/course-inventory
SECTION 17

COLLEGE OF
GLOBAL SUSTAINABILITY
Changes to Note

Graduate Council approved the changes on the date noted.

Major

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Graduate Certificates

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<td>11/7/2016</td>
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<tr>
<td>Energy Sustainability</td>
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<td>Food Sustainability and Security</td>
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University of South Florida  
Patel College of Global Sustainability  
4202 E. Fowler Ave., CGS 101  
Tampa, FL 33620

Web address:  
www.patel.usf.edu  
Phone:  
813-974-9694  

College Dean:  
Govindan Parayil, Ph.D.

College Information:

The Patel College of Global Sustainability fosters sustainable urban communities and environments through collaborative research, education and community involvement. Its research generates innovations and new knowledge that will help cities around the world, including those in developing countries, reduce their ecological footprint while improving their form and function to make them healthier, more livable and resilient.

The Patel College of Global Sustainability comprises the Patel Center for Global Solutions, the M.A. College of Global Sustainability and the Office of Sustainability. It is an inclusive and holistic school based on interdisciplinary research, design, and education.

Degrees, Majors, Concentrations:

Master of Arts (M.A.)
Global Sustainability (GBS)
  Climate Change and Sustainability (CLT)
  Coastal Sustainability (COA)
  Entrepreneurship (ETR)
  Food Sustainability and Security (FOO)
  Sustainable Business (SBU)
  Sustainable Energy (SUSE)
  Sustainable Tourism (SUT)
  Sustainable Transportation (STN)
  Water (WTR)
GLOBAL SUSTAINABILITY

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
- Fall: June 1
- Spring: October 15
- Summer: n/a

Minimum Total Hours: 30
Level: Masters
CIP Code: 30.3301
Dept Code: CS
Major/College Codes: GBS / CS
Approved: 2010

Concentrations:
- Climate Change and Sustainability (CLT)
- Coastal Sustainability (COA)
- Entrepreneurship (ETR)
- Food Sustainability and Security (FOO)
- Sustainable Business (SBU)
- Sustainable Energy (SUSE)
- Sustainable Tourism (SUT)
- Sustainable Transportation (STN)
- Water (WTR)

Graduate Certificates Offered:
See Graduate Certificates: [http://www.usf.edu/innovative-education/programs/graduate-certificates/](http://www.usf.edu/innovative-education/programs/graduate-certificates/)

CONTACT INFORMATION

College: Patel College of Global Sustainability
Contact Information: [www.grad.usf.edu](http://www.grad.usf.edu) [www.patel.usf.edu](http://www.patel.usf.edu)

MAJOR INFORMATION

The Patel College of Global Sustainability fosters sustainable urban communities and environments through collaborative research, education, and community involvement. Its research generates innovations and new knowledge that help cities around the world, including those in developing countries, to reduce their ecological footprint while improving their form and function to make them healthier, more livable, and more resilient.

In this innovative 30 credit hour major, the students will apply their passion for the environment with cutting-edge research and on-the-ground experience. The major offers a multidisciplinary study of the environment and social and economic dimensions of sustainability to enable informed decisions and to create tangible change toward sustainable futures. Upon graduation, the students will be ready for careers in global sustainability that require teamwork and program planning skills to solve sustainability issues in developing and developed nations.

Major Research Areas: Global sustainability, integrated resource management, systems thinking, green communities, entrepreneurship, ecotourism

[http://www.usf.edu/pcgs/](http://www.usf.edu/pcgs/)
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- GPA of at least 3.00 or greater
- At least two letters of recommendation. Official transcripts for degrees earned at institutions other than the University of South Florida
- 250-500 word essay that includes the student's academic and professional background, choice of concentration, reasons for pursuing this degree, and their professional goals in terms of contributing to global sustainability.
- Portfolio – the applicant may provide a portfolio demonstrating prior work that focuses on sustainability
- GRE is not required

English Proficiency Requirement/TOEFL
International applicants from non-English speaking countries or who have not earned a degree in the United States must demonstrate English Proficiency. For specific requirements - [http://www.grad.usf.edu/policies_Sect4_full.php#engprof](http://www.grad.usf.edu/policies_Sect4_full.php#engprof)

CURRICULUM REQUIREMENTS

Total Minimum Hours - 30 credits
The M.A. in Global Sustainability degree offers a number of concentrations. Students are required to complete 30 credit hours as follows:

- Core courses – 9 credit hours
- Concentration courses – 9 credit hours
- Electives – 6 credit hours
- Internship/Research – 6 credit hours
- Comprehensive Exam

CORE COURSES – 9 credit hours
IDS 6233 3  Concepts and Principles of Sustainability
IDS 6235 3  Economics and Finance for Sustainability
IDS 6234 3  Systems Thinking: The key to Sustainability

CONCENTRATION REQUIREMENTS - 9 credits
Students select at least one concentration.

**Climate Change and Sustainability (CLT)**
Choose three of the following courses:
IDS 6208 3  Renewable Power Portfolio
IDS 6222 3  Sustainable Food Energy Water Nexus
IDS 6938 3  Special Topics/Seminars: Climate Change Adaptation and Mitigation
IDS 6938 3  Special Topics/Seminars: Bioresources for a Sustainable Future
PHI 6938 3  Selected Topics in Public Health: Climate Change and Civil Evolution

**Coastal Sustainability (COA)**
Choose three of the following courses:
IDS 6240 3  Sustainable Coastal Planning Concepts and Principles
IDS6938 3  Special Topics/Seminars: Sustainable Coastal Planning: Strategies and Implementation
IDS 6938 3  Special Topics/Seminars: Climate Change Adaptation and Mitigation
OCE 6085 3  Ocean Policy

**Entrepreneurship (ETR)**
Choose three of the following courses
ENT 6116 3  Business Plan Development
ENT 6186 3  Strategic Market Assessment
ENTS 6930 3  Special Topics in Entrepreneurship: Global Entrepreneurship
IDS 6938 3  Special Topics/Seminars Entrepreneurship with a Social Impact
Food Sustainability and Security (FOO)
Choose three of the following courses:
IDS 6938  3 Special Topics/Seminars: Future of Food: Environment, Health, and Policy
IDS 6938  3 Special Topics/Seminars: Sustainable Food Production
IDS 6938  3 Special Topics/Seminars: Sustainable Food Energy Water Nexus
PHC 6515  3 Food Safety
URP 6444  3 Global and Community Food Systems

Sustainable Business (SBU)
GEB 6457  3 Ethics, Law and Sustainable Business Practices
Choose two of the following courses:
GEB 6527  3 Lean Six Sigma
MAR 6336  3 Promotional Management
or MAR 6936  3 Selected Topics: Sustainable Marketing
MAR 6466  3 Supply Chain Management

Sustainable Energy (SUSE)
Choose three of the following courses:
IDS 6207  3 Renewable Transportation Fuels
IDS 6208  3 Renewable Power Portfolio
IDS 6210  3 Bioresources for a Sustainable Future
IDS 6222  3 Sustainable Food Energy Water Nexus
ECH 5931  3 Solar Energy and Applications
EEL 6935  3 Sustainable Energy

Sustainable Tourism (SUT)
Choose three of the following courses:
HMG 6246  3 Organizational Effectiveness in Hospitality
IDS 6236  3 Sustainable Tourism Development: Principles & Practices
IDS 6237  3 Ecotourism and Sustainable Tourism Management for Coastal & Marine Habitat
IDS 6247  3 Climate Change Adaptation and Mitigation
OCE 6085  3 Ocean Policy

Sustainable Transportation (STN)
Choose three of the following courses:
TTE 5501  3 Transportation Planning and Economics
TTE 6651  3 Public Transportation
TTE 6655  3 Transportation and Land Use
URP 6711  3 Multimodal Transportation Planning

Water (WTR)
Choose three of the following courses:
IDS 6222  3 Sustainable Food Energy Water Nexus
IDS 6245  3 Sustainable Water Resource Management: Doing More with Less
IDS 6246  3 Water Sensitive Urban design for Sustainable Communities
IDS 6248  3 Water Resources Planning

Electives for all concentrations - 6 credit hours
Students select two available courses such as the following typically offered:
ANG 5937  3 Seminar In Anthropology: Climate Change and Development
ANG 6436  3 Issues in Heritage Tourism
ARC 5931  3 Special Studies in Architecture: The City
CGN 6933  3 Special Topics in Civil and Environmental Engineering: Green Engineering for Sustainability
Global Sustainability (M.A.)

CGN 6933 3 Special Topics in Civil and Environmental Engineering: Green Infrastructure for Sustainable Communities
CGN 6933 3 Special Topics in Civil and Environmental Engineering: Sustainable Transportation
CWR 6305 3 Urban Hydrology
ECH 5785 3 Sustaining the Earth: An Engineering Approach
ECH 5931 3 Special Topics IV: Solar Energy and Applications
EEL 6935 3 Selected Electrical Topics: Sustainable Energy
EIN 6936 3 Special Industrial Topics III: Advanced Lean Six Sigma
ENT 6016 3 New Venture Formation
ENT 6126 3 Strategies in Technology Entrepreneurship
ENT 6415 3 Fundamentals of Venture Capital and Private Equity
ENT 6606 3 New Product Development
ENT 6947 3 Advanced Topics in Entrepreneurship
ENV 6510 3 Sustainable Development Engineering
ENV 6667 3 Environmental Biotechnology
EVR 6216 3 Advances in Water Quality Policy and Management
EVR 6320 3 Environmental Management
EVR 6937 3 Seminar in Environmental Policy: Environmental Policy and the Built Environment
EVR 6937 3 Seminar in Environmental Policy: Sustainability and Development
GIS 5049 3 GIS for Non-Majors
GIS 6100 3 Advanced Geographic Information Systems
GIS 6355 3 Water Resources Applications of GIS
GLY 6739 3 Selected Topics in Geology: The Anthropocene
MAR 6936 3Selected Topics: Sustainable Marketing
OCE 6934 3 Selected Topics in Oceanography: Marine Aquaculture
OCE 6934 3 Selected Topics in Oceanography: Port Sustainability
PAD 6355 3 Urban Growth Management
PAD 6336 3 Community Development Programs and Strategies
PHC 6934 3 Selected Topics in Public Health: Global Issues in Environment and Health
URP 6930 3 Special Topics in Urban and Regional Planning: Environmental Policy and the Built Environment
URP 6422 3 Environmental Planning Issues in Coastal Communities
URP 6930 3 Special Topics in Urban and Regional Planning: GIS Planners

Note* Other courses in global sustainability may be substituted for these electives as approved by the Graduate Director.

Internship/Research Requirement
Choose one of the following:
IDS 6946 6 Sustainability Internship
IDS 6398 6 Special Topics/Seminars: Capstone Research Project

The required 6 credit Internship or Research Project will be completed in the student's last semester

Note - for Returned Peace Corps Volunteers (RPCV) in the Peace Corps Coverdell Fellows Program, the required 6 credit hour internship will be fulfilled by completing part or all of the required internship course (IDS 6946) locally or nationally.

Comprehensive exam
The Internship or research report serves as the program's comprehensive exam. As part of this process students write a final report and deliver a presentation based on their internship work or research project.

COURSES
See http://ugs.usf.edu/course-inventory/
GLOBAL SUSTAINABILITY AND ENTREPRENEURSHIP IN APPLIED TECHNOLOGIES
CONCURRENT DEGREES

Master of Arts in Global Sustainability (M.A.) Degree and
Master of Science in Entrepreneurship in Applied Technologies (M.S.)

DEGREE INFORMATION

Refer to individual Majors for deadlines
Minimum Total Hours: 30/30
Level: Masters
CIP Code: 30.3301/
Dept Codes: CS/MAN
Major/College Codes: GBS/CS & EAT/BA

CONTACT INFORMATION

Colleges: Business and
Global Sustainability
Departments: Center for Entrepreneurship
and Global Sustainability
Contact Information: www.grad.usf.edu
Other Resources: www.Patel.usf.edu
www.entrepreneurship.usf.edu
entrepreneurship@usf.edu

MAJOR INFORMATION

The Concurrent Degrees in Global Sustainability and Entrepreneurship combine two existing majors which allows students to attain two Master’s degrees simultaneously rather than in a sequential effort. The time commitment will be about three years with a total of 51 credit hours between the two majors (9 hours are shared). The combination of a Master’s in Global Sustainability with a Master’s in Entrepreneurship provides students with a comprehensive understanding of concepts, tools, and skills of sustainability, and students will be able to apply these areas in a problem solving context. Students shall have the opportunity to focus on the areas of green technology and development, transport, energy, and sustainable enterprise.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for each major. Students must satisfy the requirements for the two degrees separately. Refer to the individual major listings for the specific requirements for each degree.

CURRICULUM REQUIREMENTS

Listed below are the 9 hours of shared courses. Please refer to the specific major listings for full requirements. All graduation requirements of the individual programs apply.

Common Courses (9 credits may be counted toward both the GS and EAT degrees)
ENT 6016 3 New Venture Formation
ENT 6116 3 Business Plan Development
GMS 6095 3 Principles of Intellectual Property
ENT 6186 3 Strategic Market Assessment
ENT 6947 3 Applied Topics in Entrepreneurship
ENT 6606 3 Product Development
ENT 6415 3 Venture Capital and Private Equity

All Concurrent Master’s in Global Sustainability and Entrepreneurship students must complete ENT 6016 (New Venture Formation), ENT 6186 (Strategic Market Assessment) and ENT 6947 (Applied Topics in Entrepreneurship).
Internship
All Concurrent Master’s in Global Sustainability and Entrepreneurship students must complete a six (6) credit hour internship.

COURSES
See http://www.ugs.usf.edu/course-inventory/
COLLEGE OF

GRADUATE STUDIES

(ADMINISTERED BY THE OFFICE OF GRADUATE STUDIES)
Changes to Note

There were no curricular changes for the College of Graduate Studies for 2017-2018
University of South Florida  
Office of Graduate Studies (College of Graduate Studies)  
4202 E. Fowler Ave ALN226  
Tampa, FL 33620

Web address: http://www.grad.usf.edu/  
Phone: 813-974-2846  
Fax: 813-974-5762

College Dean: Dwayne Smith, Ph.D.  
Associate Dean: Ruth Bahr, Ph.D.

Mission Statement:  
The University of South Florida Office of Graduate Studies serves as the University hub of leadership for graduate education producing global leaders, one scholar at a time.

College Information:  
The College of Graduate Studies is housed in the Office of Graduate Studies and serves as the College for newly developed interdisciplinary programs. In the past programs have included the Applied Behavior Analysis (MA), Cancer Biology (Ph.D.), Entrepreneurship in Applied Technologies (MS), and Global Sustainability (MA), which are now housed in other colleges.

Degrees, Majors, Concentrations

Master of Science (M.S.)  
Cybersecurity (CYS)  
Digital Forensics (CYC)  
Computer Security Fundamentals (CYF)  
Cyber Intelligence (CYI)  
Information Assurance (CIA)
CYBERSECURITY

Master of Science (M.S.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
- Fall: February 15
- Spring: October 15
- Summer: February 15

Minimum Total Hours: 30*
Level: Masters
CIP Code: 43.0303
Dept Code: ---
Major/College Codes: CYS / GS
Effective: Fall 2014

CONTACT INFORMATION

College: Graduate Studies
Department: Institute for Secure and Innovative Computing
Contact Information: www.grad.usf.edu

International applicant deadlines:
http://www.grad.usf.edu/majors

Concentrations
- Digital Forensics (CYC)
- Computer Security Fundamentals (CYF)
- Cyber Intelligence (CYI)*
- Information Assurance (CIA)

*Cyber Intelligence requires 33 minimum total hours

MAJOR INFORMATION

The Master of Science in Cybersecurity is an interdisciplinary major that utilizes talent across the Colleges of Business, Engineering, Arts & Sciences, and Behavioral and Community Sciences. The major prepares students for leadership, managerial and domain-specific roles in Cybersecurity and for employment in managerial and operational positions that require quick analytical thinking, decision-making under uncertainty regarding critical resources, and domain-specific technical skills for managing secure operations. Specifically, based on the design of the concentrations and the core of this major, the major is also expected to prepare students for 1) intelligence positions that require innovative, analytical, decision-making, and technical skills for providing cybersecurity intelligence, 2) information assurance positions that require secure management of information and data transferred, used, stored, and processed in information systems, 3) law enforcement positions that are required to deal more and more with cyber-crimes, and 4) cybersecurity positions that require deep technical skills in the security domain.

Because this is a graduate-level major, to ensure that students possess the foundational knowledge for academic success, students admitted to this major are most likely to be successful if they have academic or work experience in the areas of C/C++ programming, computer networks, operating-system design, algorithms, data structures, and computer organization. An undergraduate degree in computer science, computer engineering, MIS, or IT is recommended for admission. Note: For the Information Assurance Concentration it is recommended that students have a background in accounting information systems, database management, and systems analysis and design.

Major Research Areas:
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

**Undergraduate Degree:** An applicant must have one of the following (a, b, or c):

a) A bachelor’s degree from a regionally accredited institution with a “B” average or better in all work attempted while registered as an undergraduate, degree-seeking student.
b) A bachelor’s degree with a “B” average or better from a regionally accredited institution and a previous graduate degree with a “B” average or better from a regionally accredited institution.
c) The equivalent bachelors and/or graduate degrees from a foreign institution.

**English Language Proficiency:** Applicants whose native language is not English or who have earned degrees from countries where English is not the official language must also demonstrate proficiency in English in one of the following ways:

- By providing scores of 79 or higher on the internet based Test of English as a Foreign Language (TOEFL iBT)
- By providing a score of 6.5 or higher on the International English Language Testing System (IELTS).
- By providing a score of 53 or higher on the Pearson Test of English Academic (PTE-A)
- By earning a score of 500 (153 or equivalent at 62nd percentile) on the GRE Verbal exam.
- By earning a baccalaureate or higher degree at a regionally accredited institution in the U.S.
- By earning a baccalaureate or equivalent degree at a foreign institution where English is the language of instruction (must be documented on the transcript or on an official Certificate of Medium of Instruction from the Institution).

**Additional Requirements**

Applicants also must submit the following with their application:

- Official transcripts with confirmation that the applicant has received a bachelor’s degree from a regionally-accredited university
- A 250-500 word essay in which the student describes her or his academic and professional background, reasons for pursuing this degree, and professional goals pertaining to cybersecurity
- Two letters of recommendation, at least one of which should come from a faculty member familiar with the applicant’s academic performance and potential. If the applicant is unable to provide the letter from a former professor, with approval from the program’s admission coordinator, letters from other professional sources will be accepted
- Current Resume or CV
- Scores from the GRE General Test. Applicants with degrees from regionally-accredited U.S. universities, however, may request a waiver of the GRE requirement.

The graduate admissions committee may request a video or phone admission interview or additional documentation, if necessary.

**CURRICULUM REQUIREMENTS**

**Total Minimum Hours:** 30 credit hours

- Core Requirements – 12 hours
- Concentrations – 15-18 hours
- Practicum – 3 hours
Core Requirements - 12 hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Title and Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>EEL 6935</td>
<td>3</td>
<td>Special Topics: Data Networks, Sys &amp; Securities (Proposed EEL 6808; pending SCNS approval)</td>
</tr>
<tr>
<td>MAT 5932</td>
<td>3</td>
<td>Special Topics: Applied Cryptography</td>
</tr>
<tr>
<td>ISM 6328</td>
<td>3</td>
<td>Information Security and Risk Management</td>
</tr>
<tr>
<td>ISM 6930</td>
<td>3</td>
<td>Special Topics: Decision Processes for Business Continuity and Disaster Recovery</td>
</tr>
</tbody>
</table>

Concentrations - 15-18 hours

Students select from the following concentrations:

**Digital Forensics - 15 hours**
Area of emphasis on forensics following attacks on critical infrastructure systems.

- CJE 6688 3 Cybercrime and Criminal Justice
- CJE 6627 3 Digital Evidence Recognition and Collection
- CJE 6624 3 Introduction to Digital Evidence
- CJE 6625 3 Network Forensic Criminal Investigations
- CJE 6626 3 Digital Forensic Criminal Investigations

**Computer Security Fundamentals - 15 hours**
Area of emphasis in operating secure critical infrastructure systems.

*Students select from the following options to complete the 12 hour requirement:*

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Title and Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>EEL 6764</td>
<td>3</td>
<td>Principles of Computer Architecture</td>
</tr>
<tr>
<td>COP 6611</td>
<td>3</td>
<td>Operating Systems</td>
</tr>
<tr>
<td>COT 6405</td>
<td>3</td>
<td>Introduction to the Theory of Algorithms</td>
</tr>
<tr>
<td>CIS 6930</td>
<td>3</td>
<td>Special Topics: Computer Systems Security (New Course Number Pending)</td>
</tr>
</tbody>
</table>

*For the remaining 3 hours students may select a course from the other concentrations.*

**Cyber Intelligence - 18 hours**
Area of emphasis in methodologies for analyzing threats against critical systems

Note – this concentration requires a minimum of 33 total program hours.

<table>
<thead>
<tr>
<th>Course</th>
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</tr>
</thead>
<tbody>
<tr>
<td>LIS 6107</td>
<td>3</td>
<td>Advanced Professional and Technical Communication for Analysts</td>
</tr>
<tr>
<td>LIS 6700</td>
<td>3</td>
<td>Information Strategy &amp; Decision Making</td>
</tr>
<tr>
<td>LIS 6703</td>
<td>3</td>
<td>Core Concepts in Intelligence</td>
</tr>
<tr>
<td>LIS 6702</td>
<td>3</td>
<td>Advanced Intelligence Analytic Methods</td>
</tr>
<tr>
<td>LIS 6709</td>
<td>3</td>
<td>Cyber Intelligence</td>
</tr>
<tr>
<td>LIS 6670</td>
<td>3</td>
<td>Advanced Cyber Intelligence</td>
</tr>
</tbody>
</table>

**Information Assurance - 15 hours**
Area of emphasis in securing critical information and systems. The concentration requires students to take four out of the following five courses as well as an additional elective course.

<table>
<thead>
<tr>
<th>Course</th>
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<th>Title and Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISM 6124</td>
<td>3</td>
<td>Advanced Systems Analysis and Design</td>
</tr>
<tr>
<td>ISM 6218</td>
<td>3</td>
<td>Advanced Database Management</td>
</tr>
<tr>
<td>BUL 5842</td>
<td>3</td>
<td>Risk Management and Legal Compliance</td>
</tr>
<tr>
<td>ACG 6457</td>
<td>3</td>
<td>Accounting Systems Audit, Control and Security</td>
</tr>
<tr>
<td>ISM 6137</td>
<td>3</td>
<td>Statistical Data Mining</td>
</tr>
</tbody>
</table>

For the additional elective in the Information Assurance Concentration, students may take:

<table>
<thead>
<tr>
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<th>Credits</th>
<th>Title and Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISM 6145</td>
<td>3</td>
<td>Seminar on Software Testing</td>
</tr>
<tr>
<td>ISM 6316</td>
<td>3</td>
<td>Project Management</td>
</tr>
<tr>
<td>ACG 6688</td>
<td>3</td>
<td>Forensics Accounting and the Legal Environment</td>
</tr>
</tbody>
</table>

Or any other elective pre-approved by the Muma College of Business Information Assurance Concentration Director.
The information below applies to all concentrations in the major:

**Comprehensive Exam**
During the semester in which the student is scheduled to graduate, the student will be required to submit an electronic portfolio demonstrating completion of core major competencies in cybersecurity and in the area of concentration. This competency-based portfolio will substitute for the written comprehensive exam because the portfolio permits the capstone assessment to align exactly with the degree program’s objectives. Each objective in the portfolio is reviewed and rated by graduate faculty for Content (demonstrating knowledge of accepted practices, procedures, and trends in the field) and Critical Thinking (ability the student’s ability to analyze a problem, organize a response, synthesize perspectives, and draw practical, testable conclusions)

**Non-Thesis**
Because the primary aim of the M.S. in Cybersecurity is to train highly skilled practitioners for the workforce, the Degree does not include a research thesis requirement.

**Practicum - 3 hours**
Satisfactory completion of a three (3) credit hour applied learning experience (practicum) is a core degree requirement for all students pursuing the M.S. in Cybersecurity. The practicum experience is arranged and managed through the coordinator for the student’s concentration area. The student will register for practicum credit in her concentration area’s home department. Until each department receives final approval for a “practicum” or “field work” course number, some departments will develop a learning plan with the student for the practicum and use the “Independent Study” course mechanism.

- For Information Assurance: ISM 6905 Independent Study
- For Computer Security Fundamentals: CAP 6940 IT Graduate Practicum
- For Digital Forensics: CCJ 6905 Directed Independent Study
- For Cyber Intelligence: LIS 6946 Supervised Field Work

**COURSES**
See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)

http://www.grad.usf.edu/
SECTION 19

COLLEGE OF MARINE SCIENCE

http://www.marine.usf.edu/
Changes to Note

USF Graduate Council approved the following curriculum on the dates noted.

Certificates
MS Teaching & Communication Ocean Sciences Broader Change Curriculum 10/3/16
College Structure and Location:
The College of Marine Science (CMS) was formed during 2000 from the previous Department of Marine Science, initiated in 1967 with three founding faculty members. The Florida Board of Regents declared it a University Center of Excellence in 1978 and approved the Marine Science Ph.D. degree program in 1982. The CMS at the University of South Florida is constituted as a graduate-level research major that forms the basis for educational opportunities at the Ph.D. and M.S. degree levels and for public service to the State of Florida.

Located on the beautiful waterfront of Tampa Bay adjacent to the USF St. Petersburg campus, CMS is administratively part of the USF Tampa campus and reports to the Provost of USF. The College is focused on interdisciplinary research in marine science. Our ranked faculty, support personnel, and graduate students work together toward a vision of understanding the unified global ocean system. The College seeks to build new interdisciplinary research teams in collaboration with our local marine science research partners, including the Florida Fish and Wildlife Research Institute, the U.S. Geological Survey, NOAA, SRI St. Petersburg, and Mote Marine Lab.

Mission Statement:
The primary mission of the College is to conduct basic and applied research in ocean science. Here, ocean science is defined by application of the traditional fields of science to the biology, chemistry, geology, and physics of the marine environment and the interactions between the marine environment and the adjoining atmosphere and land systems – presenty and throughout earth’s history. Included in the primary ocean science mission is the development of new technologies and tools for exploring the coupled ocean-atmosphere-land systems. The College expects its faculty to develop research majors of outstanding caliber and to fully engage the national and international scientific communities, through the reporting of research results in the most respected oral and written venues, and by professional service. Integral to the ocean science research mission is the education of graduate students.

The College recruits, trains, and graduates productive, creative scientists at the Ph.D. and M.S. levels that are prepared to make independent contributions to ocean science. The faculty are expected to develop outstanding graduate education programs that will afford students the opportunity to participate in all aspects of research. The College recognizes that graduate education requires strong mentoring along with traditional
classroom instruction. An ancillary but important mission of the College is education outreach for students at all levels and for the public at large. Our outreach programs have significantly expanded our educational responsibilities, and they are intended to motivate all generations to become scientifically literate citizens and to understand the environment in which they live. The College pursues innovative avenues for educational outreach. Efforts are made to attract more junior and senior level undergraduates into both the ocean science core courses and into advanced courses for which they have pre-requisites. Historically, this is a way in which students have made career decisions to engage in ocean science. In this manner the College maintains close ties with the student body in other University of South Florida colleges and campuses.

Research Facilities:
The College facilities include specialized laboratories equipped for studies in: Scanning and transmission electron microscopy; Trace metal analysis; Water quality; Organic and isotope geochemistry, Physical chemistry, Optical oceanography, Satellite imagery; Sedimentology; Geophysics; Physical Oceanography; Micropaleontology; Physiology; Benthic Ecology; Microbiology; Planktology; and Ichthyology. Additionally, the complex includes the Center for Ocean Technology, which provides instrumental manufacturing and prototyping support to the faculty and students.

The College’s students and faculty have conducted research in the Antarctic, Arctic, Atlantic, Indian, and Pacific Oceans, as well as the Bering, Mediterranean, and Caribbean Seas. The College has access to 5 research vessels in conjunction with the Florida Institute of Oceanography (FIO) and the U.S. geological Survey: The RV Weatherbird II (115 ft), the RV Bellows (71 ft), the RV Gilbert (42 ft), the RV Fish Hawk (38 ft), and the RV Price (24 ft). Ship time on other vessels in the U.S. fleet of oceanographic vessels, as well as foreign research vessels, is generally obtained through federal funding.

Major Research Areas:
Faculty major research areas as listed at: [http://www.marine.usf.edu/faculty/index.shtml](http://www.marine.usf.edu/faculty/index.shtml)

Degrees, Majors, Concentrations:
- **Master of Science M.S.**
  - Marine Science (MSC)
    - Biological Oceanography (BOC)
    - Chemical Oceanography (COG)
    - Geological Oceanography (GOG)
    - Interdisciplinary (IDY)
    - Marine Resource Assessment (MRA)
    - Physical Oceanography (POG)

- **Doctor of Philosophy Ph.D.**
  - Marine Science
    - Biological Oceanography (BOC)
    - Chemical Oceanography (COG)
    - Geological Oceanography (GOG)
    - Interdisciplinary (IDY)
    - Marine Resource Assessment (MRA)
    - Physical Oceanography (POG)

**Graduate Certificates Offered:**
- Teaching and Communicating Ocean Sciences Broader Impacts
MARINE SCIENCE

Master of Science (M.S.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: January 10
Spring: October 1

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 32
Level: Masters
CIP Code: 40.0607
Dept Code: MSC
Major/College Codes: MSC MS
Approved: 1976
Concentrations:
- Biological Oceanography (BOC)
- Chemical Oceanography (COG)
- Geological Oceanography (GOG)
- Interdisciplinary (IDY)
- Marine Resource Assessment (MRA)
- Physical Oceanography (POG)

CONTACT INFORMATION

College: Marine Science
Contact Information: www.grad.usf.edu
Website: http://www.marine.usf.edu/
Email: Marinescience@usf.edu

MAJOR INFORMATION

The College of Marine Science (CMS) offers M.S. and Ph.D. degrees in Marine Science. This research-based major has a low student-to-faculty ratio, with an average of 100 graduate students under the direction of ~ 30 full-time faculty. Students in the Marine Science major may elect a concentration in biological, chemical, geological, or physical oceanography, or Marine Resource Assessment through course work and thesis research. CMS graduates are well prepared for positions in academia, industry, government agencies, and non-governmental organizations at local to international levels.

Biological Oceanography
Biological Oceanographers seek to understand the life histories and population dynamics of marine organisms and how they interact with their environment over space and time. Scientists in the College of Marine Science study the full breadth of biological oceanography including microbiology, phytoplankton, zooplankton, benthos, coral reefs, fishes, and marine mammals. Our biological oceanographers utilize a variety of techniques including SCUBA, shipboard samplers, acoustics, molecular biology, and mathematical modeling to understand the oceans and their inhabitants. Scientists in our college also use the latest in remote sensing technology to study vast regions of the Earth’s oceans, and have developed new technology, capable of identifying and quantifying harmful algal blooms and related processes.

Chemical Oceanography
Chemical oceanographers seek to understand the ways in which various chemical forms are cycled within the oceans, and the reactions that influence biogeochemical cycles. Ocean chemists improve our understanding of the basic conditions under which ocean life thrives in seawater, and help predict the effects of anthropogenic and natural climate change on ocean composition. Research programs in the College of Marine Science include wide ranging topics such as the role and variability of nutrients in seawater, the distribution and cycling of both biologically-essential and toxic trace metals, the oceans’ CO2 system, dissolved organic matter, molecular organic compounds, radionuclides and stable isotopes, and the distribution of chemical pollutants and their interactions with marine organisms and ecosystems. Faculty and students utilize a wide variety of state-of-the-art instrumentation and technology for conducting this research.
**Geological Oceanography**

Geological oceanographers in the College of Marine Science conduct research from the continental margins to the deep-ocean seafloor. Their work extends from modern environments to millions of years before present to understand and predict Earth surface and interior processes. Primary research themes include: (1) paleoceanography and paleoclimatology; (2) coastline and continental shelf development and processes including effects of storms and sea-level fluctuations; (3) the health of modern coral reefs; (4) carbonate depositional processes; (5) anthropogenic influences on estuaries; (6) mathematical descriptions of geologic phenomena; and (7) plate tectonics. Our geological oceanography group has a variety of modern well-equipped laboratories and field equipment, including one of the best seafloor mapping capabilities in the US. Fully integrated with these field instruments is the computational capability to generate state-of-the-art data depictions and imagery. Our group also works closely with scientists from the US Geological Survey’s Center for Coastal and Marine Science Center, a major federal laboratory located nearby.

**Physical Oceanography**

Physical oceanography involves the study of water movement in the ocean. Energy is introduced to the ocean through wind and solar heating, and these combine with the rotation of the Earth and gravitational effects to drive ocean circulation, tides, and waves. Our physical oceanographers also investigate how the Earth’s oceans are directly coupled with the atmosphere, from local weather patterns to the global climate system. Physical oceanographers in the CMS carry out research on a variety of topics using the latest technology. Computer models, real time data, satellite remote sensing, and in situ data from moored arrays, coastal tide gauges, and research cruises are used to study a wide range of research problems. Topics include tide and current prediction in Tampa Bay, circulation on the West Florida Shelf and in the Gulf of Mexico, El Niño phenomena, and the potential for global climate change.

**Marine Resource Assessment**

The College of Marine Science offers an interdisciplinary concentration in Marine Resource Assessment (MRA) as part of its M.S. and Ph.D. majors. This concentration provides training in the emerging field of ecosystem-based management. Its mission is to train a new generation of scientists that can effectively address issues concerning the sustainability of the world’s living natural resources. The MRA concentration addresses the national shortage of graduates possessing the skills required for managing living marine resources by teaching a quantitative approach to ecosystem analysis and living resource assessment. The MRA concentration is designed to produce resource assessment scientists who can introduce relevant ecosystem-level variables into the traditional, single-species assessment process, complementing and enhancing the development of science-based management policies that protect living marine resources.

**ADMISSION INFORMATION**

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

Meeting these criteria shall not be the only basis for admission. Complete and up-to-date application instructions can be found at [http://www.marine.usf.edu/students/how-to-apply](http://www.marine.usf.edu/students/how-to-apply)

- Bachelor’s degree or equivalent from a regionally accredited university (Preferable majors include biology, chemistry, geology, physics, and math).
- Have earned a 3.00 or higher average GPA (on a 4.00 scale) in upper division undergraduate coursework.
- Have completed all of the coursework listed on our website ([http://www.marine.usf.edu](http://www.marine.usf.edu)) under “Undergraduate Preparation”.
- Have taken the Graduate Record Examination (GRE) within 5 years preceding the application. Preferred minimum scores are as follows: Verbal = 153 (59th percentile), Quantitative = 148 (32nd percentile). Preferred minimum scores for Marine Resource Assessment concentration are: Verbal = 156 (71st percentile), Quantitative = 155 (60th percentile).
- Have the commitment of a Marine Science faculty member to serve as advisor during the student’s graduate studies.
**Required Application Materials**

- research interest essay (use template from Marine Science website)
- a resume or curriculum vitae
- three letters of recommendation
- official transcripts of grades
- GRE exam scores

**Additional Requirements for International Applicants**

- Minimum TOEFL exam score of 79
- Financial Support Requirements Form (available on the Office of Graduate Studies website)
- Official transcripts of grades: all international transcripts must be in English; it is the applicant’s responsibility to have foreign transcripts translated and evaluated before submitting them as part of their graduate application packet. Please visit the Foreign Transcript Evaluations Services Listing of acceptable evaluators. Further details can be found at: [http://www.usf.edu/admissions/graduate/application-requirements/transcripts-foreign.aspx](http://www.usf.edu/admissions/graduate/application-requirements/transcripts-foreign.aspx)

**CURRICULUM REQUIREMENTS**

A committee, consisting of a major advisor and at least 2 other members of the graduate faculty, will be appointed to supervise and guide the major of each student.

Total Minimum Hours - 32 hours

Students must complete a minimum of 32 credit hours within the following areas:

**CORE REQUIREMENTS (12 hours)**

Core courses completed with a grade of “B” or better:

- **OCB 6050** Biological Oceanography 3
- **OCC 6050** Chemical Oceanography 3
- **OCG 6051** Geological Oceanography 3
- **OCP 6050** Physical Oceanography 3

**CONCENTRATION REQUIREMENTS (14 hours)**

Students select one of the following concentrations and complete 14 hours of electives within the concentration subject area (or other courses as approved by the Graduate Director). Note: At least 8 of these credit hours must be in formal courses to satisfy the USF requirement of 20 hours of formal coursework.

- Biological Oceanography (BOC)
- Chemical Oceanography (COG)
- Geological Oceanography (GOG)
- Interdisciplinary (IDY)
- Marine Resource Assessment (MRA)*
- Physical Oceanography (POG)

*Students in Marine Resource Assessment Concentration area are required to take 3 courses from the following list (totaling 9 credit hours) as part of their concentration requirements:

- Population Dynamics 3
- Fish Biology 3
- Dynamics of Marine Ecosystems 3
- Applied Multivariate Statistics 3

**ELECTIVE REQUIREMENTS**

Electives are taken within each concentration area (see above)
COMPREHENSIVE EXAM REQUIREMENTS
In lieu of a standard Comprehensive Exam, M.S. students must only pass their thesis defense. M.S. students planning to remain in CMS and enter the Ph.D. after completion of their M.S. are invited and encouraged to take the Integrated Marine Science Exam (IMSE) after their first or second year in the M.S. Or they can wait until they are in the Ph.D.

THESIS REQUIREMENTS (6 hours)
- A minimum of 6 credits of OCE 6971 (Thesis credit hours)
- A written thesis
- A successful thesis defense examination

OTHER REQUIREMENTS
Other coursework as required by thesis advisory committee

COURSES
See http://www.ups.usf.edu/course-inventory/
See http://www.marine.usf.edu/students/courses-offered
MARINE SCIENCE

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines
Fall: January 10
Spring: October 1

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 90
Level: Doctoral
CIP Code: 40.0607
Dept Code: MSC
Major/College Codes: MSC MS
Approved: 2000

Concentrations:
- Biological Oceanography (BOC)
- Chemical Oceanography (COG)
- Geological Oceanography (GOG)
- Interdisciplinary (IDY)
- Marine Resource Assessment (MRA)
- Physical Oceanography (POG)

CONTACT INFORMATION

College: Marine Science
Contact Information: www.grad.usf.edu
Website: http://www.marine.usf.edu/
Email: Marinescience@usf.edu

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Chemical Oceanography
Chemical oceanographers seek to understand the ways in which various elements are cycled within the oceans, and the reactions that influence biogeochemical cycles. Ocean chemists improve our understanding of the basic conditions under which ocean life thrives in seawater, and help predict the effects of anthropogenic and natural climate change on ocean composition. Research programs in the College of Marine Science include such wide ranging topics as the role and variability of nutrients in seawater, the distribution and cycling of both biologically-essential and toxic metals, the oceans’ CO2 system, dissolved organic matter, molecular organic compounds, radionuclides and stable isotopes and the distribution of chemical pollutants and their interactions with marine organisms and ecosystems. Faculty and students utilize a wide variety of state-of-the-art instrumentation and technology for conducting this research.

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Physical oceanography involves the study of water movement in the ocean. Energy is introduced to the ocean through wind and solar heating, and these combine with the rotation of the Earth and gravitational effects to drive ocean circulation, tides, and waves. Our physical oceanographers also investigate how the Earth’s oceans are directly coupled with the atmosphere, from local weather patterns to the global climate system. Physical oceanographers in the CMS carry out research on a variety of topics using the latest technology. Computer models, real time data, satellite remote sensing, and in situ data from moored arrays, coastal tide gauges, and research cruises are used to study a wide range of research problems. Topics include tide and current prediction in Tampa Bay, circulation on the West Florida Shelf and in the Gulf of Mexico, El Niño phenomena, and the potential for global climate change.

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ADMISSION INFORMATION
Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below. Meeting these criteria per se shall not be the only basis for admission. Complete application instructions can be found on the college website: http://www.marine.usf.edu/students/how-to-apply

- Bachelor’s degree or equivalent from a regionally accredited university (Preferable majors include biology, chemistry, geology, physics or math)

- Have earned a 3.00 (on a 4.00 scale) average GPA or higher on upper division undergraduate coursework • Have completed all of the coursework listed on our website (http://www.marine.usf.edu) under “Undergraduate Preparation”
• Have taken the Graduate Record Examination (GRE) within 5 years preceding application. Preferred minimum scores are as follows: Verbal = 135 (59th percentile), Quantitative = 148 (32nd percentile). Preferred minimum scores for Marine Resource Assessment concentration are: Verbal = 156 (71st percentile), Quantitative = 155 (60th percentile).
• Have the commitment of a Marine Science faculty member to serve as advisor during the student’s graduate studies.

Required Application Materials
• research interest statement (use template from Marine Science website)
• a resume or curriculum vitae
• three letters of recommendation
• official transcripts of grades
• GRE exam scores

Additional Requirements for International Applicants
• Minimum TOEFL exam score of 79
• Financial Support Requirements Form (available on the Office of Graduate Studies website (http://www.grad.usf.edu/graduate‐admissions‐international.asp)
• Official transcripts of grades: all international transcripts must be in English; it is the applicant’s responsibility to have foreign transcripts translated and evaluated before submitting them as part of their graduate application packet. Please visit the Foreign Transcript Evaluations Services Listing of acceptable evaluators. Further details can be found at: http://www.usf.edu/admissions/graduate/application‐requirements/transcripts‐foreign.aspx

CURRICULUM REQUIREMENTS

A committee, consisting of a major advisor and at least four other members of the graduate faculty, is appointed to supervise and guide the major of the candidate. One member shall be from a department outside of the College of Marine Science.

Total Minimum Hours Required: 90 hours beyond the Bachelor’s

Students must complete a minimum of 90 credit hours beyond the Bachelor’s degree, (12 hours of core requirements, 16 hours of dissertation, and 62 hours split between coursework and research as determined by the committee) and must complete the following:

CORE REQUIREMENTS (12 hours)
Core courses completed with a grade of “B” or better
OCB 6050 Biological Oceanography 3
OCC 6050 Chemical Oceanography 3
OCG 6051 Geological Oceanography 3
OCP 6050 Physical Oceanography 3

CONCENTRATION REQUIREMENTS
Students select one of the following concentrations. There is no minimum credit requirement except for the Marine Resource Assessment Concentration:

Biological Oceanography (BOC)
Chemical Oceanography (COG)
Geological Oceanography (GOG)
Interdisciplinary (IDY)
Marine Resource Assessment (MRA)*
Physical Oceanography (POG)

*Students in the Marine Resource Assessment Concentration area are required to take three courses from the following list (totaling nine credit hours) as part of their concentration requirements:
Population Dynamics 3
Fish Biology 3
Dynamics of Marine Ecosystems 3
Applied Multivariate Statistics 3

ELECTIVE REQUIREMENTS
Electives are taken within each concentration area (see above)

COMPREHENSIVE QUALIFYING EXAM REQUIREMENTS
There will be an Integrated Marine Science Exam (IMSE) administered early each Fall semester. The exam aims to judge a student’s ability, upon successful completion of the four core classes (B- or better), to integrate the concepts covered in these classes. All students will take the same exam, at the same time, and questions will be determined by a committee to be appointed by the Dean. All Ph.D. students are expected to take this exam no later than the beginning of their third year (to allow for students who take 2 years to finish the core classes because of other course requirements or if they do not start in the fall term). M.S. students who anticipate continuing in the major to obtain their Ph.D. are encouraged to take this exam, which will fulfill this requirement as long as they enter the Ph.D. major within 7 years of successfully completing the exam. The IMSE is a written exam, followed by optional oral exam if the student does not perform satisfactorily on the written exam. If the student fails the exam, he/she has a second chance to pass the exam in the following year. If a student fails the exam twice, he/she may not proceed in the Ph.D. major.

After passing the IMSE, students are expected to form their dissertation committee, have their research proposal approved by the committee, and to take and pass a Ph.D. Candidacy Exam (PCE) administered by the dissertation committee. The qualifying exam is meant to test the students’ in-depth knowledge in their area of concentration and/or dissertation research. The PCE must consist of a 2-4 hour oral exam, with an optional written exam (which could be prior to or after the oral exam) at the discretion of the student’s major advisor. The student is expected to take and pass the PCE no later than the start of their fourth year. A student has two chances to pass the PCE in order to become a Ph.D. candidate and must do so prior to beginning their fifth year. Students failing the first time must take the exam again within one year of the first try. If a student fails the exam twice, he/she may not proceed in the Ph.D. major.

DISERVATION REQUIREMENTS (16 hours)
- A minimum of 16 credits of OCE 7980 (Dissertation credit hours). Following admission to candidacy, the student must enroll in OCE 7980 when engaged in research, data collection, or writing activities relevant to the dissertation. The student is required to accumulate a minimum of 6 credits during each previous 12 month period (previous 3 terms, e.g., Fall, Spring, Summer) until the degree is granted.
- A written dissertation
- A successful dissertation defense examination

OTHER REQUIREMENTS
Other coursework as required by dissertation advisory committee

COURSES
See http://www.ugs.usf.edu/course-inventory/
See http://www.marine.usf.edu/students/courses-offered
MORSANI COLLEGE OF MEDICINE

http://health.usf.edu/medicine/
Changes to Note

Graduate Council approved the curriculum as noted on the date below.

Concurrent Degrees

<table>
<thead>
<tr>
<th>Program</th>
<th>Degree</th>
<th>Action</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>MD Medicine/Public Health</td>
<td>M.D./M.P.H.</td>
<td>New Concurrent Degree Option</td>
<td>5/1/2017</td>
</tr>
<tr>
<td>MD Public Health/Medical Sciences (BMB)</td>
<td>M.P.H. / Ph.D.</td>
<td>Terminate Concurrent Degree Option</td>
<td>3/6/2017</td>
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Majors

<table>
<thead>
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<th>Action</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>MD Athletic Training</td>
<td>M.S.</td>
<td>Change Major - curriculum; pre-reqs, course numbers</td>
<td>5/1/2017</td>
</tr>
<tr>
<td>MD Health Informatics</td>
<td>M.S.H.I.</td>
<td>Add New Concentration in Health Analytics (BHAP)</td>
<td>11/7/2016</td>
</tr>
<tr>
<td>MD Medical Sciences</td>
<td>M.S.M.S.</td>
<td>Change Major: Anatomy Concentration</td>
<td>11/7/2016</td>
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<tr>
<td>MD Medical Sciences</td>
<td>M.S.M.S.</td>
<td>Terminate Concentration - Health Informatics (HIN)</td>
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<tr>
<td>MD Medical Sciences</td>
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<td>Inactivate Metabolic &amp; Nutritional Medicine Conc (MNM)</td>
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New Certificates

<table>
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<th>Degree</th>
<th>Action</th>
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<tbody>
<tr>
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<td>12/5/2016</td>
</tr>
<tr>
<td>MD Pathology</td>
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<td>New Certificate</td>
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Terminated Certificates

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<th>Degree</th>
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<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>MD Integrative Weight Management</td>
<td>Certificate</td>
<td>Terminate Certificate</td>
<td>5/8/2017</td>
</tr>
<tr>
<td>MD Metabolic Cardiology</td>
<td>Certificate</td>
<td>Terminate Certificate</td>
<td>5/8/2017</td>
</tr>
<tr>
<td>MD Metabolic Endocrinology</td>
<td>Certificate</td>
<td>Terminate Certificate</td>
<td>5/8/2017</td>
</tr>
</tbody>
</table>
Mission Statement:
The Morsani College of Medicine Graduate Faculty consist of scientists who conduct research in many fields of science basic to understanding disease processes and to the development of improved methods of diagnosis, treatment and prevention of disease. Students receive their research training in up-to-date methods of scientific investigation and gain experience in modern well-equipped laboratories. The faculty is dedicated to providing high quality education in an environment conducive to scholarly activity and scientific achievement.

Candidates for the Ph.D. in Medical Science enter into an interdisciplinarity major enabling them to select any one of the concentrations that are offered. Collaboration among laboratory scientists of all disciplines is encouraged. The programs of study allow students to tailor their majors to individual needs and interests. Thanks to faculty research awards, students have a multitude of opportunities to participate in cutting-edge research projects. Medical Science Ph.D. graduates go on to become deeply involved in research sponsored by academic, industrial and government institutions.

The master’s degree in Medical Sciences (M.S.M.S.) can be completed in as little as one year and has been designed to assist students who are seeking admissions into doctoral degree programs (Ph.D. or M.D.). Successful graduates of the Medical Science master’s degree program can improve their chances for admissions into professional programs by further developing their foundational knowledge of biomedical science. Currently, the Medical Sciences master’s degree program boasts a ninety percent success rate for adequately preparing students for entry into doctoral or professional majors. Financial Aid - A limited number of assistantships, fellowships, and tuition waivers are available for doctoral students.

Major Research Areas:
Allergy, Immunology and Infectious Diseases Cancer Biology, Cardiovascular Research, Neuroscience Research

Degrees, Majors, Concentrations:

Master of Science (M.S.)
  Advanced Athletic Training (AAT)
  Athletic Training (ATR)

Master of Physician Assistant Studies (M.P.A.S.)
Physician Assistant Studies (MPA)

Master of Science in Bioinformatics and Computational Biology (M.S.B.C.B.)
Bioinformatics and Computational Biology (BCB)
Master of Science in Biotechnology (M.S.B.)
Biotechnology (MSB)

Master of Science in Health Informatics (M.S.H.I.)
Health Informatics (HIF)
Health Analytics (BHAP)

Master of Science in Medical Sciences (M.S.M.S.)
Medical Sciences (MSG)
Aging and Neuroscience (ANS)
Athletic Training (ATL)
Anatomy (ANA)
Biochemistry and Molecular Biology (BMB)
Clinical and Translational Research (CTR)
Health Science (HSC)
Interdisciplinary Medical Sciences (IMS)
Medical Microbiology and Immunology (MDI)
Metabolic and Nutritional Medicine (MNM)
Molecular Medicine (MLM)
Women’s Health (WSH)

Doctor of Philosophy (Ph.D.)
Medical Sciences (MSG)
Allergy, Immunology and Infectious Disease (AII)
Anatomy (ANA)
Biochemistry and Molecular Biology (BMB)
Clinical and Translational Research (CTR)
Microbiology and Immunology (MMI)
Molecular Medicine (MLM)
Molecular Pharmacology and Physiology (MPY)
Neuroscience (NEU)
Pathology and Cell Biology (PCB)
Pathology and Laboratory Medicine (PLM)
Pharmacology and Therapeutics (PAT)
Physiology and Biophysics (PAB)
Rehabilitation Sciences (RHS)
Chronic Disease (CHD)
Neuromusculoskeletal Disability (NMD)
Veteran’s Health/Reintegration (VHR)

Doctor of Medicine (M.D.)*
Medicine

Doctor of Physical Therapy (D.P.T.)*
Physical Therapy

*professional majors, offered through the Morsani College of Medicine – USF Medical School
Concurrent Degrees:
Biomedical Engineering (Ph.D.) and Medicine (M.D.) Concurrent Degree*
Biotechnology (MS) and Entrepreneurship in Applied Technologies (M.A.)
Medical Sciences (Ph.D.)/Medicine (M.D.) Combined Major
Medicine (MD) / Public Health (M.P.H.)
Physical Therapy (D.P.T.) and Public Health (M.P.H.)
*refer to the USF Medical School or the College of Engineering for information.

Graduate Certificates:
Aging and Neuroscience
Anatomy
Biochemistry & Molecular Biology
Bioinformatics
Biotechnology
Brain Fitness and Memory Management
Cardiovascular Engineering
Clinical Investigation
Health Analytics
Health Informatics
Health Sciences
Integrative Health Coaching
Integrative Oncology
Medical Biochemistry, Microbiology and Immunology
Medicine and Gender
Molecular Medicine
Pathology
Pharmacy Sciences
Scholarly Excellence, Leadership Experiences and Collaborative Training

For the most up to date listing, see:
http://www.usf.edu/innovative-education/programs/graduate-certificates/

COLLEGE REQUIREMENTS
Refer to College for information.
ADVANCED ATHLETIC TRAINING

Master of Science (M.S.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: June 1
Spring: No Admission
Summer: No Admission

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 33
Level: Master’s
CIP Code: 51.0913
Dept Code: OSM
Major/College Codes: AAT/MD
Approved: 201508

CONTACT INFORMATION

College: Medicine
Department: Orthopedics and Sports Medicine
Contact Information: www.grad.usf.edu

USF Athletic Training Admissions Office – Professional Degree Program
Attn: Angela Moore
13220 USF Laurel Drive, MDF 5th Floor, MDC106,
Tampa, FL 33612

MAJOR INFORMATION

The Master of Science in Advanced Athletic Training has an emphasis on youth sports injury and other advanced athletic training competencies. This post-professional major is directed towards students either who hold the athletic training credential issued by the Board of Certification (BOC) or who are BOC-eligible or have equivalent athletic training professional preparation and wish to seek an advanced degree. This major is designed to provide students with a post-professional degree in Advanced Athletic Training with an emphasis on youth sports injury. For information on tuition costs, please contact the Department.

Major Research Areas:
Athletic training, youth sports injury

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- A bachelor’s degree from a regionally accredited university
- Board of Certification (BOC)-certified or equivalent (i.e. certified athletic trainer, recent graduate from CAATE-accredited Athletic Training Program, Canadian Athletic Therapist certification)
- Minimum overall grade-point average of 3.00 out of a possible 4.00 with a minimum grade-point average of 3.00 in Athletic Training courses
- Completion of GRE on record
CURRICULUM REQUIREMENTS

Total Minimum Hours: 33 credit hours

Core Requirements
- ATR 6236 3 Pediatric Sports Medicine
- ATR 6235 3 Motor Development & Skill Acquisition
- ATR 5605 3 Youth Injury Epidemiology
- ATR 5515 3 Administrative Aspects of Injury Prevention Programs
- ATR 6615 3 Evidence Based Medicine, Research & Writing
- ATR 5508 3 Contemporary Issues in Athletic Training *(Includes 5 days on campus in Tampa)*
- ATR 6116 3 Preventing Sudden Death in Youth Sports Settings
- ATR 5319 3 Rehabilitation Considerations for Children
- ATR 6617 3 Capstone Project I
- ATR 6446 3 Medical Conditions of Adolescents
- ATR 6618 3 Capstone Project II

Non-Thesis
No thesis is required.

Comprehensive Exam: Capstone requirement
The degree will be a non-thesis option, but will require a capstone project for each student, that will be completed during his or her Year 2 (ATR 6617 & ATR 6618). The capstone project will be in lieu of a comprehensive examination. The project could consist of items such as a comprehensive literature review, development of an injury prevention program, systematic review, development of a policies and procedures manual, etc.

Other Requirements
The major is designed to be completed in two years. The format of the major includes 10 courses, which are taught completely online, and one hybrid course that includes an online component and an on-campus (Tampa, Fl) 5-day session in the summer.

COURSES
See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
ATHLETIC TRAINING

Master of Science (M.S.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:

<table>
<thead>
<tr>
<th></th>
<th>Fall</th>
<th>Spring</th>
<th>Summer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admission</td>
<td>No</td>
<td>No</td>
<td>February 15</td>
</tr>
</tbody>
</table>

International applicant deadlines: http://www.grad.usf.edu/majors

Minimum Total Hours: 60
Level: Master’s
CIP Code: 51.0913
Dept Code: OSM
Major/College Codes: ATR/MD

Concentrations: None

CONTACT INFORMATION

College: Medicine
Department: Orthopedics and Sports Medicine

Contact Information: www.grad.usf.edu
www.usfathletictraining.com

MAJOR INFORMATION

The Master of Science in Athletic Training (M.S. in A.T.) major is built around 60 credit hours of required coursework to satisfy the eligibility requirements for the students to sit for the National Athletic Trainers’ Association Board of Certification examination.

Major Research Areas:
Athletic Training, Rehabilitation, Biomechanics, Prevention of Sudden Death in Athletics

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- A bachelor’s degree from a regionally accredited university
- Minimum of 3.00 GPA or equivalent in undergraduate coursework
- Completion of GRE on record
- Meet the technical standards for admission or show potential for accomplished tasks
- Three (3) letters of Recommendation
- Personal statement in 1000 words or less describe primary career goals, what has most directly influenced your choice to become an Athletic Trainer, your attributes related to the field of Athletic Training and why you should be selected in the Athletic Training major.
- Interview (via Skype or on campus) with the Athletic Training faculty and staff
- Must complete a secondary application with ATCAS: https://atcas.liaisoncas.com/applicant-ux/#/login

http://health.usf.edu/medicine/
Prerequisite Courses

- Anatomy and Physiology (2 semesters with lab)
- Medical Terminology
- Nutrition
- Psychology
- Exercise Physiology
- Chemistry (lab preferred not required)
- Physics (lab preferred not required)
- Biology (lab preferred not required)
- Statistics
- Biomechanics/Kinesiology (Recommended not required)
- Technical Writing (Recommended not required)

CURRICULUM REQUIREMENTS

Total Minimum Hours: 60 credit hours

Core Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>ATR 5105C</td>
<td>Athletic Training Techniques</td>
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</tr>
<tr>
<td>ATR 5125</td>
<td>Anatomical Basis of Clinical Practice in Sports Medicine</td>
<td>3</td>
</tr>
<tr>
<td>ATR 5217C</td>
<td>Physical Examination I</td>
<td>4</td>
</tr>
<tr>
<td>ATR 5218C</td>
<td>Physical Examination II</td>
<td>4</td>
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<td>ATR 5348C</td>
<td>Health and Wellness Promotion across the Lifespan III</td>
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<td>ATR 5306C</td>
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<td>ATR 5307C</td>
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<tr>
<td>ATR 5308C</td>
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<td>ATR 5435</td>
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<tr>
<td>ATR 5534</td>
<td>Documentation in Athletic Training</td>
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<td>ATR 5612</td>
<td>Evidence Based Medicine in Athletic Training</td>
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<td>ATR 5815</td>
<td>Clinical Experience in Athletic Training I</td>
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<tr>
<td>ATR 5825</td>
<td>Clinical Experience in Athletic Training II</td>
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<td>ATR 6114</td>
<td>Preventing Sudden Death in Sport I</td>
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<tr>
<td>ATR 6115</td>
<td>Preventing Sudden Death in Sport II</td>
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<td>ATR 6226</td>
<td>Advanced Athletic Training</td>
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<tr>
<td>ATR 6517</td>
<td>Professional Practice</td>
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<td>ATR 6616</td>
<td>Research in Athletic Training</td>
<td>3</td>
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<tr>
<td>ATR 6835</td>
<td>Clinical Experience in Athletic Training III</td>
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<tr>
<td>ATR 6845</td>
<td>Clinical Experience IV</td>
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</tbody>
</table>

*Students are required to complete between 200-300 clinical hours per semester at various assigned clinical sites around the Tampa area. In accordance to accreditation standards, these clinical experiences must be tied directly to academic credit.

**Many students will take advantage of the summer between the 1st and 2nd years to obtain clinical internships in both local and out of town entities.

Non-Thesis

No thesis is required.

Comprehensive Exam: Capstone requirement

The major is a non-thesis option, but requires a capstone project for each student, that will be completed in his or her last semester during the Research in Athletic Training course. The capstone project will be in lieu of a comprehensive examination. The project could consist of items such as a comprehensive literature review, development of an injury prevention program, systematic review, development of a policies and procedures manual, etc. The Athletic Training faculty will approve the contents of individual projects during the Research in Athletic Training course (ATR 6610).
**Other Information:**
Graduation Requirements - Students will complete all 60 hours of didactic coursework with a minimum GPA of 3.00. Students will complete at least 1000 hours of clinical education under an approved Preceptor.

Sequence:

**Year 1**

**Summer**
- AT Techniques 3
- Anat Basis of Clin Prac 3
- Documentation in AT 1

**Fall**
- Physical Exam I 4
- Therapeutic Inter I 4
- Preventing Sudden Death I 2
- Preventing Sudden Death II 2
- Clinical Exp I 3

**Spring**
- Therapeutic Inter II 4
- Physical Exam II 4
- Health and Wellness I 3
- Medical Conditions 3
- Evidence Based Med 2
- Clinical Exp II 3

**Year 2**

**Summer**
- Open time for clinical internships

**Fall**
- Health and Wellness II 1
- Health and Wellness III 1
- Professional Practice 4
- Research in AT 3
- Clinical Exp III 3

**Spring**
- Therapeutic Inter III 1
- Advanced AT 3
- Clinical Exp IV 3

**COURSES**
See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
BIOINFORMATICS AND COMPUTATIONAL BIOLOGY

Master of Bioinformatics and Computational Biology (M.S.B.C.B.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: June 1
Spring: October 15
Summer: February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 36
Level: Masters
CIP Code: 26.1103
Dept Code: MED
Major/College Codes: BCB MD
Approved: 2003

CONTACT INFORMATION

College: Medicine
Department: Molecular Medicine
Contact Information: www.grad.usf.edu

Other Resources:
http://gradaffairs.health.usf.edu/Bioinformatics.html

MAJOR INFORMATION

The Master’s Degree Program in Bioinformatics and Computational Biology at the University of South Florida represents a multi-college partnership and a truly interdisciplinary collaboration. Participating departments include the Departments of Biochemistry & Molecular Biology in the Morsani College of Medicine, Mathematics in the College of Arts and Sciences, Computer Sciences and Engineering and the Division of Biomedical Engineering in the College of Engineering, Epidemiology and Biostatistics in the College of Public Health and Information Systems and Decision Sciences in the College of Business Administration. The major is designed to meet the increasing demand for trained people in this emerging area, which crosses the traditional fields of biological, mathematical and computer sciences. The major, therefore, builds on and complements the current strengths of the university.

The goal of the Master’s Degree Program in Bioinformatics and Computational Biology is to provide students enrolled in the major with high quality training and education that will prepare them for careers in science, industry, health care and education. The curriculum has been designed accordingly and provides the theoretical background, the practical training and, with the internships, the "real life" experience, which will equip students with the essential tools for a successful career in the field of Bioinformatics and Computational Biology.

The Master’s Degree Program in Bioinformatics & Computational Biology is designed for 36 credit hours to be obtained during one to two years of study. Core courses will provide the foundation and basics before advanced work, including electives, and a Master's thesis or internship will be pursued. The curriculum is flexible and will be tailored to the individual student’s background, interests and career goals. However, electives must be selected from at least two of the participating departments to assure breadth of training.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- A bachelor’s degree or equivalent from a regionally accredited university
- Minimum overall grade-point average of 3.00 out of a possible 4.00 with a minimum grade-point average of 3.00 in the sciences
- Graduate Record Examination*
- Completed pre-requisites in:

http://health.usf.edu/medicine/
The GRE may be waived in special circumstances where the applicant can demonstrate substantial bioinformatics experience. This experience includes (but is not limited to) 2-3 years of research experience in academic or industrial settings working on bioinformatics analysis of biological data, or software development (preferentially in biological or bioinformatics fields), or participation in research projects leading to published papers. The decision on the waiving of GRE will be at the Graduate Director’s discretion.

CURRICULUM REQUIREMENTS

Total Minimum Hours - 36

Core Requirements – 28
Electives – 8

Prerequisites:
Calculus I-III, linear algebra, biostatistics, at least "C" and "Maple" or "Mathematica" or "MATH-CAD", one year of general biology and one year of organic chemistry.

CORE REQUIREMENTS

Required courses: 28

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<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tr>
<td>GMS 7930</td>
<td>Principles of Molecular Medicine Sec I &amp; II</td>
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<td>GMS 7930</td>
<td>Python Programming</td>
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<td>BCH 6886</td>
<td>Fundamentals of Structural Bioinformatics</td>
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<td>GMS 7930</td>
<td>Applied Bioinformatics</td>
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<tr>
<td>BSC 6932</td>
<td>Computational Biology</td>
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<td>GMS 6901</td>
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<td>PHC 6050</td>
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<tr>
<td>BSC 6942</td>
<td>Bioinformatics Internship</td>
<td>4</td>
</tr>
<tr>
<td>MAT 5932</td>
<td>Selected Topics: Combinatorics/Graph Theory</td>
<td>3</td>
</tr>
</tbody>
</table>

Students who can demonstrate significant prior training in any required course can, at any time during their studies, with written approval of the Graduate Director, replace the course with a major elective course.

ELECTIVES 8
Students select from the lists below, or other course as approved by Graduate Director.
SEQUENCE

Required Courses:

FALL
  GMS 7930 Basic Principles of Molecular Medicine Sec I & II 4cr
  MAT 5932 Selected Topics: Combinatorics/Graph Theory 3 cr
  GMS 6091 Research Ethics 1cr

SPRING
  BCH 6886 Fundamentals of Structural Bioinformatics 4 cr
  PHC 6050 Biostatistics I 3cr
  BSC 6932 Computational Biology 3 cr

SUMMER
  GMS 7930 Applied Bioinformatics 3 cr
  GMS 7930 Python Programming 3 cr
  BCH 6952 Bioinformatics Internship (all semesters) 4 cr – 6 cr

Electives

Science/COM:
  BCH 6135 Methods In Molecular Biology 4
  GMS 6114 Vaccines and Applied Immunology 2
  GMS 6194 Biotechnology Forum—R&D in Florida’s Biotech Companies 1
  GMS 6933 Case Studies: Intellectual Property in Biotechnology 2
  GMS 6141 Basic Medical Microbiology/Immunology 3
  CIS 6930 Advanced Data Structures 3
  MAT 6932 Sel. Topics in Bioinformatics & Comp. Biology 3
  GMS 7930 Selected Topics 3
  GMS 7939 Graduate Seminar 1
  GMS 6847 Translational Biotechnology 3
  GMS 7910 Directed Research 1-4
  GMS 6101 Molecular and Cellular Immunology 3
  BHC 6746 Structural Biology 3
  BCH 6227 Molecular Basis of Disease 4
  GMS 6103 Found-Med Microbiology and Immunology 4
  GMS 6107 Advances in Virology 2

Management Information Systems/COBA:
  ISM 6124 Advanced Systems Analysis and Design 3
  ISM 6218 Advanced Database Management 3
  ISM 6225 Distributed Information Systems 3
  ISM 6930 Data Warehousing and Data Mining 3
  ISM 6930 Information Technology in Medical Care 3

Computer Science and Engineering/Biomedical Engineering/CE:
  COT 6405 Introduction to the Theory of Algorithms 3
  CEN 6016 Software Engineering 3
  CAP 5625 Introduction to Artificial Intelligence 3
  CAP 6638 Pattern Recognition 3
  CAP 5400 Digital Image Processing 3
  ESB/CIS 6930 Bioinformatics in Biomedical Engineering 3

Mathematics/CAS:
  STA 5326 Mathematical Statistics 3
  MAD 5305 Graph Theory 3
  STA 5166 Computational Statistics 3
  MAT 6939 Graduate Seminar 2

http://health.usf.edu/medicine/
Bioinformatics and Computational Biology (M.S.B.C.B.)

Epidemiology & Biostatistics/CPH:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHC 6051</td>
<td>Biostatistics II</td>
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</tr>
<tr>
<td>PHC 6053</td>
<td>Categorical Data Analysis</td>
<td>3</td>
</tr>
<tr>
<td>PHC 6054</td>
<td>Design of Experimental Studies for Health Researchers</td>
<td>3</td>
</tr>
<tr>
<td>PHC 6057</td>
<td>Biostatistical Inference I</td>
<td>3</td>
</tr>
</tbody>
</table>

Comprehensive Exam

As an alternative to a Master’s Comprehensive Exam, Bioinformatics Master’s students will have to complete a practical internship and theoretical assignment, which will both require the successful application of the knowledge they have acquired during their formal training. Required are:

- An internship with a written and an oral internship report and
- A review paper providing an overview of recent advancements in an area of bioinformatics of the student’s choice.

Thesis

Complete M.S. Thesis Project or Internship 4-6

Students must maintain an overall average of 3.00 (“B”).

COURSES

See http://ugs.usf.edu/course-inventory
BIOTECHNOLOGY

Master of Science in Biotechnology (M.S.B.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: June 1
Spring: October 15
Summer: February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 36
Level: Masters
CIP Code: 26.1201
Dept Code: MED
Major/College Codes: MSB MD
Approved: 2007

CONTACT INFORMATION

College: Medicine
Department: Molecular Medicine
Contact Information: www.grad.usf.edu
biotech@health.usf.edu
Other Resources:
Website:
http://gradaffairs.health.usf.edu/biotechnology.html

MAJOR INFORMATION

The USF Master’s Degree Program in Biotechnology represents a multi-college partnership and a truly interdisciplinary collaboration. Participating colleges include the Morsani College of Medicine, the College Of Engineering, the College Of Public Health, the College of Arts And Sciences and the College of Business Administration. The major is designed to meet the increasing demand for trained people in this exploding area, which crosses the traditional fields of biological, chemical, engineering, health and computer sciences. The curriculum has been designed accordingly and provides the theoretical background, the practical training and, with the internships, the “real life” experience, which will equip students with the essential tools for a successful career in the field of biotechnology. In 2008, the USF Biotechnology major was recognized by the Council of Graduate Schools as Professional Science Master’s Program. Graduates take jobs in the Biotechnology Industry or move on to a Ph.D. Degree Program, Medical School, Dental School, Veterinary School or Pharmacy School.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below. The USF Biotechnology major will be available for full-time and part-time enrollment. In order to be considered for admission to the Master’s degree program in Biotechnology, applicants must fulfill the following requirements:

Administrative Pre-Requirements:

- A bachelor’s degree
- A minimum undergraduate GPA of 3.00 on a 4.00 scale
- A GRE test score
- Two letters of recommendation
- Statement of purpose, indicating how the major would suit the student’s interests and serve his/her professional goals
- Complete transcripts of undergraduate work and any previous graduate work
- International students need an official transcript evaluation, see Office of Admissions
- A completed USF Application to Graduate Studies

http://health.usf.edu/medicine/
Major Pre Requirements:
A good foundation in biochemistry, molecular biology and genetics, i.e. a bachelor’s degree in either the biological or chemical sciences or at least one year of studies in those disciplines would be the optimal preparation for admission to the major in Biotechnology. However, the faculty of the USF Biotechnology major is aware that not all applicants who are interested in pursuing this degree will have this formal background. Instead, some might have accumulated substantial knowledge in one of these disciplines during their work as laboratory technicians, engineering assistants or environmental or public health service providers. Those students would be ideally suited to start their graduate education with a Graduate Certificate in Biotechnology that is also offered by the Department of Molecular Medicine in the Morsani College of Medicine.

http://www.usf.edu/innovative-education/programs/graduate-certificates/biotechnology.aspx

The Biotechnology Graduate Certificate Degree has less stringent entrance requirements (a GRE is not required) but its successful completion will serve several purposes:
- It will provide the students with a certificate of advanced studies independent of prospective additional studies in the Biotechnology major,
- It will serve as a complete package of fulfilled pre requirements for admission into the Biotechnology major,
- 12 credit hours of the Biotechnology Certificate can be transferred into the major.

CURRICULUM REQUIREMENTS

Total Minimum Hours 36 credit hours

The Master's Degree Program in Biotechnology is designed for 36 credit hours, which can be obtained in 3 semesters of study. The major will be available for full-time and part-time enrollment. Seven core courses will provide the foundation and basics before advanced work, including four electives and an internship, will be pursued. The curriculum is flexible and can be tailored to the individual student’s background, interests and career goals.

The core courses include introductory courses in biochemistry, molecular and cellular biology, introduction to biotechnology, bioinformatics, biotechnology and bioethics, Translational Biotechnology and a seminar on current topics in biotechnology. Most of these courses are part of the current graduate curricula in the involved colleges. Student will have the option to choose four electives out of a total of 22 electives that are contributed by five participating colleges. The electives are organized in four different categories i.e. science, engineering, public health and business/law and the students will be free to select according to their interests and career plans.

Students must maintain an overall average of 3.00 (“B”)

CORE REQUIREMENTS

Required Courses: 31 hours
GMS 7930 Basic Principles in Molecular Medicine Sec I & II 4cr
BCH 6135C Methods in Molecular Biology 4cr
BSC 6436 Intro to Biotechnology 3cr
EIN 6106 Technology and Law 3cr
GMS 6847 Translational Biotechnology 3cr
BSC 6437 Biotechnology and Bioethics 3cr
BCH 6886 Fundamentals of Structural Bioinformatics 4cr
GMS 7930 Biotech Forum 1cr
GMS 6943 Biotechnology Internship 3cr
GMS 7930 Python Programming 3cr

Students who can demonstrate significant prior training in any required course, can at anytime during their studies, with written department approval, replace a course with an elective.

Electives: 5 hours
Students select from the lists below, or other course as approved by Graduate Director.
SEQunce
Required Courses:

<table>
<thead>
<tr>
<th>Semester</th>
<th>Hours</th>
<th>Courses</th>
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<tbody>
<tr>
<td>Fall Semester</td>
<td>14</td>
<td>GMS 7930 Basic Principles in Molecular Medicine Set I &amp; II 4</td>
</tr>
<tr>
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<td></td>
<td>BSC6436 Introduction to Biotechnology 3</td>
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<tr>
<td></td>
<td></td>
<td>BCH 6135C Methods in Molecular Biology 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EIN 6106 Technology and Law 3</td>
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<tr>
<td>Spring Semester</td>
<td>11</td>
<td>GMS 7930 Biotech Forum 1</td>
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<tr>
<td></td>
<td></td>
<td>GMS 6847: Translational Biotechnology 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BSC 6437: Biotechnology and Bioethics 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BCH 6886 Fundamentals of Structural Bioinformatics 4</td>
</tr>
<tr>
<td>SUMMER</td>
<td>6</td>
<td>GMS 7930 Python Programming 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GMS 6943 Biotechnology Internship (all semesters) 3</td>
</tr>
</tbody>
</table>

Electives

Science:
- GMS 7930 Stem Cells in Brain Repair 3
- GMS 6513 Principles of Pharmacology and Therapeutics 3
- GMS 7930 Aging and Neuroscience 3
- GMS 6114 Vaccines and Applied Immunology 2
- GMS 7939 Graduate Seminar 1
- GMS 6141 Basic Medical Microbiology/Immunology 3
- GMS 6115 Medical Parasitology and Mycology 3
- GMS 6110 Microbial Pathogenesis and Host parasite interactions 3
- BCH 6746 Structural Biology 3
- GMS 6103 Foundations in Med Microbiology & Immunology 4
- GMS 7930 Applied Bioinformatics 3
- BCH 6627 Molecular Basis of Disease 4
- GMS 6101 Molecular Cellular Immunology 3
- GMS 6012 Basic Medical Genetics 3
- GMS 6107 Advances in Virology 2
- GMS 7930 FDA Regulations 2
- GMS 7910 Directed Research 1-4

Engineering:
- BME 6107 Biomaterials I: Material Properties 3
- BME 6108 Biomaterials II: Biocompatibility 3
- BME 6634 Biotransport Phenomena 3
- ECH 6417 Bioseparations 3
- ECH 5740 Theory and Design of Bioprocesses 3
- BME 5040 Pharmaceutical Engineering 2
- ENV 6667 Environmental Biotechnology 3

Public Health:
- PHC 6310 Environmental Occupational Toxicology 3
- PHC 6050 Biostatistics I 3
- PCH 6051 Biostatistics II 3
- PHC 6000 Epidemiology 3
- PHC 6017 Design and Conduct of Clinical Trials 3

Business/Law:
- EIN 6186 Strategic Market Assessment for New Technologies 3
- ENT 6016 New Venture Formation 3
Project or Thesis/Dissertation:
As an alternative to a Master's Comprehensive Exam, biotechnology Master's students will have to complete a practical internship and theoretical assignment which will both require the successful application of the knowledge they have acquired during their formal training. Required are:

- an internship with a written and an oral internship report and
- a review paper providing an overview of recent advancements in an area of biotechnology of the student's choice.

COURSES
For more information on individual courses, please see [http://ugs.usf.edu/course-inventory](http://ugs.usf.edu/course-inventory) or contact the department directly: biotech@health.usf.edu
BIOTECHNOLOGY AND
ENTREPRENEURSHIP IN APPLIED TECHNOLOGIES

Concurrent Degrees:
Master of Science in Biotechnology (M.S.B.) Degree and
Master of Science in Entrepreneurship in Applied Technologies (M.S.)

DEGREE INFORMATION

Contact Information:
Colleges: Business and Medicine
Department: Center for Entrepreneurship and Molecular Medicine

CONTACT INFORMATION

Refer to individual Majors for deadlines
Minimum Total Hours: 57
Level: Masters
CIP Code: 26.1201
Dept Code: MED
Major/College Codes: MSB MD

MAJOR INFORMATION

The Concurrent Degrees in Biotechnology and Entrepreneurship is the combination of two existing majors that allows students to obtain two Master’s degrees in a concurrent rather than sequential effort. The time commitment will be about three years with a total of 57 credit hours. The combination of a Master’s in Biotechnology with a Master’s in Entrepreneurship educates students to understand the scientific process and its challenges and at the same time provides the training that will enable them to facilitate the translation of scientific data from mind to market. This combination makes graduate students outstandingly versatile and thereby lays an essential step-stone for their future success. The Biotechnology Major has also been recognized as a “Professional Science Master’s Program” by the U.S. Council of Graduate Schools.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

Students will have to apply individually to each major. Admission to one major does not automatically grant admission to the other major. Once the student has been admitted to both majors, he/she seeks permission from the Graduate Directors of both majors for concurrent crediting of 9 credit hours; the USF Office of Graduate Studies provides a form sheet for this process. For admission students must have:

- A bachelor's degree with a minimum undergraduate GPA of 3.0 on a 4.0 scale
- A minimum GRE test score of at least 500 verbal and at least 600 quantitative, can be waived in some cases
CURRICULUM REQUIREMENTS

A total of 57 credits is required for graduation with a Concurrent Master’s in Biotechnology and Entrepreneurship. Beyond the shared crediting of 9 credit hours, all graduation requirements of the individual majors apply.

Course Requirements:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GMS 6200</td>
<td>Biochemistry and Molecular and Cellular Biology</td>
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<td>BSC 6436</td>
<td>Intro to Biotechnology</td>
<td>3</td>
</tr>
<tr>
<td>BCH 6888</td>
<td>Bioinformatics</td>
<td>3</td>
</tr>
<tr>
<td>GMS 6095</td>
<td>Principles of Intellectual Property</td>
<td>3</td>
</tr>
<tr>
<td>GMS 6847</td>
<td>Translational Biotechnology</td>
<td>3</td>
</tr>
<tr>
<td>BCH 6070</td>
<td>Biotechnology and Bioethics</td>
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<tr>
<td>Elective</td>
<td>Elective from Biotechnology Major</td>
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<tr>
<td>GMS 7939</td>
<td>Graduate Seminar</td>
<td>1</td>
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<tr>
<td>EIN 6106</td>
<td>Technology and Law</td>
<td>3</td>
</tr>
<tr>
<td>GEB 6115</td>
<td>New Venture Formation</td>
<td>3</td>
</tr>
<tr>
<td>GEB 6930</td>
<td>Fund of Venture Cap Priv Equity</td>
<td>3</td>
</tr>
<tr>
<td>EIN 6930</td>
<td>New Product Development</td>
<td>3</td>
</tr>
<tr>
<td>GMS 6943</td>
<td>Biotechnology Internship (140 contact hrs minimum)</td>
<td>3</td>
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<tr>
<td>GEB 6930</td>
<td>Strategies in Entrepreneurship</td>
<td>3</td>
</tr>
<tr>
<td>EIN 6430</td>
<td>Overview of Regulated Industries</td>
<td>3</td>
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<tr>
<td>GEB 6930</td>
<td>Strategies in Market Assessment</td>
<td>3</td>
</tr>
<tr>
<td>GEB 645</td>
<td>Social, Ethical, Legal Systems</td>
<td>3</td>
</tr>
<tr>
<td>GEB 6116</td>
<td>Business Plan Development</td>
<td>3</td>
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<td>GEB 6930</td>
<td>Adv Topics in Entrepreneurship/Internship</td>
<td>3</td>
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<td>GEM 7930</td>
<td>Biomedical Ethics</td>
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<td>GMS 6141</td>
<td>Basic Medical Microbiology/Immunology</td>
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</tr>
<tr>
<td>GMS 6115</td>
<td>Medical Parasitology and Mycology</td>
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<tr>
<td>GMS 6110</td>
<td>Microbial Pathogenesis and Host Parasite Interaction</td>
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</tbody>
</table>

COURSES

See [http://ugs.usf.edu/course-inventory](http://ugs.usf.edu/course-inventory) for more information on individual courses.

For more information on individual courses, please see [http://ugs.usf.edu/course-inventory](http://ugs.usf.edu/course-inventory) or contact the department directly: biotech@health.usf.edu
HEALTH INFORMATICS

Master of Science in Health Informatics (M.S.H.I.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
- Fall: February 15
- Spring: October 15
- Summer: February 15

Minimum Total Hours: 32
Level: Masters
CIP Code: 51.2706
Dept Code: MED
Major/College Codes: HIF/MD
Approved: 2013

Concentrations:
Healthcare Analytics (BHAP)

CONTACT INFORMATION

College: Medicine
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Master of Science in Health Informatics degree offers a curriculum that integrates the domains of information science, information resources management and health care organization and management.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- $65 non-refundable application fee
  The breakdown of this fee is as follows:
  - $30.00 USF’s Application Fee
  - $35.00 Transcript Procurement Fee

- A bachelor’s degree from a regionally-accredited university in the biological, chemical, computer or management information sciences or other appropriate field, or the equivalent bachelors and/or graduate degrees from a foreign institution.
- Minimum overall grade-point average of 3.00 out of a possible 4.00 with a minimum grade point average of 3.00 in the sciences
- Transcripts from all colleges and universities attended
- Resume
- Two Letters of Recommendation
- While these are not required, GRE, MCAT or VAT standardized test scores or evidence of substantial health informatics experience can be submitted to enhance an application.
- An example is if a student has a GPA below 3.00 and wishes to prove he will be a positive addition to the school.

Note: F-1 student visa regulations allow students to enroll in only one 3-credit hour online/distance learning course per the official full-time equivalent for the degree level of study. Therefore, the F-1 visa is not appropriate for any major that is offered completing via distance learning or online courses. International students may pursue an online major from outside the US, in which case an I-20 is not required.
Applicants who do not require a visa who are from countries where English is not the official language must
demonstrate proficiency in English* in one of the following ways

- By providing scores of 79 or higher on the Test of English as a Foreign Language (TOEFL iBT)
- By providing a score of 6.5 or higher on the International English Language Testing System (IELTS)
- By earning a score of 500 (or equivalent) on the GRE Verbal Exam
- By earning a baccalaureate or higher degree at a regionally accredited institution in the U.S.
- By earning a degree at a foreign institution where English is the language of instruction (must be
documented on the transcript)

Proof of Residency

a. Applicants who are not U.S. citizens, but are residing in the U.S., must provide a copy of a U.S. Visa or
permanent resident card.
   i. The following VISA types are not eligible to take classes in these majors:
      - F-1
      - F-2
      - B-1/B-2
      - C (transit visa only)
      - D
      - J-1 student
      - M-1
      - M-2
      - The other categories could be admitted - subject to review of ability to engage in
study while in the US.
   ii. USF cannot issue an I-20 for a student visa to pursue this major. International applicants who
do not require a visa and whose current visa status allows study can apply as well as students
who intend to take the entire degree from outside the US. Please note the visa waiver major
and the B1/B2 visa do not allow study in this type of major.

b. Applicants who were born outside of the U.S. but are now U.S. citizens are required to submit proof of
citizenship (naturalization paperwork or a copy of a passport).

All foreign transcripts that are not in English must be accompanied by a certified English translation and a course-by-
course credential evaluation from any National Association of Credential Evaluators, Inc (NACES) or the Association of
International credential Evaluators, Inc. (AICE) approved agency certifying equivalency to the U.S. degree. Documents
signed by a notary or other public official with no educational affiliation will not be accepted.

CURRICULUM REQUIREMENTS

<table>
<thead>
<tr>
<th>Total Minimum Hours</th>
<th>32 credit hours</th>
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<tbody>
<tr>
<td>CORE REQUIREMENTS</td>
<td>26 hours</td>
</tr>
<tr>
<td>Required Courses</td>
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<tr>
<td>HIM 6667</td>
<td>Foundation in Management Information Systems 3</td>
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<tr>
<td>HIM 6017</td>
<td>Legal Aspects of Health Information Systems 3</td>
</tr>
<tr>
<td>ISM 6930</td>
<td>Selected Topics: Health Data Management 3</td>
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<tr>
<td>HIM 6018</td>
<td>e-Healthcare Ethics 2</td>
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</table>

Students select either the General Pathway or the Healthcare Analytics Concentration:

General Pathway Course Requirements: (15 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>HIM 6840</td>
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<td>HIM 6118</td>
<td>Introduction to Health Informatics 3</td>
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<tr>
<td>HIM 6350</td>
<td>E-Medicine Business Models 3</td>
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<tr>
<td>HIM 6114</td>
<td>Integrated Electronic Medical Records 3</td>
<td></td>
</tr>
<tr>
<td>HIM 6320</td>
<td>Managerial Communications 3</td>
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</tbody>
</table>
Healthcare Analytics Concentration (15 hours):

- HIM 6116 Introduction to Healthcare Analytics 3
- HIM 6200 Health Data Visualization 3
- HIM 6120 Statistics for Healthcare Analytics 3
- HIM 6665 Healthcare Data Mining and Predictive Analytics 3
- HIM 6810 Health Outcomes Research 3

Electives (6 hours)

General Pathway Electives (6 hours)

Two or more required:
- HIM 6137 Pharmacy Informatics 3
- HIM 6943 Health Informatics Internship 3
- HIM 6908 Health Informatics Independent Study 3
- MHS 6645 Mental Health Informatics 3
- PHC 6934 Selected Topics in Public Health: Medical Terminology 3
- ISM 6930 Selected Topics in MIS: Health Systems Analysis & Design 3
- ISM 6930 Selected Topics in MIS: Health Data Mining 3
- PHC 6050 Biostatistics I 3
- BCH 6888 Bioinformatics 3

Concentration Electives (6 hours)

Two or more required:
- HIM 6668 Healthcare Decision Support 3
- HIM 6669 Applied Healthcare Analytics 3
- HIM 6908 Health Informatics Independent Study 3
- HIM 6670 Advanced Healthcare Analytics Applications 3
- HIM 6943 Health Informatics Internship 3
- HIM 6930 Medical Terminology in Health Informatics 3

Comprehensive Exam

Internship Project

For students who select the Internship option, each student will be assigned a faculty director who will oversee the internship project. Students will formally present their projects which will be shared with all major participants. A minimum of thirty-two (32) semester hours are required and entail a minimum of 480 contact hours.

COURSES

See [http://ugs.usf.edu/course-inventory](http://ugs.usf.edu/course-inventory)
MEDICAL SCIENCES

Master of Science in Medical Sciences (M.S.M.S.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: June 1

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 30
Level: Masters
CIP Code: 26.9999
Dept Code: MED
Major/College Codes: MSG MD
Approved: 1983

Concentrations:
Aging and Neuroscience (ANS)
Anatomy (ANA)
Biochemistry and Molecular Biology (BMB)*
Clinical and Translational Research (CTR)
Health Science (HSC)
Interdisciplinary Medical Sciences (IMS)
Medical Microbiology and Immunology
Metabolic and Nutritional Medicine*
Molecular Medicine (MLM)
Women’s Health (WSH)
* closed for admissions; not accepting applications

CONTACT INFORMATION

College: Medicine
Department: Medical Sciences

Contact Information: www.grad.usf.edu
Website: http://health.usf.edu/medicine/graduatestudies/index.htm

MAJOR INFORMATION

The major is designed to provide students with advanced training in either Anatomy, Biochemistry, Medical Microbiology, or Pharmacology. Students successfully completing the major will have a foundation that will prepare them for a professional degree in biomedical science such as a M.D. or Ph.D. or qualify them to work as teachers or research assistants in academia or in the private sector. The major will provide a solid core of training in the latest findings, concepts, and experimental techniques. Students will be allowed to individualize their training through elective courses and will have the opportunity to conduct laboratory research. The major is intended for students who wish training beyond a baccalaureate degree but do not wish to commit to a Ph.D. major or do not meet the qualifications required for admissions into a M.D. or Ph.D. major.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- A bachelor’s degree or equivalent from a regionally accredited university
- Minimum overall grade-point average of 3.00 out of a possible 4.00 with a minimum grade-point average of 3.00 in the sciences*
- GRE or MCAT

http://health.usf.edu/medicine/
• Completed pre-requisites in:
  o General biology (1 year)
  o General chemistry (1 year)
  o General physics (1 year)
  o Organic chemistry (1 year)
  o Quantitative analysis (1 course)
  o Mathematics including integral and differential calculus

APPLICATION PROCEDURES
Please refer to http://health.usf.edu/medicine/graduatestudies/mscus/applyDomestic.htm?wbc_purpose=Basic

CURRICULUM REQUIREMENTS

Programs of Study are individualized according to the educational and research interests and goals.

Total Minimum hours - 30

Core Requirements

Core Course: (2 hours minimum)
GMS 6871 Health Sciences Ethics 2

Pre-Professional Track: (30 hours minimum in addition to core requirement)
Students are required to complete the following, chosen in consultation with Graduate Advisor.
GMS 6605 Basic Medical Anatomy 3
GMS 6630 Basic Medical Histology 3
GMS 6201 Basic Medical Biochemistry 3
GMS 6706 Basic Medical Neuroscience 3
GMS 6012 Basic Medical Genetics 3
GMS 6141 Basic Medical Immunology & Microbiology 3
GMS 6433 Clinical Correlations in Molecular Medicine 3
GMS 6440 Basic Medical Physiology 3
GMS 6111 Basic Medical Pathology 3
GMS 6505 Basic Medical Pharmacology 3

Electives Course
GMS 6000 Medical Sciences Success Skills 1-3

Concentration Options:
Students who prefer to take a Concentration instead of the Pre-Professional Track may choose from the following concentrations. Requirements for each are listed on the following pages:

  Aging and Neuroscience (ANS)
  Anatomy (ANA)
  Athletic Training (ATL)
  Clinical and Translational Research (CTR)
  Health Science (HSC)
  Interdisciplinary Medical Sciences (IMS)
  Metabolic and Nutritional Medicine
  Molecular Medicine (MLM)
  Women’s Health (WSH)
CONCENTRATIONS

AGING AND NEUROSCIENCE (ANS)

Neuroscience is one of the fastest growing fields of biomedical sciences. There is an increasing demand for health care professionals and research scientists to meet the needs of the increasing number of the aging population affected with neurodegenerative diseases such as Alzheimer's disease. The Aging and Neuroscience concentration within the master's degree program in Medical Sciences has been developed in collaboration with the School of Aging Studies to integrate neuroscience as well as biomedical aging in one-year curriculum. The major is targeted for students interested in pursuing a medical, professional degree or further graduate education in biomedical sciences and in aging studies. The core curriculum focuses on basic and applied neuroscience, with emphasis on neurodegenerative diseases. Classes on research methods, stem cell biology, neuropharmacology and other basic biomedical sciences, as well as several classes offered by the School of Aging Studies are offered as electives. The students can elect to engage in a research component where they will be supervised by mentors from the USF research faculty or affiliated institutes. Graduates can pursue further professional training in medicine and allied health sciences, continue their graduate education in neuroscience or aging studies, or work in the diverse health care fields, especially those catered to the aging population.

Concentration Core Requirement:
GMS6020  Neuroscience (Interdisciplinary)  4-6

Required Courses:
GMS7930  Aging and Neuroscience (Neurosurgery)  3
GMS7930  Neuroscience Seminar Series (Neurosurgery)  1
GEY 6613  Physical Change and Aging (Aging Studies)  3
GMS7910  Aging and Neuroscience Directed Research (neurosurgery)  3-12

All students are required to have a minimum of 20 hours of didactic lectures, and a minimum of 6 hours of directed research. Only students who opt for a research paper must and can accumulate a minimum of 15 hours of directed research and laboratory rotations in their mentor/mentors’ laboratories.

Electives
A minimum of 10 credit hours must be fulfilled by COM elective courses.

Morsani College of Medicine Courses
GMS6091  Ethics and Skills in Research (Interdisciplinary)  2
GMS6404  Systems Neurophysiology (Physiology)  4
GMS6602  Neural Correlates of Behavior (Pathology and Cell Biology)  3
GMS6610  Advanced Neuroanatomy (Pathology and Cell Biology)  4
GMS6200  Biochemistry, Molecular & Cellular Biology (Molecular Medicine)  5
GMS7930  Aging/Neuroscience Lab Rotations (Neurosurgery)  3
GMS6735  Neuropharmacology (Pharmacology)  3
GMS7930  Stem Cells in Brain Repair (Neurosurgery)  3
GMS7930  Spec Topics in Alzheimer's Disease (Neurosurgery)  1
NUR6931  Psychoneuroimmunology (Nursing)  3
PCH6050  Biostatistics (Public Health)  3

School of Aging Elective Courses
GEY6600  Human Development  3
GEY5620  Sociological Aspects of Aging  3
GEY6450  Gerontological Research and Planning  3
GEY6614  Psychopathology and Aging I  3
GEY6934  Alzheimer's Diseases Management  3
GEY6616  Mental Health assessment in Older Adults  3

Graduate students must maintain an overall average of 3.00 (B) in all courses.
ANATOMY

Total Minimum Hours -31
In addition to the Core requirements (GMS 6871 – 2 hrs), students complete:

Concentration Core Requirements (27 hours):
GMS 6323 Pathology Case Studies 1 3
GMS 6604 Human Embryology 3
GMS 6605 Basic Medical Anatomy 3
GMS 6326 Pathology Case Studies 4 3
GMS 6609 Advanced Gross Anatomy 4
GMS 6610 Advanced Neuroanatomy 3
GMS 6630 Basic Medical Histology 3
GMS 7930 Selected Topics: Forensic Pathology 3

Concentration Core Electives: one of the following is required:
GMS 6324 Pathology Case Studies 2 2
GMS 6601 Introduction to Laboratory Medicine 2

Electives (Minimum 2 credit hours):
GMS 6671 A Brief History of Medical Sciences 2
GMS7910 Directed Research 2
GMS 6325 Pathology Case Studies 3 2
GMS 6608 Pathology Case Studies 5 2
GMS 6950 Biomedical Science Communication and Instructional Skills 2

BIOCHEMISTRY AND MOLECULAR BIOLOGY
Contact the department for information - Closed for admissions; not accepting applications

CLINICAL AND TRANSLATIONAL RESEARCH (CTR)
Admission Criteria
This is a one-and-a-half to two-year major of both didactic coursework and mentored research. Admission criteria will be to the Scholars in Patient-Oriented Research (SPOR) Program and include the following:

- Must have a doctoral or first professional degree (M.D., D.O., Ph.D., D.D.S., Pharm.D., Dr.P.T., Doctorate of Nursing Practice, Ph.D. in Nursing, or equivalent degrees)
- GRE score will be waived and replaced by a requirement for documentation of a professional doctorate degree.
- NIH eligibility for the SPOR Program requires U.S. citizenship or status as a non-citizen national or lawfully admitted permanent resident of the U.S.
- Applicants will be required to complete a 2-step application process.
  - For Step 1 to enter the SPOR Program there is an online application.
  - Upon acceptance into the SPOR Program, Step 2 of the application process will consist of completing the standard application procedures to become a graduate degree-seeking student in the Master of Science in Medical Sciences degree program.

Concentration Degree Requirements
Minimum of 32 hours of credit, (23 hours core coursework, 6 hours directed research, and remaining 3 required hours in any combination of directed research and/or elective courses, as needed for each SPOR scholar's particular research focus. In addition, each SPOR scholar will be required to submit a first author manuscript based on his/her research project (not a review article) to a peer-reviewed journal, and that manuscript must be judged by an appointed sub-panel of the SPOR Program Executive Committee and Key Faculty to be potentially acceptable for publication. This latter requirement is in lieu of a thesis requirement.
Coursework:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GMS6875</td>
<td>Ethical &amp; Regulatory Aspects of Clinical Research</td>
<td>2</td>
</tr>
<tr>
<td>GMS6840</td>
<td>Cultural Influences &amp; Diversity Issues in Clinical Research</td>
<td>2</td>
</tr>
<tr>
<td>GMS6844</td>
<td>Special Topics: Principles of Patient-Oriented Research</td>
<td>1</td>
</tr>
<tr>
<td>PHC6050</td>
<td>Biostatistics I</td>
<td>3</td>
</tr>
<tr>
<td>PHC6000</td>
<td>Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>GMS6841</td>
<td>Fundamentals of Translational and Team Research</td>
<td>1</td>
</tr>
<tr>
<td>GMS6843</td>
<td>Scientific Communication</td>
<td>2</td>
</tr>
<tr>
<td>BCH6627</td>
<td>Metabolic and Genetic Basis of Disease</td>
<td>3</td>
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<tr>
<td>GMS6905</td>
<td>Grantsmanship I</td>
<td>1</td>
</tr>
<tr>
<td>GMS6906</td>
<td>Grantsmanship II</td>
<td>1</td>
</tr>
<tr>
<td>PHC6020</td>
<td>Design and Conduct of Clinical Trials</td>
<td>3</td>
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<tr>
<td>GMS6921</td>
<td>Colloquium on Building a Successful Academic Patient-Oriented Research Career</td>
<td>1</td>
</tr>
</tbody>
</table>

Mentored Clinical and Translational Research/Directed Research 6
Electives/Mentored Clinical and Translational Research/Directed Research 3

HEALTH SCIENCE (HSC)

100% ONLINE. Health sciences, the study and research of the human body and health-related issues, are critical to our understanding of how humans function. The knowledge gained from these studies is vital to today’s mission of improving health and preventing and curing diseases. In the new millennium, in which science truly complements the art of medicine, advances in the health sciences contribute to our understanding of the structure and function of molecules key to normal body function and the pathogenesis of disease and to design new approaches for diagnosis, treatment and prevention. Recent changes in research and scholarship in the biomedical sciences has directed attention to the development and training of students who are able cross the barriers of traditional disciplines and embrace the concepts of interdisciplinary approaches to biomedical problems. The Health Sciences concentration, within the Master’s of Science degree program in Medical Sciences, has been developed to provide a new interdisciplinary and concentrated program of study that is designed for students interested in either future doctoral professional programs in the biomedical sciences. The major integrates an array of disciplines, including anatomy, biochemistry, histology, physiology, genetics, microbiology, immunology, pathology, pharmacology and ethics to provide a solid medically-relevant foundation. The rigorous major allows students to demonstrate their full academic ability for future graduate majors or medical school. The interdisciplinary major promotes the broad intellectual focus required of future graduate or professional students in the biomedical sciences or health-care related fields. The courses integrate modern distance teaching methods and are designed to improve their academic skills that are critical to their future professional development.

Curriculum

Course Requirements:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GMS6605</td>
<td>Basic Medical Anatomy</td>
<td>3</td>
</tr>
<tr>
<td>GMS6630</td>
<td>Basic Medical Histology</td>
<td>3</td>
</tr>
<tr>
<td>GMS6201</td>
<td>Basic Medical Biochemistry</td>
<td>3</td>
</tr>
<tr>
<td>GMS6706</td>
<td>Basic Medical Neuroscience</td>
<td>3</td>
</tr>
<tr>
<td>GMS6012</td>
<td>Basic Medical Genetics</td>
<td>3</td>
</tr>
<tr>
<td>GMS6141</td>
<td>Basic Medical Immunology &amp; Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>MCB6433</td>
<td>Clinical Correlations in Molecular Medicine</td>
<td>3</td>
</tr>
<tr>
<td>GMS6871</td>
<td>Health Sciences Ethics</td>
<td>2</td>
</tr>
<tr>
<td>GMS6440</td>
<td>Basic Medical Physiology</td>
<td>3</td>
</tr>
<tr>
<td>GMS6111</td>
<td>Basic Human Medical Pathology</td>
<td>3</td>
</tr>
<tr>
<td>GMS6505</td>
<td>Basic Medical Pharmacology</td>
<td>3</td>
</tr>
</tbody>
</table>

http://health.usf.edu/medicine/
INTERDISCIPLINARY MEDICAL SCIENCES (IMS)
This concentration is designed to provide qualified students with advanced training in the sciences basic to the practice of medicine. Students successfully completing the major with this concentration will have a foundation that fosters opportunities in the private sector, teaching, or the pursuit of further advanced degrees. A goal of this concentration is to provide promising medical school applicants an opportunity to develop the knowledge, skills, and attitudes that would enable them to have a career in the medical sciences. Students who perform well during this major could be considered for admission to medical, graduate, or other health professions majors. This concentration provides an opportunity for students interested in graduate work that has a broad medical base. Students will take courses that will provide the same level of depth, breadth and intensity as those taken by a first year medical student. This will allow successful participants to demonstrate their readiness for the rigors of a medical school curriculum. Alternatively, appropriate selection of elective courses will allow any student who completes the major to tailor their educational experience to best suit their future plans and aspirations.

Admission Information:
Applicants must hold a Bachelor’s degree from an accredited institution at the time of entrance into the major. They must have completed at least 1 year each of General Chemistry, Organic Chemistry, General Biology and General Physics and have achieved a total score of at least 22 on the MCAT. Applicants who are deficient in one or more of these requirements, but otherwise meet the College-wide requirements for admission to the Master’s Degree may be considered on a case by case basis.

Total Minimum Hours for the MSMS with a concentration in IMS: 31 hours

Core Courses
GMS 6871 Health Sciences Ethics 2 credits

Required Concentration Courses:
GMS 6418 Musculoskeletal System 3 credits
GMS 6054 Cancer Biology 3 credits
GMS 6004 Introduction to Medical Sciences 5 credits
GMS 6707 Medical Neuroscience 6 credits
GMS 6411 Cardiovascular and Pulmonary Systems 6 credits
GMS 6419 Excretory, Endocrine and Reproductive Systems 6 credits

Elective Courses
Students may select elective courses with the approval of the Graduate Director.
GMS 6110 Microbial Pathogenesis and Host Parasite Interactions 3 credits
GMS 6115 Medical Parasitology and Mycology 3 credits
GMS 6141 Basic Medical Microbiology and Immunology 3 credits
GMS 7930 Selected Topics 1-3 credits
GMS 6908 Medical Sciences Independent Study 1-3 credits

Total minimum hours: 31

MEDICAL MICROBIOLOGY AND IMMUNOLOGY

Core Course
GMS6200C Biochemistry, Cell & Molecular Biology 5

Required Courses
GMS 6100C Medical Microbiology 3
GMS 7930 Medical Parasitology and Mycology 2
GMS 6101 Molecular and Cell Immunology 3
GMS 6107 Adv in Virology 2
GMS 6110 Microbial Pathogenesis and Host-parasite Interactions 3
BCH6411 Biomedical Genomics and Genetics 4
<table>
<thead>
<tr>
<th>Electives</th>
<th>11</th>
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</thead>
<tbody>
<tr>
<td>Select one course of the following (2 hrs minimum)</td>
<td></td>
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<tr>
<td>BCH6935 Grant Writing and Scientific Communication</td>
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<tr>
<td>BSCG6436 Intro to Biotech</td>
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<td>GMS6876 Current Topics in Molecular Medicine</td>
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<td>Select one or more from the following (9 hrs minimum):</td>
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<tr>
<td>GMS7910 Directed Research</td>
<td>3-9</td>
</tr>
<tr>
<td>GMS6114 Vaccines and Applied Immunology</td>
<td>2</td>
</tr>
<tr>
<td>BCH6135C Methods in Molecular Biology</td>
<td>4</td>
</tr>
<tr>
<td>BCH6420 Clinical Correlations in Molecular Medicine</td>
<td>3</td>
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<tr>
<td>Total minimum hours:</td>
<td>32</td>
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**METABOLIC AND NUTRITIONAL MEDICINE – not currently available**

<table>
<thead>
<tr>
<th>Core Courses (2 hours)</th>
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<tbody>
<tr>
<td>GMS 6871 Health Sciences Ethics</td>
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</table>

<table>
<thead>
<tr>
<th>Required Courses:</th>
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<tbody>
<tr>
<td>GMS6455 Clinical Intensives in Metabolic and Nutritional Medicine</td>
</tr>
<tr>
<td>GMS6441 Clinical Approach to Endocrinology</td>
</tr>
<tr>
<td>GMS6543 Diabetes and Coronary Heart Disease</td>
</tr>
<tr>
<td>GMS6751 Integrated Clinical Neurobiology</td>
</tr>
<tr>
<td>GMS6451 Nutrition and Metabolism</td>
</tr>
<tr>
<td>GMS6454 Functional Medicine and Infectious Disease</td>
</tr>
<tr>
<td>GMS6752 Autoimmune Diseases and Cognitive Function</td>
</tr>
<tr>
<td>GMS6340 Laboratory Fundamentals and Adjunct Cancer Therapies</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Electives:</th>
</tr>
</thead>
<tbody>
<tr>
<td>GMS 6240 Metabolic Approaches to Pediatrics</td>
</tr>
<tr>
<td>GMS 6550 Introduction to IV Therapies</td>
</tr>
<tr>
<td>GMS 6310 Toxic Metal and Functional Toxicology</td>
</tr>
<tr>
<td>GMS 6770 A Metabolic Approach to Pain Management</td>
</tr>
<tr>
<td>GMS6753 The Basics of Brain Fitness and Memory Management</td>
</tr>
<tr>
<td>GMS 6331 Stem Cell Biology</td>
</tr>
<tr>
<td>GMS 6456 Integrated Bariatrics</td>
</tr>
<tr>
<td>GMS 7930 Selected Topics</td>
</tr>
<tr>
<td>GMS 6908 Medical Sciences Independent Study</td>
</tr>
<tr>
<td>GMS7910 Directed Research</td>
</tr>
<tr>
<td>GMS 6053 Cancer Prevention</td>
</tr>
<tr>
<td>GMS 6055 Cancer Immunology</td>
</tr>
<tr>
<td>GMS 6408 Cardiovascular Disease</td>
</tr>
<tr>
<td>GMS 6410 Cardiovascular Health</td>
</tr>
<tr>
<td>GMS 6411 Metabolic Cardiology</td>
</tr>
<tr>
<td>GMS 6709 Neuropsychiatry</td>
</tr>
<tr>
<td>GMS 6715 Lifestyle Coaching</td>
</tr>
<tr>
<td>GMS 6716 Nutrition Counseling</td>
</tr>
<tr>
<td>GMS 6717 Co-Active Coaching</td>
</tr>
<tr>
<td>GMS 6718 Integrated Lifestyle Medicine</td>
</tr>
<tr>
<td>GMS 6720 Sports Medicine and Nutrition</td>
</tr>
<tr>
<td>GMS 6755 How the Brain Learns</td>
</tr>
<tr>
<td>GMS 6756 Brain Fitness Therapies</td>
</tr>
</tbody>
</table>
MOLECULAR MEDICINE (MLM)

Considered the vanguard of the new millennium in which science truly complements the art of medicine, molecular medicine strives to understand the molecules key to normal body function and the pathogenesis of disease and to design molecular tools for diagnosis, treatment and prevention. Recent changes in research and scholarship in the biomedical sciences has directed attention to the development and training of students who are able to cross the barriers of traditional disciplines and embrace the concepts of interdisciplinary approaches to biomedical problems. The Molecular Medicine concentration, within the Master’s of Science degree in Medical Sciences, has been developed to provide a novel interdisciplinary and concentrated program of study that is designed for students interested in either future doctoral or professional majors in the biomedical sciences. The major integrates several disciplines, including biochemistry, molecular biology, genetics, genomics, microbiology, immunology, virology and biomedical ethics to provide a solid medically-relevant foundation. The rigorous major allows students to demonstrate their full academic ability for future graduate majors or medical school. The interdisciplinary major promotes the broad intellectual focus required of future graduate students in the biomedical sciences or health-care profession. The courses integrate modern teaching methods with extensive student participation designed to improve their oral and presentation skills that are critical to their future professional development.

Core requirements:

<table>
<thead>
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<th>Course Code</th>
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<tbody>
<tr>
<td>GMS6200C</td>
<td>Biochemistry, Molecular and Cellular Biology</td>
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<tr>
<td>BCH6935</td>
<td>Grant Writing and Scientific Communication</td>
<td>2</td>
</tr>
<tr>
<td>GMS6100</td>
<td>Medical Microbiology</td>
<td>3</td>
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Course Requirements:

<table>
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<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>BCH6411</td>
<td>Biomedical Genomics and Genetics</td>
<td>4</td>
</tr>
<tr>
<td>GMS6101</td>
<td>Molecular and Cellular Immunology</td>
<td>3-4</td>
</tr>
<tr>
<td>GMS6110</td>
<td>Microbial Pathogenesis and Host-Parasite Interactions3</td>
<td>3</td>
</tr>
<tr>
<td>GMS7930</td>
<td>Clinical Correlations in Molecular Medicine</td>
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<tr>
<td>BCH6627</td>
<td>Metabolic and Genetic Basis of Human Diseases</td>
<td>3</td>
</tr>
<tr>
<td>GMS6114</td>
<td>Vaccines and Applied Immunology</td>
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</table>

Electives

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BCH6135C</td>
<td>Methods in Molecular Biology</td>
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<tr>
<td>GMS6104</td>
<td>Cellular Immunology</td>
<td>3</td>
</tr>
<tr>
<td>GMS6107</td>
<td>Advances in Virology</td>
<td>3</td>
</tr>
<tr>
<td>BCH6746</td>
<td>Proteomics and Structural Biology</td>
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<tr>
<td>BCH6888</td>
<td>Bioinformatics</td>
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<td>PHC6050</td>
<td>Biostatistics I</td>
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</tr>
<tr>
<td>BCH6876</td>
<td>Current Topics in Molecular Medicine</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Minimum Hours: 32

WOMEN’S HEALTH (WSH)

This innovative, interdisciplinary concentration, the first in Florida to provide an integrated approach to the subject area of holistic women’s health, is designed to develop leaders in the field of women’s health. The major, with this concentration, has been constructed to prepare students for future educational or research endeavors in graduate or medical schools or health practice institutions, is designed to fulfill the M.S.M.S. Women’s Health Concentration increasing demand for trained individuals in this emerging area, which focuses on gender-specific issues. It is founded on the premise that future health-care providers, researchers and educators will require extensive interdisciplinary training in order to develop novel solutions to current biomedical problems in women’s health. The interdisciplinary curriculum has been designed to provide the background training that will equip students with the essential tools for a successful career in the field of women’s health.

The major, with this concentration, requires a minimum of 32 credit hours, which can be completed in one year of accelerated and intense study. Core courses provide both foundation and advanced training while electives in such topics as reproductive women’s cancers, endocrine mechanisms, clinical nutrition, the business side of medicine and biostatistics, provide students with additional educational opportunities.
Admission Requirements

- A bachelor’s degree or equivalent from a regionally-accredited university in the biological or chemical sciences
- Minimum overall grade-point average of 3.00 out of a possible 4.00 with a minimum grade point average of 3.0 in the sciences
- Graduate Record Examination (MCAT scores can be submitted in lieu of the GRE)

Courses

Core Courses:

- GMS 6871 Health Science Ethics 2
- GMS 6380 Medicine and Gender 3
- GMS 7930 Women’s Health Lab (1-2 Interd.) 2-3
- Elective 2-3 hours
- GMS 6334 Pathobiology of Human Cancer 3
- GMS 6452 Clinical Nutrition 3
- PHC 6532 Women’s Health Issues 3
- GMS 7910 Directed Research (Women’s Health) 3-6 hours Interdisciplinary
- Elective 3

Electives:

- PCH 6050 Biostatistics 3
- GM 7910 Directed Research (Women’s Health) 3-6 hours Interdisciplinary
- Elective 5-6 hours

COURSES

See http://ugs.usf.edu/course-inventory
MEDICAL SCIENCES

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 1

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 90
Level: Doctoral
CIP Code: 26.9999
Dept Code: MED
Major/College: MSG MD
Approved: 1974

Concentrations:
- Allergy Immunology & Infectious Disease (AII)
- Anatomy (ANA)
- Biochemistry and Molecular Biology (BMB) *
- Clinical and Translational Research (CTR)
- Microbiology and Immunology (MMI) *
- Molecular Medicine (MLM)
- Molecular Pharmacology and Physiology (MPY)
- Neuroscience (NEU)
- Pathology and Cell Biology ((PCB)
- Pathology and Laboratory Medicine (PLM)
- Pharmacology and Therapeutics (PAT)
- Physiology and Biophysics (PAB)

*Closed for admissions; not accepting applications

CONTACT INFORMATION

College: Medicine
Department: Medical Sciences
Contact Information: www.grad.usf.edu
Website: http://health.usf.edu/medicine/graduatestudies/index.htm

MAJOR INFORMATION

The major is designed to provide students with a broad knowledge in the basic medical sciences, while preparing them for careers as effective and knowledgeable teachers, as well as productive and versatile researchers. To meet these objectives, students take courses in the medical sciences and related areas, participate in seminars, and receive individual research training. Departmental advisory committees counsel the entering students in planning their first year curriculum. In addition to course work and participation in seminars, first year students are expected to become familiar with ongoing research in their chosen department; when possible, they are encouraged to work on a part-time basis as research assistants in their department. Once the student selects a major professor, a formal dissertation committee is appointed. The dissertation committee assists the student in planning the research and course of study, evaluates the student's progress, supervises the comprehensive examination, and conducts the final dissertation defense.

By the end of the second year, a student has usually completed sufficient course work and met the other research requirements to take the comprehensive qualifying examination. Successful completion of this examination leads to formal admission to candidacy for the Ph.D. degree. The final phase of the major emphasizes research and independent study and leads to a written dissertation. The Ph.D. degree is awarded upon successful completion and oral defense of the dissertation. Departments within the Morsani College of Medicine may have additional requirements that pertain to their respective training program. Contact the department for information.
Major Research Areas:
Allergy, Immunology and Infectious Diseases, Cancer Biology, Cardiovascular Research, Neuroscience & Neurodegenerative Diseases, Diabetes/Metabolic Disorders

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- A bachelor’s degree or equivalent from a regionally accredited university
- Minimum overall grade-point average of 3.00 out of a possible 4.00 with a minimum grade-point average of 3.00 in the sciences
- GRE - Graduate Record Examination (preferred at the 70th percentile or above) The GRE may be waived with MCAT scores and Graduate Director approval.
- Completed pre-requisites in:
  - General biology (1 year)
  - General chemistry (1 year)
  - General physics (1 year)
  - Organic chemistry (1 year)
- Three (3) letters of recommendation
- Personal Interview
- One-two page personal statement
- Research experience preferred

Application Procedures
Please refer to http://health.usf.edu/medicine/graduatestudies/phd/apply_phd.htm

CURRICULUM REQUIREMENTS

Total Minimum Hours: 90 hours
(including 24 minimum directed research hours)

All students are required to successfully complete the following didactic courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GMS 6001</td>
<td>Foundation in Biomedical Sciences</td>
<td>6</td>
</tr>
<tr>
<td>GMS 6091</td>
<td>Responsible Conduct in Research</td>
<td>1</td>
</tr>
<tr>
<td>GMS 6094</td>
<td>Experimental Design &amp; Analysis</td>
<td>3</td>
</tr>
<tr>
<td>GMS 6002</td>
<td>Success Skills for the Biomedical Science Researcher</td>
<td>1</td>
</tr>
<tr>
<td>BCH 6935</td>
<td>Grant Writing &amp; Scientific Communication</td>
<td>2</td>
</tr>
</tbody>
</table>

Students are also required to complete at least one semester of:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GMS 6942</td>
<td>Laboratory Rotations in Biomedical Sciences</td>
<td>1-3</td>
</tr>
</tbody>
</table>

Each student shall complete a minimum of 24 credit hours of didactic course work (excluding journal clubs, seminars, laboratory rotations, directed research, etc.). In addition to the required courses listed above (13 credit hours), the student shall fulfill the 24 credit hour minimum by completing coursework in their chosen concentration. The student will work with his/her advisory and dissertation committees to choose appropriate courses from the course list for their chosen concentration.
CONCENTRATIONS:

ALLERGY, IMMUNOLOGY & INFECTIOUS DISEASE
Research and education in the Ph.D. in Medical Sciences major, concentration in Allergy, Immunology & Infectious Disease is focused on interdisciplinary approaches to the study of the immune system functions properly to rid the body of foreign pathogens and how the immune system can go awry in autoimmunity. The process by which microbes interact with the host to cause disease is also a focus of this major.

ANATOMY

BIOCHEMISTRY AND MOLECULAR BIOLOGY - Closed for admissions; not accepting applications

CLINICAL AND TRANSLATIONAL RESEARCH
Cardiovascular disease is the leading cause of death, in the United States Atherosclerotic coronary artery disease, valvular heart disease, diseases of the heart muscle, electrical disturbances of the heart rhythm, high blood pressure, stroke, and peripheral vascular disease all contribute to this morbidity. According to current estimates, coronary heart disease, high blood pressure, congestive heart failure and stoke affect nearly 58 million Americans. The USF Signature Interdisciplinary Program in Cardiovascular Research is a comprehensive program that brings together resources in heart care, research and education to fight against cardiovascular disease. Clinicians and researchers at USF are working to improve our knowledge of cardiovascular disease in order to develop new methods of prevention and treatment that will make a difference in the lives of patients with cardiovascular disorders.

MEDICAL MICROBIOLOGY AND IMMUNOLOGY - Closed for admissions; not accepting applications

MOLECULAR MEDICINE
Research and education in the Ph.D. in Medical Sciences major, concentration in Molecular Medicine is focused on interdisciplinary approaches to the study of bacteriology, biochemistry, immunology, molecular biology and virology as it relates to human health and disease such as allergy and immune dysfunction, cancer, cardiovascular disorders, infectious diseases and inheritable defects. Training will include a unique interdisciplinary blend of didactic coursework, journal clubs, seminar series, as well as significant research experience.

MOLECULAR PHARMACOLOGY & PHYSIOLOGY
Research and education in the Ph.D. in Medical Sciences major, concentration in Molecular Pharmacology and Physiology is focused on interdisciplinary approaches to the study of the nervous and cardiovascular systems and related disorders, including Alzheimer's disease and other neurodegenerative disorders, cardiovascular disease and stroke, diabetes, and neuropsychiatric disorders such as depression and drug addiction. Training will include a unique interdisciplinary blend of didactic coursework, journal clubs, seminar series, as well as significant research experience.

NEUROSCIENCE
Research and education in the Ph.D. in Medical Sciences major, concentration in Neuroscience is focused on interdisciplinary approaches to the study of the nervous systems and related disorders, including Alzheimer's disease and other neurodegenerative disorders, stroke, and neuropsychiatric disorders such as depression and drug addiction. Areas of expertise include biochemistry and cellular and molecular neuroscience, neural systems and computational neuroscience, behavioral neuroscience, developmental neuroscience, neuroimmunology, and neuropsychopharmacology, among others. Students are encouraged to carry out research during their entire period of study. Training will include a unique interdisciplinary blend of didactic coursework, journal clubs, seminar series, as well as significant research experience. The interdisciplinary structure permits considerable flexibility in training; each student's training is tailored to meet individual requirements.

PATHOLOGY & CELL BIOLOGY
Research and education in the Ph.D. in Medical Sciences major, concentration in Pathology & Cell Biology is focused on interdisciplinary approaches to the study of cancer, reproductive pathobiology, neurological disease & injury and related diseases, including cancer biology, angiogenesis and morphogenesis, gene discovery, neurobiology, cell biology and new educational technologies.
PATHOLOGY AND LABORATORY MEDICINE

PHARMACOLOGY AND THERAPEUTICS

PHYSIOLOGY AND BIOPHYSICS

Electives
Some of the electives include:

- BCH 6746 Structural Biology 3
- GMS 6115 Medical Parasitology & Mycology 3
- GMS 6708 Neuroimmunology 3

Dissertation

COURSES
See http://ugs.usf.edu/course-inventory
MEDICINE

Doctor of Medicine (M.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall November 14

International applicant deadlines: http://www.grad.usf.edu/majors

Minimum Total Hours: Four Year Program
Level: Doctoral Professional
CIP Code: 51.1201
Dept Code: MD
Major/College Codes: MED MD

The Morsani College of Medicine offers a traditional medical program and a parallel program that give you a choice of emphasis and geographical focus.

The CORE program is based in Tampa for four years and features a strong preclinical integrated curriculum with small group and engaged learning emphasis, integrated clerkships, and year 4 career tracks that prepare you for the residency of your choice. The Scholarly Concentration option allows you to focus and develop yourself in an area of interest outside the normal curriculum in fields such as Health Care Disparities, Engineering, Business, and Medical Education.

The SELECT program is based in Tampa (2 years) and Lehigh Valley, Pennsylvania (2 years). It has the same integrated curriculum focus as the CORE program, but also offers additional training in Leadership, Health Systems, and Values-Centered Patient Care, all important domains for developing medical leadership. This increased emphasis on leadership (in one on one coaching, small groups, seminars) is a focused alternative to the Scholarly Concentration program for students who want to focus on developing their medical leadership skills.

Major Research Areas

Biomedical research
International Medicine
Medical Education
Health Systems
Health Disparities

http://health.usf.edu/medicine/
Admission Information

Admission Requirements:
Students applying for admission to the USF Morsani College of Medicine (MCOM) M.D. degree program must complete the requirements for a bachelor’s degree at a regionally accredited U.S. university or college by the time of matriculation. In addition, all prerequisites must be completed from a U.S. regionally accredited institution by the time of matriculation into the MCOM. Required coursework may not be taken as Pass/Fail or online. Applicants who are currently pursuing a graduate or professional degree are obligated to complete all degree requirements prior to matriculation into the M.D. degree program.

- AMACS Primary Application
- Secondary Application with program selection
- Bachelor’s Degree (from U.S. regionally accredited institutions only)
- Pre-professional committee evaluation or three faculty letters of recommendation
- Two personal / character letters of recommendation
- Personal Statement
- Interview
- Completion of prerequisite courses
- Medical College Admissions (MCAT)
- Residency – must be either a U.S. Citizen or Permanent Resident of the U.S.

Curriculum Requirements:

Required Core Curriculum Descriptions

Doctoring 1-3
A three-year small group-based sequence that teaches students interviewing, physical diagnosis, and differential diagnostic skills; bioethics, medical humanities, health systems and economics; community, preventive, and public health. Introduces care of special populations including the disabled.

Evidence-based Clinical Reasoning 1-2
A two-year sequence first introducing students to principles of statistics and evidence-based medicine, then applying that knowledge in small group based problem based learning (PBL) cases in which students research topics relevant to the presented cases and teach their small group peers what they learned. The course emphasizes evidence-based and lifelong learning principles.

Year 1-2 Medical Science Courses
Years 1 and 2 of the curriculum are a continuum that introduce students to an organ system-based overview of normal and disease processes, increasing the emphasis on diseases and therapy as the courses progress. Courses integrate anatomy, physiology, pathophysiology, cell biology, biochemistry, microbiology and pharmacology relevant to the organ systems under study.

- Course 1: Musculoskeletal System - dissection based anatomy of the back and extremities; physiology and biochemistry of muscle contraction
- Course 1: Cancer biology - a review of important tenets of molecular/cellular biology, genetics and immunology from the perspective of cancer pathogenesis and treatment.
- Course 2: Neurologic System - structure and function of the central and peripheral neurologic system
- Course 3: Cardiovascular and Pulmonary Systems - normal function, common abnormalities, and structural anatomy of the heart, lungs and vessels; components and physiology of blood.

http://health.usf.edu/medicine/
Course 4: Renal, Endocrine, Gastrointestinal, and Reproductive Systems - integrated histology, physiology and gross anatomy of these systems; biochemistry and physiology of metabolism.

Course 5: Immunology, Microbiology, Hematology, Rheumatology, Dermatology - principles of immune host defense, microbial pathogenesis; autoimmunity/rheumatologic diseases; diseases of blood and skin.

Course 6: Nephrology, Pulmonary Disease, Cardiology, Gastroenterology - pathophysiology, pathology, and pharmacology for diseases of kidneys, lungs, heart/vessels, liver, and GI tract.

Course 7: Neurology, Psychiatry, Endocrinology, Men’s and Women’s Health - diseases and therapy of the brain and peripheral nervous system, endocrine system, male and female reproductive tracts; psychiatry, including psychiatric interviewing.

Colloquium 1-2
Selective seminars in several areas of the students’ choice (e.g. advances in radiology, sun and skin, neurosurgery principles, etc.) designed to give the students elective choice in developing career plans. Taken twice, once per year.

Year 3 Clinical Clerkships
MCOM clinical clerkships in Tampa emphasize integrative process of patient care from a patient perspective, vs. the traditional departmental-based approach. Multiple departments interact to deliver the curriculum at core clinical sites including Tampa General Hospital, Haley VA Medical Center, All Children’s Hospital, and Morsani Center for Advanced Patient care. The year includes 4 weeks of elective time of the student’s choice to explore non-clerkship career options or do research.

Primary Care - outpatient care in Family Medicine, Internal Medicine, Pediatrics, and Women’s Health/Gynecology, emphasizing management of common chronic diseases and prevention strategies.

Adult Medicine - inpatient care of acute adult illness

Surgical Care - principles of pre-, intra-, and post-operative care, with rotations in general, trauma, vascular, and gynecologic surgery. Includes selective rotations in surgical subspecialties and simulation training at the Center for Advanced Medical Learning and Simulation (CAMLSS) in downtown Tampa.

Psychiatry and Neurology - diagnosis and therapy of neurologic and psychiatric illness in the inpatient and outpatient settings. Shared approaches to patients with altered mental state.

Maternal, Newborn, and Pediatric Care - Obstetrics, prenatal care, labor and delivery, newborn nursery, inpatient pediatric care

Year 4 Electives/Selectives
Year 4 is focused on preparation for residency, building advanced clinical skills, and exploration of areas of medicine of interest to the student. Nine months of coursework are required, including:

1. Four months of work in a track that prepares students for a specific residency discipline, including:
   a. An Acting Internship with direct patient management responsibility (1 month)
   b. A return to basic science in the discipline of the track, involving both clinical and basic science approaches to the discipline (2-4 weeks)
   c. 1-2 months of specialty, consultative, or other selectives

2. Five months of additional coursework, which may include independent study electives, externships at other approved medical centers, and additional electives of the student’s choice.
SELECT Program Overview

Building Leadership Competencies and Emotional Intelligence
The USF Health Morsani College of Medicine SELECT program (Scholarly Excellence. Leadership Experiences. Collaborative Training.) prepares students to be physician leaders who can accelerate change in health care. The program recruits and develops students with the intellectual perspective, empathy, creativity and passion to change patient care, the health of communities and the medical profession. The founding principle of SELECT is the concept that students with high emotional intelligence are more likely to develop the skills needed to transform health care and improve the health of communities. In essence: students with a strong foundation in emotional intelligence will become more engaged, compassionate physicians who will connect deeply with their patients and their patients’ families; feel more comfortable with and be more effective as team leaders and team members; and have the relationship building skills and systems perspectives to more effectively lead change in health care organizations.

One of the most distinctive features of SELECT is the opportunity for medical students to shape their educational experiences at both a highly progressive, student-centered medical school, the USF Morsani College of Medicine in Tampa, FL, AND at one of the country’s top health networks known for its quality, safety, and lean approach to driving efficiency in healthcare, the Lehigh Valley Health Network in Allentown, PA. The first class was admitted in 2011, and 56 students are now admitted annually. Students admitted to SELECT spend their first two years taking classes at the USF Morsani College of Medicine in Tampa, and then go to Lehigh Valley Campus for two years of clinical education. Students admitted to SELECT develop leadership skills that will arm them with the knowledge, resources, and network to change the healthcare landscape for the better. These include:

- Making a difference in the lives of patients, peers, community, and hospitals.
- Applying continuous improvement approaches to optimize healthcare quality, patient safety, and efficient use of resources.
- Building resilience to operate efficiently in complex health systems.
- Acquiring tools to become a change catalyst.
- Becoming a driving force for the evolution of healthcare quality.
Concurrent Degrees
Doctor of Medicine (M.D.) / Doctor of Philosophy (Ph.D.)

DEGREE INFORMATION

Refer to individual Majors for deadlines

Minimum Total Hours: 90
Level: Doctoral
CIP Code: 26.9999
Dept Code: MED
Major/College: MED MD / MSG MD
Concentrations:
- Allergy Immunology & Infectious Disease (AII)
- Anatomy (ANA)
- Biochemistry and Molecular Biology (BMB)*
- Clinical and Translational Research (CTR)
- Microbiology and Immunology (MMI)*
- Molecular Medicine (MLM)
- Molecular Pharmacology and Physiology (MPY)
- Neuroscience (NEU)
- Pathology and Cell Biology ((PCB)
- Pathology and Laboratory Medicine (PLM)
- Pharmacology and Therapeutics (PAT)
- Physiology and Biophysics (PAB)

CONTACT INFORMATION

College: Medicine
Department: Medicine/Medical Sciences
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The combined MD/PhD concurrent degree is designed to provide well-qualified students who are interested in careers in translational medicine with a broad knowledge in the basic biomedical and clinical sciences that is integrated with the advanced experimental training that is critical for their development as productive and versatile researchers. To meet these objectives, student’s complete courses in both the basic and clinical sciences, participate in patient-care activities and seminars, and receive individual research training in one of the many research concentrations available within the College. Graduate advisory committees counsel the entering students on planning their curriculum and selecting a research mentor. During the first two years, students complete the basic science course work and participation in research rotations that assist in the selection of a dissertation mentor. Following the successful completion of the second year of medical training and the selection of a major professor, a formal dissertation committee is appointed which assists the student in planning the research and course of study, evaluates the student’s progress and supervises the comprehensive examination.

The successful completion of this examination leads to formal admission to candidacy for the PhD degree. The remainder of this phase of the major emphasizes research and independent study and leads to a written dissertation and its oral defense. Following the completion and defense of their PhD dissertation, students embark on the final two years of their medical training. The major culminates in the award of both MD and PhD degrees. Departments within the Morsani College of Medicine may have additional requirements that pertain to their respective portions of the training program. Contact the department for information.

http://health.usf.edu/medicine/
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements of the Morsani College of Medicine MD and PhD majors, listed below.

Student applications must be submitted through AMCAS.

- A bachelor’s degree or equivalent from a regionally accredited university
- Minimum overall grade-point average of 3.70 out of a possible 4.00 with a minimum grade-point average of 3.7 in the sciences
- Medical College Admissions Test score of 30 (The MCAT substitutes for the GRE).
- Completed pre-requisites in:
  - General biology (1 year)
  - General chemistry (1 year)
  - General physics (1 year)
  - Organic chemistry (1 year)
  - Quantitative analysis (1 course)
  - Mathematics including integral and differential calculus
- Three (3) letters of recommendation
- Interview
- One-two page personal essay

CURRICULUM REQUIREMENTS

Total Minimum Hours 90

Contact departments for complete information. Degree requirements are individualized according to research interests and goals. Ninety credit hours minimum including 24 minimum directed research hours.

COURSES

See http://ugs.usf.edu/course-inventory

http://health.usf.edu/medicine/
MEDICINE AND PUBLIC HEALTH

Concurrent Degrees:
Doctor of Medicine (M.D.) and Master of Public Health (M.P.H)

DEGREE INFORMATION

Refer to individual Majors for deadlines
Minimum Total Hours: 42 (MPH), 369 (MD)
Total hours shared: 9 credit hours
Level: Masters/Doctorate
CIP Codes: 51.2201 / 51.1201
Dept. Codes:
Majors/Collages: MPH/PH, MD/MD

CONTACT INFORMATION

Colleges: Public Health and Medicine
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The concurrent MPH/MD degree provides a unique opportunity for medical students who are interested in blending their field of medicine with the discipline of public health. The students recognize the value of inter-professional education within health as well as the professional opportunities that require dual skill sets.

The two majors review applicants independently and admission to one major in no way guarantees admission into the other major. Medical students must be admitted and in good standing when applying for the MPH degree. Upon completion of all requirements for the concurrent degree, the student submit separate applications for graduation. Both (MPH and MD) degrees are certified individually by each college prior to graduation. Students receive two diplomas.

Accreditation:
The College of Public Health is fully-accredited by the Council on Education in Public Health.

ADMISSION INFORMATION

Applicants must meet University Admission Requirements (see Graduate Admissions section) and USF Medical School admission requirements. Refer to the individual listings for the MPH and MD for admission requirements specific to the major.

CURRICULUM REQUIREMENTS

For specific information on the requirements for the major, please refer the Catalog listing for that major.

M.P.H. in Public Health – total minimum hours - 42
M.D. in Medicine – total minimum hours – 369 (the MD is a 4-year professional major)

411 Total hours, with 9 credit hours shared, resulting in total combined: 402 hours

Shared Courses: The following courses are approved to be shared with both majors:

- Transferred from MD degree
  - BMS 5005  Professions of Health  2 credits
  - BMS 6825  Doctoring I  7 out of 12 credits

For all other curriculum requirements, including Thesis/non-Thesis, Internship, Comprehensive Examination, etc., refer to the Catalog listing for that major.

http://health.usf.edu/medicine/
PHYSICAL THERAPY

Doctor of Physical Therapy (D.P.T.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Summer: November 15

Level: Doctoral Professional
CIP Code: 51.2308
Dept Code: PHT
Major/College: MPT MD

CONTACT INFORMATION

College: Morsani College of Medicine
Department: School of Physical Therapy and Rehabilitative Sciences
Contact Information: http://dpt.health.usf.edu/

MAJOR INFORMATION

As an integral part of the USF College of Medicine and USF Health system, the School of Physical Therapy & Rehabilitation Sciences offers you top-notch classroom and clinical experience in your entry-level preparation as a physical therapy practitioner.

Our innovative, integrated, interprofessional Doctor of Physical Therapy (DPT) curriculum, which places physical therapy students alongside medical students in foundational basic and clinical science courses during year 1 of studies, is one of the many reasons students are choosing to come to Tampa for their professional education. The School of Physical Therapy & Rehabilitation Sciences boasts an impressive and broadly experienced cadre of faculty who are engaged in teaching as well as scholarly and research activities contributing to our discipline’s body of knowledge. As part of USF Health, our Doctor of Physical Therapy students receive instruction from physicians, nurses, public health professionals and basic science experts. Teaching and learning together form the basis for future successful collaborative practice so necessary in today’s healthcare environment.

The major begins a new cohort each July.

Accreditation
Accredited by Commission on Accreditation in Physical Therapy Education (CAPTE)

ADMISSION INFORMATION

Completed applications of qualified students with all supporting documentation, received by PTCAS by November 15 will be reviewed by the School of Physical Therapy and Rehabilitation Sciences DPT Student Selection Committee. The most qualified applicants will be offered enrollment as a member of the next DPT Class. Letters of offer will be mailed to selected students on or about February 1. A Waiting List will be maintained of otherwise qualified applicants in the event that a class opening should occur.

- You must be a U.S. Citizen or Permanent Resident Alien (PRA) with a Green Card in your possession before we will consider your application;
- Minimum 3.20 (out of 4.00) GPA overall and in upper division and prerequisite coursework;
- Note: Level of prerequisite courses must be appropriate for science majors, and must have been completed within five (5) years of date of matriculation;
- Twenty (20) total volunteer, observational or employment hours experience with a minimum of 8 hours in each type in order to appreciate the differences in physical therapists’ responsibilities in each setting. Hours must be documented observational, volunteer or other work experiences in both hospital inpatient and outpatient physical therapy settings;
- Two References from Licensed Physical Therapists with knowledge of the applicant’s aptitude and potential for success in professional school
- Application to be completed through PTCAS

## CURRICULUM REQUIREMENTS

The DPT degree program is a 3 calendar year program including two summers.

### Core Course Requirements

#### Year 1 (36 weeks)

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMS 5005 Professions of Health</td>
<td>1</td>
</tr>
<tr>
<td>BMS 6206 Medical Biochemistry</td>
<td>1</td>
</tr>
<tr>
<td>BMS 6640 Medical Science 1: Musculoskeletal System</td>
<td>6</td>
</tr>
<tr>
<td>BMS 6641 Medical Science 2: Neuroscience</td>
<td>6</td>
</tr>
<tr>
<td>BMS 6633 Medical Science 3: Cardiovascular &amp; Pulmonary Systems</td>
<td>6</td>
</tr>
<tr>
<td>BMS 6639 Medical Science 4: Excretory &amp; Reproductive Systems</td>
<td>6</td>
</tr>
<tr>
<td>PHT 6174 Movement Science 1 (total lab hours including enhanced anatomy=30)</td>
<td>2</td>
</tr>
<tr>
<td>PHT 6205 Doctoring for Physical Therapists (Pass/Fail)</td>
<td>6</td>
</tr>
<tr>
<td>PHT 6274 Clinical Reasoning for Physical Therapists</td>
<td>5</td>
</tr>
<tr>
<td>PHT 6284 Scientific &amp; Professional Foundations of Physical Therapy 1 (lab=60 hrs)</td>
<td>5</td>
</tr>
<tr>
<td>PHT 7864 Integrated Clinical Experience 1</td>
<td>1</td>
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</table>

#### Year 2 (42 weeks)

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<tr>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Fall 2 Contact hours @ 19 weeks = 26.6</td>
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</tr>
<tr>
<td>PHT 6178 Movement Science 2</td>
<td>3</td>
</tr>
<tr>
<td>PHT 6285 Scientific &amp; Professional Foundations of Physical Therapy 2</td>
<td>3</td>
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<tr>
<td>PHT 6352 Pharmacology for Healthcare Professionals</td>
<td>4</td>
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<tr>
<td>PHT 6609 Critical Assessment of the Literature/EBP</td>
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<tr>
<td>PHT 7264 Neuromuscular Clinical Problem Solving</td>
<td>3</td>
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<tr>
<td>PHT 7265 Cardiopulmonary &amp; Integumentary Clinical Problem Solving (year-long, concludes in Spring)</td>
<td>0</td>
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<tr>
<td>PHT 7421 Professional Issues 1</td>
<td>2</td>
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<tr>
<td>PHT 7540A Principles of Patient/Client Management &amp; Seminar 1</td>
<td>1</td>
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<tr>
<td>PHT 7866 Integrated Clinical Experience 1</td>
<td>1</td>
</tr>
<tr>
<td>Spring 2 Contact hours @ 15 weeks = 22.7</td>
<td>20</td>
</tr>
<tr>
<td>PHT 7265 Cardiopulmonary &amp; Integumentary Clinical Problem Solving (year-long, continued from Fall)</td>
<td>3</td>
</tr>
<tr>
<td>PHT 7328 Pediatric Physical Therapy</td>
<td>3</td>
</tr>
<tr>
<td>PHT 7402 Psychosocial Aspects of Physical Therapy Practice</td>
<td>3</td>
</tr>
<tr>
<td>PHT 7531 Professional Issues 2</td>
<td>3</td>
</tr>
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</table>
### Physical Therapy (DPT)

<table>
<thead>
<tr>
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<th>Course Title</th>
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<tbody>
<tr>
<td>PHT 7540B</td>
<td>Principles of Patient/Client Management &amp; Seminar 2</td>
<td>2</td>
</tr>
<tr>
<td>PHT 7777</td>
<td>Musculoskeletal Clinical Problem Solving</td>
<td>4</td>
</tr>
<tr>
<td>Summer 2</td>
<td>Contact hours @ 8 weeks = 40</td>
<td>20</td>
</tr>
<tr>
<td>PHT 6841</td>
<td>Clinical Education 1 (10 weeks @ 40 hours)</td>
<td>5</td>
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#### Year 3 (43 weeks)

<table>
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<tr>
<th>Term</th>
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<tr>
<td>Fall 3</td>
<td>PHT 7151</td>
<td>Health Promotion and Wellness</td>
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<tr>
<td></td>
<td>PHT XXXX</td>
<td>Seminar: Contemporary Issues in Physical Therapy</td>
<td>3</td>
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<tr>
<td></td>
<td>PHT 8179</td>
<td>Movement Science 3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PHT 8266</td>
<td>Advanced Clinical Problem Solving</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>PHT 8550</td>
<td>Professional Issues 3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PHT 8702</td>
<td>Prosthetics and Orthotics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>*</td>
<td>Optional Elective</td>
<td>3</td>
</tr>
<tr>
<td>Spring / Summer 3</td>
<td>PHT 7842</td>
<td>Clinical Education 2 (12 weeks @ 40 hours)</td>
<td>6</td>
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<tr>
<td></td>
<td>PHT 8843</td>
<td>Clinical Education 3 (16 weeks @ 40 hours)</td>
<td>8</td>
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<tr>
<td></td>
<td></td>
<td>Graduation in August of Year 3</td>
<td>122</td>
</tr>
</tbody>
</table>

### Comprehensive / Qualifying Exam Information

Licensure Examination following graduation and prior to initiating practice – the National Physical Therapy Examination (NPTE)

http://health.usf.edu/medicine/
PHYSICAL THERAPY AND
PUBLIC HEALTH

Concurrent Degrees
Doctor of Physical Therapy (D.P.T.) and Master of Public Health (M.P.H.) Degree

DEGREE INFORMATION

Refer to individual Majors for deadlines
Rolling Admissions. One class admitted each August.

Minimum Total Hours: Contact departments
Level: Professional/Masters
Status: Active
CIP Codes: 51.2308/
Dept Code: PHT/
Major/College Codes: MPT MD

CONTACT INFORMATION

Colleges: Medicine and Public Health
Departments: School of Physical Therapy and Rehabilitation Sciences and Public Health
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

Physical therapists are health professionals with special expertise in the science of movement. They use this knowledge to provide preventive and therapeutic services and psychological support to people of all ages with movement dysfunction. Professional education includes study of basic sciences and the professional skills needed for client examination, evaluation, diagnosis, prognosis, intervention and outcomes. Students will participate in comprehensive clinical internships throughout the major. The School of Physical Therapy and Rehabilitation Sciences is a component of the Morsani College of Medicine and is a limited access first professional degree program with an annual enrollment of up to 36 students per year. Students complete the majority of their first year studies on a parallel path with the first year curriculum in medicine.

The Doctor of Physical Therapy is offered through the USF Medical School in the Morsani College of Medicine. For information regarding the DPT contact the School of Physical Therapy and Rehabilitation Sciences.

The Master of Public Health is offered through the USF College of Public Health. For information regarding the MPH contact the College of Public Health Graduate Studies office.

Accreditation:
Accredited by the Commission on Accreditation in Physical Therapy Education.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- Have a bachelor’s degree or equivalent from a regionally accredited university, and completion of prerequisite courses.
- Have earned a "B" (3.00 on a 4.00 scale) average or better in all work attempted while registered as an upper division student working for a baccalaureate degree; overall GPA of 3.00 and on all prerequisite coursework.
- Interview upon request of the School of Physical Therapy and Rehabilitation Sciences.
- Have at least 20 total hours of documented, observational, volunteer or other work experience in both hospital outpatient and inpatient physical therapy settings.

http://health.usf.edu/medicine/
• English competency. Applicants who have completed a degree in which English is not the primary language of instruction must present evidence of competency to pursue studies in the English language prior to being extended an offer of admission. Acceptable English language proficiency tests for applicants to the Doctor of Physical Therapy degree program are: TOEFL (Test of English as a Foreign Language) a minimum score of 600 (paper version); 230 (computer version).

• Have a written autobiographical statement of personal values and purpose for attending USF’s DPT Degree Program.

CURRICULUM REQUIREMENTS

Contact Colleges for complete information.

Students must complete 107 credit hours of professional coursework and meet the general graduate requirements of the School of Physical Therapy and Rehabilitation Sciences, the Morsani College of Medicine, and the College of Public Health for admission and graduation.

COURSES

See http://ugs.usf.edu/course-inventory
PHYSICIAN ASSISTANT STUDIES

Master of Physician Assistant Studies (M.P.A.S.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Spring April
(Contact department for exact date)

Minimum Total Hours: 90
Level: Masters
CIP Code: 51.0912
Dept Code: MPA
Major/College: MPA / MCOM
Approved Effective Fall 2016

CONTACT INFORMATION

College: Morsani College of Medicine
Department: Physician Assistant Program
Contact information
www.health.usf.edu/medicine/pa/

MAJOR INFORMATION

The goal of the USF PA Major is to prepare its graduates to deliver high-quality, evidence-based, patient-centered health care. This is accomplished through a robust, systems-based curriculum. The major (delivered over 24 continuous months) begins with a rigorous 12-month phase in basic and medical sciences. Educational methodologies include traditional lecture, clinical simulation, team-based problem solving, and hands-on laboratory learning experiences—often delivered with students from other USF health students. The 12-month clinical phase follows and students engage in approximately 2300 hours of supervised clinical practice experiences. Students will participate in the following five week, core clinical clerkships: Internal Medicine, Family Medicine, Pediatrics, Surgery, Emergency Medicine, Women’s Health, Behavioral and Mental Health, and two elective clerkships. Upon successful completion of the two-year curriculum, the student is awarded the Master of Physician Assistant Studies degree. The graduate is then eligible to sit for the Physician Assistant National Certifying Exam (PANCE) administered by the National Commission on Certification of Physician Assistants (NCCPA).

Accreditation
The ARC-PA has granted Accreditation - Provisional status to the USF Morsani College of Medicine Physician Assistant Program sponsored by the University of South Florida. Accreditation-Provisional is an accreditation status granted when the plans and resource allocation, if fully implemented as planned, of a proposed major that has not yet enrolled students appear to demonstrate the degree program’s ability to meet the ARC-PA Standards or when a program holding Accreditation-Provisional status appears to demonstrate continued progress in complying with the Standards as it prepares for the graduation of the first class (cohort) of students.

Accreditation-Provisional does not ensure any subsequent accreditation status. It is limited to no more than five years from matriculation of the first class.

Admission Information

All applicants to the USF MCOM PA major must apply through the Central Application Service for Physician Assistants (CASPA).

Degree, GPA and GRE

- Baccalaureate Degree from a U.S. regionally accredited College or University. (Baccalaureate degrees must be completed by the Fall semester prior to matriculation.)
- Overall GPA of 3.0 and Science GPA of 3.0; Minimum Upper Division Grade Point Average of 3.0
- Graduate Record Examination (GRE) Test is required–official scores are required and must be from tests taken within the past five years. The Admissions Committee will evaluate your most recent set of GRE scores.
- Applicants MUST meet a minimum GRE score at or above the 50th percentile in all components of the examination to be considered eligible for an interview.
- GRE Scores are to be sent directly by ETS to CASPA code 8854.
- Degree and prerequisite coursework taken outside of the U.S. is not accepted (regardless if made equivalent by a U.S. institution).
- Transfer credit or Admission with Advanced Standing from another PA major is not accepted. All curriculum requirements for the major are required for graduation and must be completed at the USF PA major.

Prerequisites
- Mathematics – 6 Credit Hours
- Statistics – 3 Credit Hours
- Biology with Laboratory – 4 Credit Hours
- Microbiology with Laboratory – 4 Credit Hours
- Chemistry with Laboratory – 8 Credit Hours
- Organic Chemistry with Laboratory – 4 Credit Hours
- Biochemistry – 3 Credit Hours
- Anatomy & Physiology with Laboratory – 8 Credit Hours
- Medical Terminology – 3 Credit Hours
- English – 6 Credit Hours
- Humanities – 3 Credit Hours
- Social Sciences – 9 Credit Hours

Experience in Healthcare Setting
- A minimum of 500 hours of direct patient care experience in a health care setting must be completed prior to application. Examples of direct patient care experiences may include but not limited to: EMT, Paramedic, Medical Assistant, Nurse, Surgical Technician, Athletic Trainer, and Physical Therapy Aide.
- Shadowing experiences are not accepted as direct patient care.
- Applicants will submit verifiable information regarding their health care experiences on CASPA.

Letters of Recommendation
- Three letters of recommendation are required.
- Letters should be from Physicians, Physician Assistants, Nurse Practitioners, Research Mentors, Professors, Volunteer Coordinators/Supervisors who had direct interaction with the applicant and can attest to his/her qualities, strengthens and suitability for a career as a Physician Assistant.
  - One letter of a recommendation must be from someone who supervised the applicant in a clinical setting.
  - Letters should not be from a peer or family member.

Residency
- U.S. Citizen or Permanent Resident Alien
  - Permanent Resident Alien must possess a valid Green Card at the time of application. Documentation will be required.
- In State or Out of State for tuition purposes
  - To qualify for in state tuition, proof of residency for the 12 months preceding matriculation is required.
  - For more information, please visit our General Classifications Procedures page.

Curriculum Requirements:
Total minimum hours required: (if doctoral, are these post-bacc or post-masters)
Curriculum for Year 1

**Summer – 18 Credits**

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Anatomy I</td>
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<tr>
<td>Pathophysiological Basis of Disease I</td>
<td>3</td>
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<td>Clinical Medicine I</td>
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<td>Clinical Pharmacology I</td>
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<tr>
<td>Physical Diagnosis I</td>
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<td>Role of the Physician Assistant in American Healthcare</td>
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<td>Clinical Laboratory and Diagnostics I</td>
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**Fall – 18 Credits**

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<td>Clinical Pharmacology II</td>
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<tr>
<td>Physical Diagnosis II</td>
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<tr>
<td>Biostatistics and Epidemiology: An Introduction to Clinical Research</td>
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<tr>
<td>Clinical Laboratory and Diagnostics II</td>
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<td>Basic Medical Genetics</td>
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**Spring – 17 Credits**

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<td>Advanced Clinical Pharmacotherapeutics</td>
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<tr>
<td>Clinical Skills and Procedures</td>
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<td>Evidence-Based Medicine</td>
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<tr>
<td>Behavioral Medicine</td>
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<td>Cultural Issues in Healthcare</td>
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Curriculum for Year 2

<table>
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<tr>
<th>Course Name</th>
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<td>Capstone Research Project</td>
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<tr>
<td>Internal Medicine</td>
<td>5</td>
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<tr>
<td>Surgery</td>
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<tr>
<td>Elective</td>
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</table>

Core Course Requirements

All courses above.

Electives

Students chose clinical electives in year two of the major.

Comprehensive Exam

Capstone Research Project
The major culminates in a required capstone research project. The goal of the capstone research project is to develop competency in the critical appraisal of research and the application of the best evidence to patient care, health policy, and advocacy; ultimately resulting in improved patient outcomes.

**Internship**

**Other**
Upon graduation, the MPAS graduate will be eligible to sit for the Physician Assistant National Certifying Exam (PANCE) administered by the National Commission on Certification of Physician Assistants (NCPA).
REHABILITATION SCIENCES

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall       June 1
Spring     October 15
Summer    No Admission

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 66
Level: Doctoral
CIP Code: 51.2314
Dept Code: SPTRS
Major/College Codes: RHS/MD

Concentrations
Veteran’s Health/Reintegration (VHR)
Chronic Disease (CHD)
Neuromusculoskeletal Disability (NMD)

CONTACT INFORMATION

College: Medicine
Department: School of Physical Therapy and Rehabilitation Sciences
Contact Information:
www.grad.usf.edu
http://health.usf.edu/medicine/dpt/

MAJOR INFORMATION

The Ph.D. in Rehabilitation Sciences will prepare faculty researchers and leaders with content expertise in rehabilitation sciences who will contribute to the development of rehabilitation practice, research and education in an emerging 21st century health care environment. Graduates of the Ph.D. in Rehabilitation Sciences are expected to demonstrate advanced knowledge and productivity relative to one area of concentration: Veteran’s Health/Reintegration, Chronic Disease, or Neuromusculoskeletal Disability. Students will complete a core set of rehabilitation sciences courses, statistics/research methodology courses and then select an area of content expertise where independent research will be conducted.

Major Research Areas:
Rehabilitation Science, Veteran’s Health/Reintegration, Chronic Disease, Prosthetics, Neuromusculoskeletal Disability, Physical Therapy
**ADMISSION INFORMATION**

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- At least a Master’s degree or first-professional doctoral degree in a rehabilitation or rehabilitation sciences related discipline
- Minimum of 3.00 GPA or equivalent in prior graduate and/or professional degree studies
- GRE required, with preferred minimum scores of 70% V, Q, AW
- Interview to determine professional goals
- Three Letters of Recommendation
- Personal Statement – in 750 to 1000 words, state your professional plans and career objectives (Goal statement). Please include personal qualifications, qualities and professional development and how they have influenced your career path; reasons for this particular degree in relation to academic background, professional work experience, and career goals. Describe prior experiences and accomplishments in a rehabilitation or rehabilitation sciences related discipline.
- Curriculum Vitae
- The Test of English as a Foreign Language (TOEFL/IBT) with a score of 79 or higher or the International English Lang Testing System (IELTS) with a score of 6.5 will be required for international students from countries where English is not the official language, at the discretion of the Admissions Committee.

**CURRICULUM REQUIREMENTS**

<table>
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<th>Total Minimum Hours:</th>
<th>66 credit hours (post-masters)</th>
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<td>Core Requirements</td>
<td>15 hours</td>
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<tr>
<td>RSD 6111 Introduction to Rehabilitation Science</td>
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<tr>
<td>RSD6112 Advanced Rehabilitation Science</td>
<td>3</td>
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<tr>
<td>RSD7930 Research Pro-seminar in Rehabilitation Science</td>
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<tr>
<td>RSD7300 Rehabilitation Ethics</td>
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<tr>
<td>RSD7910 Mentored Research Apprenticeship 1 and 2</td>
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<tr>
<td>RSD 6921 Colloquium in Rehabilitation Sciences 1 and 2</td>
<td>1-2</td>
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<tr>
<td>Statistics/Research Methods Core</td>
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<tr>
<td>PHC 6051 Biostatistics II</td>
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<tr>
<td>PHC 7936 Seminar in Health Care Outcomes Measurements</td>
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Students choose from the following for the remaining 9 hours:

- HSC 6054 Design & Analysis of Experiments for Health Researchers | 3 |
- GMS 6102 Experimental Design & Analysis | 3 |
- PHC 6020 Design and Conduct of Clinical Trials | 3 |
- PHC 6060 Biostatistical Case Studies and Consulting | 3 |
- PHC 7709 Case Studies in Quantitative Analysis of Public Health Data | 3 |
- GMS 6840 Cultural and Diversity Issues in Clinical Research | 2 |
- GMS 6843 Scientific Communication | 2 |
- PHC 7054 Advanced Biostatistical Methods | 3 |
- PHC 7053 Generalized Linear Models | 3 |
- PSY 6217 Research Methods and Measurement | 3 |
- SYA 6437 SPSS and Social Research | 3 |
- PHT 6609 Critical Assessment of the Literature & Evidence-based Practice | 3 |

**Concentrations**

Students select from the following Concentrations:
Veteran’s Health/Reintegration (VHR)
Students in consultation with their committee will select courses for the Concentration.
Potential courses:
- RSD 7933 Special Topics in Veteran’s Health/Reintegration 3
- SOW 6126 Theoretical Perspectives on Physical Dysfunction 2
- PET 6388 Physical Activity Health and Disease 3
- PHT 7540 Principles in Patient/Client Management Seminar 3
- GMS 6771 Aging and Neuroscience 3
- MHS 6210 Wraparound Interventions and the System of Care 3
- PHC 6501 Homelessness: Implications for Behavioral Healthcare 3
- PHT 8702 Advanced Prosthetics and Orthotics 3

Chronic Disease (CHD)
Students in consultation with their committee will select courses for the Concentration.
Potential courses:
- RSD 7931 Special Topics in Chronic Disease 3
- GEY 7602 PhD Seminar in Health and Aging 3
- GEY 7604 Biomedical Aging 3
- GEY 7610 Psychological Issues in Aging: Interdisciplinary Perspective 3
- GEY 7622 PhD Seminar in Policy and the Elderly 3
- GEY 7623 Social and Health Issues in Aging 3
- GEY 7649 Population Aging 3
- GMS 6334 Pathobiology of Human Cancer 3
- SOW 6126 Theoretical Perspectives on Physical Dysfunction 3
- PHC 6410 Social and Behavioral Sciences Applied to Health 3
- PHC 6522 Nutrition in Health and Disease 3
- PHC 6931 Advanced Seminar in Social and Behavioral Sciences Applied to Health 3
- PET 6388 Physical Activity Health and Disease 3
- GMS 6500C Core Physiology 4-6
- PET 6369 Cardiorespiratory Aspects of Exercise Physiology 3
- PHT 7540 Principles in Patient/Client Management Seminar 3
- PHC 6418 Public Health and Aging 3
- RCS 5035 Rehabilitation Counseling: Concept and Applications 3
- RCS 5080 Medical Aspects of Disability 3

Neuromusculoskeletal Disability (NMD)
Students in consultation with their committee will select courses for the Concentration.
Potential Courses:
- RSD 7932 Special Topics in Neuromusculoskeletal Disability 3
- GMS 6440 Basic Medical Physiology 3
- GMS 6431 Cell Physiology 4
- GMS 6770 A Metabolic Approach to Pain Management 3
- HSC 6556 Pathobiology of Human Disease I 3
- HSC 6557 Pathobiology of Human Disease II 3
- PET 6388 Physical Activity Health and Disease 3
- PET 6084 Body Composition: Assessment and Management 3
- PET 6098 Topics in Strength and Conditioning 3
- PET 6339 Neuromuscular Aspects of Exercise Physiology 3
- PET 6351 Occupational Medicine for Health Professionals 3
- PHT 7450 Principles in Patient/Client Management Seminar 3
- PHT 7264 Neuromuscular Clinical Problem Solving 3
- PHT 7777 Musculoskeletal Clinical Problem Solving 3
- PHT 8724 Anatomical Basis of Physical Therapy and Rehabilitation 3
Electives
Electives may be selected in consultation with student’s committee.

Potential Courses:
- GMS 6020 Neuroscience 5-6
- GMS 6541 Pharmacology for Health Professionals 4
- GMS 6706 Basic Medical Neuroscience 3
- GMS 6843 Scientific Communication 2
- GMS 6875 Ethical and Regulatory Aspects of Clinical Research 3
- GMS 6890 Medicine and the Arts 3
- GMS 6891 Medicine and the Movies 3
- GMS 6840 Cultural and Diversity Issues in Clinical Research 2
- PHT 7151 Health Promotions and Wellness 3
- RSD 7900 Directed Readings in Rehabilitation Sciences 3
- RSD 6941 Teaching Practicum in Rehabilitation Sciences 3

Doctoral Qualifying Exam
As soon as the substantial majority of the course work is completed, the student must pass a written qualifying examination covering the subject matter in the major and related fields. This examination may be supplemented by an oral examination.

Dissertation
RSD 7980 Dissertation 12 hours 12

Other Information:

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<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4***</th>
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<tbody>
<tr>
<td>Course</td>
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<tr>
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<td>Intro to Rehabilitation Sciences</td>
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<td>Research Proseminar in Rehabilitation Sciences</td>
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<td>Colloquium 1 Concentration</td>
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<td>Statistics/Research Methodology Concentration</td>
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<td>Advanced Rehabilitation Sciences Colloquium 2 Concentration Statistics/Research Methodology</td>
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<td>Statistics/Research Methodology Elective(s)*</td>
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<td>Elective(s) Comprehensive Examination</td>
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SECTION 21

COLLEGE OF NURSING

http://health.usf.edu/nursing/
## Changes to Note

The USF Graduate Council approved the following on the dates noted.

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<tr>
<th>Majors</th>
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<td>Nursing D.N.P.</td>
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<td>Add dual application process; license info; delete Nurse Pract Conc.</td>
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<tr>
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<td>Add dual application process; add license info</td>
<td>11/7/2016</td>
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</table>
University of South Florida
College of Nursing
12901 Bruce B. Downs Blvd. MDC22
Tampa, FL 33612

Web address: http://health.usf.edu/nocms/nursing/
Email: nurstudent@health.usf.edu
Phone: 813-974-2191
Fax: 813-974-5418

Dean
Associate Dean, Academic Affairs
Associate Dean, Research
Asst VP, USF Health Shared Student Services
Sr. Asst Dean/Director for the Ph.D. Degree Program
Sr. Asst Dean Master’s/ DNP Degree Program
Sr. Asst Dean, CRNA Degree Program
Asst Director, Academic Programs
College Graduate Advisor Contact
Victoria Rich, , Ph.D, RN, FAAN
TBA
Cindy Munro, Ph.D., RN, ANP-BC, FAAN
Joe Ford
John Clochesy, RN, Ph.D.
Melanie Michael, DNP, MS, FNP-C, CAPPM, CPHQ
Susan Perry, Ph.D., CRNA, ARNP, Col, USAF, NC (retired)
Dewel Lindsey
Scott Burgess

Accreditation:
The the Commission on Collegiate Nursing Education, One Dupont Circle, Suite 530, Washington D.C. 20036-1120:(202) 887-6791 and the Florida Board of Nursing, 4052 Bald Express Way, Bin#C02, Tallahassee, Fl., 32399-3257. In addition, the Nurse Anesthesia Masters Concentration is accredited by the Council of Accreditation of Nurse Anesthesia Educational Programs, 222 South Prospect Avenue, Suite 304, Park Ridge, IL 60068-4041. (847) 692-7050

Mission Statement:
Transforming Healthcare, Transforming Lives: Creating the nursing leaders of tomorrow and the research that improves health.

Major Research Areas:
The College has consolidated its research efforts into two main centers of research:

a. The Center for Living with Chronic Illness: the College of Nursing (CON) focuses the impressive research expertise of our world-class nurse scientists, faculty, and students as they collaborate on unique solutions to the nation’s leading health care issues such as heart disease, Alzheimer’s/dementia, and cancer.

b. Through the CON RESTORE LIVES: Research to Rehabilitate and Restore the Lives of Veterans, Service Members and their Families we are developing evidence-based methods to help veterans and service members overcome psychological stress and other health problems that result from serving in combat operations.
Degrees, Majors, Concentrations

**Master of Science (M.S.)**
Nurse Anesthesia (NAT)

**Nursing**
(Major Code: NAS – for UG/GR nursing majors with an AS in Nursing) on hold
(Major Code: NBM for GS nursing majors with non-nursing bachelors)
(Major Code: NUR – for most nursing majors)

**Concentrations:**
Adult-Gerontology Acute Care Nursing (NAG)
Adult-Gerontology Primary Care Nursing (NPG)
Clinical Nurse Leader (NCL) on hold
Family Health Nursing (NFH)
Nursing Education (NED)
Pediatric Health Nursing (NPH)
Psychiatric-Mental Health Nursing (NPM) on hold

**Dual Concentrations:**
Occupational Health Nursing /Adult-Gerontology Primary Care (NOC)
Oncology Nursing/Adult-Gerontology Primary Care – on hold (NOA)

**Doctor of Nursing Practice (D.N.P.)**
Nursing (NRS)
Adult-Gerontology Acute Care Nursing (NAG) NAG
Adult-Gerontology Primary Care Nursing (NPG) NPG
Occupational Health Nursing /Adult-Gerontology Primary Care (NOC)
Oncology Nursing (NOA)/Adult-Gerontology Primary Care (NOA)
Family Health Nursing (NFH) NFH
Pediatric Health Nursing (NPH) NPH

**Doctor of Philosophy (Ph.D.)**
Nursing Science (NUS)

**Concurrent Degree:**
MS/DNP/PhD – Nursing and MPH in Public Health: Occupational Health/Adult Health Nurse Practitioner (NOP)

**Graduate Certificates Offered:**
See: [http://www.outreach.usf.edu/gradcerts/](http://www.outreach.usf.edu/gradcerts/)
COLLEGE REQUIREMENTS

For specific degree requirements for the M.S., CRNA, D.N.P., and Ph.D., degree programs in Nursing, refer to the individual listings in the Catalog. The GRE is required only for the M.S. in Nurse Anesthesia Major and for the Ph.D in Nursing Major.

PROGRESSION POLICY

1. All graduate students with the exception of PhD students:

1.1. Graduate students must earn the grade of ‘B’ or higher in each required course in their respective nursing major. An unsatisfactory (‘U’) or any grade below a ‘B’ is not acceptable.

1.2. Graduate students must also maintain an overall grade point average of 3.00 in order to be considered in academic "good standing". Students also must meet any special conditions of their admissions. All grades will be counted in computing the overall grade point average. Students must have an overall GPA of 3.00 at the completion of their respective major, or they will not be awarded a degree from the University of South Florida.

1.3. If a student earns a grade below a ‘B’ or receives a ‘U’ in a required course, she/he must repeat the course. The course must be taken in the next semester that it is offered and the student must earn a ‘B’ or higher. Any student, who earns below a ‘B’ (or ‘U’) in two or more required courses or earns below a ‘B’ (or ‘U’) in a required course twice, will be dismissed from the College. Unsuccessful course attempts, including situations where a student participates through the Withdrawal deadline and does not pay for the courses (aka: Cancelled for Financial Reasons), will count toward the progression policy. The Dean of the College of Nursing, or her designee (Associate Dean of Academic Affairs), will notify students who are dismissed, in writing. Students may petition for re-admission pending approval of their respective Director of their concentration. A petition must be submitted to the Associate Dean of Academic Affairs and the Chairperson of the Student Affairs Committee.

2. PhD students only:

2.1. All PhD students must earn the grade of 'B-' or higher in each required course in their respective nursing major. An unsatisfactory (‘U’) or any grade below a ‘B minus” is not acceptable.

2.2. PhD students must also maintain an overall grade point average of 3.00 in order to be considered in academic "good standing". Students also must meet any special conditions of their admissions. No grade below ‘B-’ will be accepted toward a PhD graduate degree. All grades will be counted in computing the overall grade point average. Students must have an overall GPA of 3.00 at the completion of their respective major, or they will not be awarded a degree from the University of South Florida.

2.3. If a student earns a grade below a ‘B-’ or receives a ‘U’ in a required course, she/he must repeat the course. The course must be taken in the next semester that it is offered and the student must earn a ‘B’ or higher. Any student, who earns below a ‘B-’ (or ‘U’) in two or more required courses or earns below a ‘B-’ (or ‘U’) in a required course twice, will be dismissed from the College. Unsuccessful course attempts, including situations where a student participates through the Withdrawal deadline and does not pay for the courses (aka: Cancelled for Financial Reasons), will count toward the progression policy.
The Dean of the College of Nursing, or her designee (Associate Dean of Research), will notify students who are dismissed, in writing. Students may petition for re-admission pending approval of their respective Director of their concentration. A petition must be submitted to the Associate Dean of Research and the Chairperson of the Student Affairs Committee.

Clinical Performance
Patient safety and welfare are the most critical criteria of the clinical rotation. If at any time during the clinical rotation the student places the patient in an actual or potentially hazardous or unsafe situation or the faculty judges the student to be deficient in clinical competence for patient care responsibility, the student will fail the course regardless of previous clinical performance. Students who receive an unsatisfactory grade for their clinical performance may be dismissed from the major, regardless of academic standing in other classes. (enacted Fall 2004)

Human Research Conduct
The protection of the rights of human subjects is the most critical criteria of any research study involving human subjects. If at any time during the conduction of a human subject study, a student violates the rights of the participants, the study will be stopped. Permission to continue with the study will be dependent upon an investigation by the University of South Florida Institutional Review Board, the student’s research advisor and the Dean of the College of Nursing. (enacted Fall 2004)

Withdrawal Policy
Withdrawals are limited to 1 per course, with a limit of 2 per undergraduate or graduate major. Withdrawals are defined as officially withdrawing from any class after the drop/add period and before the final withdrawal date as outlined in the Academic Calendar. Any student withdrawing in excess of the stated policy may be dismissed from the College of Nursing unless the College has pre-approved a documented medical and/or emergent situation.

Grading Scale
New grading scale effective spring 2014 for all nursing courses (*note – this does not change the University grading scale referenced in the Academic Policy Section of the Catalog*):

- 98-100=A+
- 94-97=A
- 90-93=A-
- 87-89=B+
- 84-86=B
- 80-83=B-
- 77-79=C+
- 74-76=C
- 70-73=C-
- 67-69=D+
- 64-66=D
- 60-63=D-
- Below 60=F
NURSE ANESTHESIA

Master of Science (M.S.) in Nurse Anesthesia Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: December 15

Minimum Total Hours: 72
Level: Masters
CIP Code: 51.3804
Dept. Code: NUR
Major/College Codes: NAT/NR
Effective: Fall 2015

CONTACT INFORMATION

College: Nursing
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The major in Nursing leading to a Master of Science degree prepares its graduates for careers as Nurse Anesthetists. Successful completion of the master’s in Nurse Anesthesia qualifies students to take appropriate national certification examinations and apply for state licensure.

Graduate Major Objectives:
1. Synthesize knowledge and apply scientific and scholarly inquiry, analytical reasoning and sound decision making in the delivery of evidence based anesthesia care to patients.
2. Assume the role of an advance nurse practitioner in the field of anesthesia as a CRNA. Engage in anesthesia practice to the fullest extent within the limitations of state statutes and practice setting philosophy. This includes strict adherence to the AANA scopes and standards for nurse anesthesia practice.
3. Demonstrate effective communication in a written and oral format in a collaborative health care setting.
4. Appraise quality advanced research for the promotion of superior health outcomes for the community.
5. Develop as an active professional in the support of nursing at the state and national level.
6. Incorporate those moral principles that guide universal practice in advanced practice nursing and anesthesia.
7. Initiate leadership for the improvement of health care and advance the practice of nursing.
8. Demonstrate advanced knowledge and competence in nurse anesthesia practice in various anesthesia delivery settings for patients of all acuity levels.
9. Implement physiologically sound anesthesia techniques/plans specific to patient physical classification status, age and co-morbidities.

Accreditation:
In addition Nurse Anesthesia major is accredited by the Council of Accreditation of Nurse Anesthesia Educational Programs.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.
Baccalaureate Degree (in Nursing) to Master's Degree Program (B.S. to M.S.)

Nurses with a baccalaureate degree in nursing are prepared to enroll directly in graduate course work. The total number of credits required is specific to the nursing concentration. Admission criteria include:

- Baccalaureate degree from a regionally accredited program.
- Competitive applicants to the CRNA Major should have a minimum of a 3.00 GPA (on a 4.00 scale). A cumulative grade point average (GPA) of 3.00 or better (based on a 4.00 system); recommended science GPA of 3.00.
- Required Undergraduate Coursework includes: Pathophysiology (3 credits), Pharmacology (3 credits), Anatomy and Physiology (6 credits), Health Assessment (3 credits), Chemistry (3 credits), Statistics (3 credits) – with a grade of B or Better. If prerequisite science coursework is greater than ten years old, repeating or supplementing with a refresher course at the undergraduate level is highly recommended.
- Earned grade point average of 3.00 or higher on 4.00 scale in all work attempted while registered as an upper division applicant working on a baccalaureate degree.
- Graduate Record Examination (GRE) is required. Graduate Record Examination (GRE) taken within five years of application. Competitive score on the GRE. A performance score at or above the 50th percentile on each of the three subtests of the (General) Graduate Record Exam (GRE). Current license as registered nurse.
- Three letters of recommendation, indicating potential for graduate study, from persons who can attest to the applicant's academic ability, clinical competence, and commitment. (Optimally, these letters will be from nursing professors, or clinical supervisors.)
- Personal statement of goals
- Current resume or curriculum vitae
- A minimum of two current years of experience as an RN in an aggressive adult, pediatric, and/or neonatal Intensive Care Unit (ICU) must be complete prior to matriculation into the major.

“A critical care area is defined as one where, on a routine basis, the registered professional nurse manages one or more of the following: invasive hemodynamic monitors (such as pulmonary artery catheter, CVP, arterial); cardiac assist devices; mechanical ventilation; and vasoactive infusions. Examples of critical care units may include but are not limited to: Surgical Intensive Care, Cardiothoracic Intensive care, Coronary Intensive Care, Medical Intensive Care, Pediatric Intensive Care, and Neonatal Intensive Care. Those who have experiences in other areas may be considered provided they can demonstrate competence with managing unstable patients, invasive monitoring, ventilators, and critical care pharmacology.” - Council on Accreditation of Nurse Anesthesia Programs.

- Current Basic Life Support (BLS) and Advanced Cardiac Life Support (ACLS) Certifications (must be maintained while in the major). Certified Rehabilitation Registered Nurse (CCRN) and Pediatric Advanced Life Support (PALS) is also highly recommended.
- A personal interview with the CRNA major Panel is required
- Statement of good physical, mental and emotional health to be verbally provided during interview.
- International students whose native language is not English must demonstrate proficiency in the English language. A Test of English as a Foreign Language (TOEFL) composite score of 550 for the paper test or 213 for the computer-based test is strongly recommended for admission to the graduate major.

Applicants who do not meet these requirements may petition the Student Affairs Committee for consideration for admission.
CURRICULUM REQUIREMENTS

The M.S. in Nurse Anesthesia requires completion of the credit hours required by the Major. Sequencing of courses is particularly important and academic advisors work with students to design full-time program plans in the major. The curriculum is composed of the didactic phase first 12 months and the clinical phase last 16 months. The classes contain the principles and practices in all applications of anesthesia. The Nurse Anesthesia major is independent of the USF academic calendar. During certain rotations in the clinical phase, weekends, nights, and 24-hour rotations will be expected.

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<th>Total Minimum Hours</th>
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<td>NGR 6002C</td>
<td>Advanced Health Assessment Across the Lifespan</td>
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<td>NGR 6404</td>
<td>Anatomy and Physiology for Nurse Anesthesia</td>
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<td>NGR 6400</td>
<td>Chemistry, Biochemistry, and Physics for Nurse Anesthesia</td>
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<td>NGR 6460</td>
<td>Pharmacology for Nurse Anesthesia</td>
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<td>NGR 6152</td>
<td>Advanced Physiology &amp; Pathophysiology</td>
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<td>NGR 6157</td>
<td>Physiology &amp; Pharmacology for Nurse Anesthetists II</td>
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<td>NGR 6424</td>
<td>Principles for Nurse Anesthesia</td>
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<td>NGR 6441L</td>
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<td>NGR 6420</td>
<td>Foundations &amp; Methods of Nurse Anesthesia Practice</td>
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<td>NGR 6423</td>
<td>Principles of Cardiothoracic Nurse Anesthesia</td>
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<td>NGR 6431</td>
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<td>Research and Evidence-Based Practice</td>
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Comprehensive Examination
Comprehensive competency testing is done through two mechanisms. Currently this requirement is typically fulfilled during the final semester of study and consists of:

- One is a comprehensive oral boards examination which is evaluated by a faculty panel.
- The other mechanism is through the Self-Evaluation Exam (SEE) which is created by the NBCRNA for Nurse Anesthetists who oversees national certification and professional licensure.

COURSES
See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
NURSING

Master of Science (M.S.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:

Fall: February 15*

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 37
Level: Masters
CIP Code: 51.3801
Dept Code: NUR
Major/College Codes: NUR/NAS/NBM NR
Approved: 1980

Concentrations:
- Adult-Gerontology Acute Care Nursing (NAG)
- Adult-Gerontology Primary Care Nursing (NPG)
- Clinical Nurse Leader (NCL) (on hold)
- Family Health Nursing (NFH)
- Nursing Education (NED)
- Pediatric Health Nursing (NPH)
- Psychiatric-Mental Health Nursing (NPM) (on hold)

Dual Concentrations:
- Occupational Health Nursing /Adult-Gerontology Primary Care * (NOC)
- Oncology Nursing /Adult-Gerontology Primary Care * (NOA) (on hold)

Also offered:
- Concurrent Degree:
  M.S. in Nursing/M.P.H. in Public Health With Nursing Concentration in Adult-Gerontology Primary Care/Occupational Health (NOP)

CONTACT INFORMATION

College: Nursing
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The major in Nursing leading to a Master of Science degree prepares its graduates for careers as nurse practitioners, nurse educators, or clinical nurse leaders. Students choose from a variety of nursing specialty options in advanced practice roles and enroll in a prescribed set of core courses central to all specialty options as well as specialty courses and electives. Successful completion of the master’s practitioners program qualifies students to take appropriate national certification examinations and apply for licensure as an ARNP in Florida and other states. Nurse Educator and Clinical Nurse Leader are also eligible for national certification from the National League of Nursing, and the American Association of the Colleges of Nursing, respectively.

Graduate Major Objectives
- Promote evidence-based practice based on synthesis of the most current research relevant to advanced nursing practice.
- Ensure excellence in written and oral communication emphasizing opportunities for publishing and presenting in areas of expertise locally and nationally.

http://health.usf.edu/nursing/
• Prepare leaders to implement and evaluate evidenced based practice.
• Create an environment that enhances the use of translational research to solve practice problems and improve health outcomes.
• Ensure excellence in the dissemination of findings from evidence-based practice at the national and international levels.

Major Research Areas
The College has consolidated its research efforts into two main centers of research:

a. The Center for Living with Chronic Illness: the College of Nursing (CON) focuses the impressive research expertise of our world-class nurse scientists, faculty, and students as they collaborate on unique solutions to the nation’s leading health care issues such as heart disease, Alzheimer’s/dementia, and cancer.

b. Through the CON RESTORE LIVES: Research to Rehabilitate and Restore the Lives of Veterans, Service Members and their Families we are developing evidence-based methods to help veterans and service members overcome psychological stress and other health problems that result from serving in combat operations.

Accreditation:
The Commission on Collegiate Nursing Education, and the Florida Board of Nursing. In addition Nurse Anesthesia Master’s Concentration is accredited by the Council of Accreditation of Nurse Anesthesia Educational Programs.

ADMISSION INFORMATION
Must meet University requirements (see Graduate Admissions) as well as requirements listed in the introductory portion of the college catalog section and for admission to the major, listed below. Certain concentrations are highly competitive.

Baccalaureate Degree (in Nursing) to Master’s Degree (B.S. to M.S.)
Nurses with a baccalaureate degree in nursing are prepared to enroll directly in graduate course work. The total number of credits required is specific to the nursing concentration. Admission criteria include:

• Baccalaureate degree from a regionally accredited program
• Earned grade point average of 3.00 or higher on 4.00 scale in all work attempted while registered as an upper division applicant working on a baccalaureate degree.*
• Current unencumbered license as a registered nurse in the United States upon matriculation. Current license as a registered nurse in the state of Florida before the first clinical course. Three letters of recommendation, indicating potential for graduate study, from persons who can attest to the applicant’s academic ability, clinical competence, and commitment. (Optimally, these letters will be from nursing professors, or clinical supervisors.)
• Current resume or curriculum vitae
• A personal interview with a designated faculty member may also be required

Applicants who do not meet these requirements may petition the Student Affairs Committee for consideration for admission.
Registered Nurse to Master's Degree (NBM)

Registered nurses who have earned a baccalaureate degree in another discipline are eligible for admission to the Master's degree program.

- B.S./B.A. from a regionally accredited program
- Earned grade point average of 3.00 or higher on 4.00 scale in all work attempted while registered as an upper division applicant while working on a baccalaureate degree. *
- Current unencumbered license as a registered nurse in the United States upon matriculation. Current license as a registered nurse in the state of Florida before the first clinical course. Three letters of recommendation
- Current resume or curriculum vitae
- A personal interview with a designated faculty member may also be required, as well as other admission requirements
  - Applicants to the MS Nursing Major are required to complete both a NursingCAS application and a USF Graduate Studies Application.
- Completion of the bridge courses with a letter grade of “B/S” or greater and a GPA of 3.00 or better before progression:
  - NUR3078 Information Technology Skills for Nurses 1
  - NUR3805 Nursing as a Profession 2
  - NUR4169C Evidence Based Practice for Baccalaureate Nurses 3
  - NUR4634C Population Health 3
  - NUR4828C Foundations of Nursing Leadership & Management 3
  - NUR4895 Educational Role of Nurse in Healthcare 3

*Note: The primary care and other selected concentrations in the Master’s program are highly competitive. Additional admission requirements and a higher GPA may be required for these concentrations.

Accelerated Graduate (N.A.S.) (on hold)

Registered nurses who have earned an Associate of Science Degree in nursing, but do not have a bachelor’s degree are also eligible for admission to the Master’s degree program. Students complete 15 credit hours of coursework in the baccalaureate degree program before applying to the Graduate major.

- Associate of Science Degree (Nursing) from a regionally accredited program
- Minimum cumulative grade point average of 3.5 or higher on 4.00 scale on all undergraduate coursework (excluding Associate of Science Nursing courses)*
- Current unencumbered license as a registered nurse in the United States upon matriculation. Current license as a registered nurse in the state of Florida before the first clinical course. Completion of general education and state mandated prerequisites
- Application to the major upon completion of the necessary undergraduate transitional courses
  - Three letters of recommendation
  - Current resume or curriculum vitae
  - Written statement of professional goals
  - A personal interview with a designated faculty member may also be required, as well as other admission requirements
- Applicants to the MS degree program are required to complete both a NursingCAS application and a USF Graduate Studies Application.
- Completion of 15 undergraduate nursing credits with a letter grade of “B/S” or greater and a cumulative 3.00 GPA* or higher is required to be considered for application to the master portion of this major.
  - NUR3078 Information Technology Skills for Nurses 1
  - NUR3805 Nursing as a Profession 2
  - NUR4169C Evidence Based Practice for Baccalaureate Nurses 3
  - NUR4634C Population Health 3
  - NUR4828C Foundations of Nursing Leadership & Management 3
  - NUR4895 Educational Role of Nurse in Healthcare 3
• Students must complete all undergraduate requirements in 3 semesters of study to start master’s courses in the 4th semester of study.

Upon admission to the Accelerated Graduate Program, students choose a Master’s concentration.

*Note: The primary care concentrations in the Master’s major are highly competitive. Additional admission requirements and a higher GPA may be required for these concentrations. During the semester that the student is completing the undergraduate nursing transition courses, the student will meet with an advisor to review all requirements to complete the transition into the graduate major.

CURRICULUM REQUIREMENTS

The M.S. degree program in Nursing requires completion of the credit hours required by the concentration. Sequencing of courses is particularly important and academic advisors work with students to design both full-time and part-time program plans in the specialty areas.

Core Requirement - 3 credit hours
NGR6803 Research and Evidence-Based Practice 3

Advanced Nursing Core: Nurse Practitioner (Acute, Adult-Gerontology, Family & Pediatric) – 24 credit hours
NGR6002C Advanced Health Assessment Across the Lifespan 4
NGR6638 Health Promotion, Clinical Prevention, & Population Health 3
NGR6152 Advanced Physiology & Pathophysiology 4
NGR6172 Pharmacology for Advanced Nurse Practitioner 4
NGR6064C Advanced Diagnostics and Procedures 3
NGR6733 Organizational & Systems Leadership & Quality Improvement for Advanced Practice Nursing 3
NGR6893 Systems and Populations in Healthcare 3

Advanced Generalist (Nursing Education) - 15 credit hours
NGR6055 Health Assessment for the Advanced Generalist Nurse 2
NGR6638 Health Promotion, Clinical Prevention, & Population Health 3
NGR6146 Pathophysiology/Pharmacology for the Adv. Generalist Nurse 4
NGR6733 Organizational & Systems Leadership & Quality Improvement for Advanced Practice Nursing 3
NGR6893 Systems and Populations in Healthcare 3

Specialty Concentration Core:

Adult-Gerontology Primary Care Nursing Concentration (NPG) 45 Total Credit Hours
Concentration Requirements – 18 hours
NGR6207C Health Management of Adults & Older Adults I (3/3) 6
NGR 6244c Health Management of Adults & Older Adults II (3/3) 6
NGR6291C Health Management of Adults & Older Adults – Special Topics (3/3) 6

Family Health Nursing (NFH) Concentration 52 Total Credit Hours
Concentration Requirements – 25 hours
NGR6207C Health Management of Adults & Older Adults I (3/3) 6
NGR6244C Health Management of Adults & Older Adults II (3/3) 6
NGR6301C Primary Care of Children and Adolescents I (4/2) 6
NGR6342 Primary Care of Childbearing Family 1
NGR6342L Primary Care of Childbearing Family Practicum 1
NGR6613C Health Management of Families – Special Topics (2/3) 5
### Pediatric Health Nursing (NPH) Concentration

Concentration Requirements – 18 hours

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NGR6301C</td>
<td>Primary Care of Children &amp; Adolescents I (4/2)</td>
<td>6</td>
</tr>
<tr>
<td>NGR6302C</td>
<td>Primary Care of Children &amp; Adolescents II (3/3)</td>
<td>6</td>
</tr>
<tr>
<td>NGR 6339C</td>
<td>Special Topics: Primary Care of Children and Adolescents (2/4)</td>
<td>6</td>
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</table>

45 Total Credit Hours

### Acute-Gerontology Acute Care Nursing Concentration (NAG)

Concentration requirements – 21 hours

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>NGR6210C</td>
<td>Clinical Management of Acutely &amp; Chronically Ill Adults (3/4)</td>
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<tr>
<td>NGR6232C</td>
<td>Clinical Management of Acute &amp; Critically Ill Adults &amp; Older Adults (3/4)</td>
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</tr>
<tr>
<td>NGR6211C</td>
<td>Acute Care of Adults &amp; Older Adults: Special Topics (3/4)</td>
<td>7</td>
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</table>

48 Total Credit Hours

### Clinical Nurse Leader (NCL) Concentration (admissions on hold)

This concentration is currently not available.

### Nursing Education (NED) Concentration

Concentration Requirements – 19 hours

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>NGR6713</td>
<td>Foundations of Nursing Education</td>
<td>3</td>
</tr>
<tr>
<td>NGR6710</td>
<td>Teaching Strategies in Nursing Education</td>
<td>3</td>
</tr>
<tr>
<td>NGR6718</td>
<td>Evaluation Strategies for Nursing Education</td>
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<td>NGR6947</td>
<td>Practicum in Nursing Education</td>
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<tr>
<td>NGR 6940</td>
<td>Classroom/Online Teaching Practicum</td>
<td>2</td>
</tr>
<tr>
<td>NGR 6719</td>
<td>Clinical Case Studies in Nursing Education</td>
<td>3</td>
</tr>
</tbody>
</table>

Cognate 3

### Psychiatric/Mental Health Concentration (NPM) (admissions on hold)

This concentration is currently not available.

### Concurrent Concentrations:

#### Oncology Nursing (NOA) / Adult-Gerontology Primary Care Nurse (admissions on hold)

### Occupational Health Nursing (NOC)/Adult-Gerontology Primary Care Nurse

Concentration Requirements – 61 Total Credit Hours

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NGR6207C</td>
<td>Health Management of Adults &amp; Older Adults I (3/3)</td>
<td>6</td>
</tr>
<tr>
<td>NGR6244C</td>
<td>Health Management of Adults &amp; Older Adults II (3/3)</td>
<td>6</td>
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<tr>
<td>NGR6291C</td>
<td>Health Management of Adults &amp; Older Adults – Special Topics (3/3)</td>
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</tr>
<tr>
<td>NGR6650</td>
<td>Occupational Health Nursing I</td>
<td>2</td>
</tr>
<tr>
<td>NGR6651</td>
<td>Occupational Health Nursing II</td>
<td>2</td>
</tr>
<tr>
<td>PHC 6360</td>
<td>Safety Principles and Practices</td>
<td>2</td>
</tr>
<tr>
<td>PHC6364</td>
<td>Industrial Hygiene Aspects of Plant Operations</td>
<td>2</td>
</tr>
<tr>
<td>OR</td>
<td>Supervised Field Experience: Plant Operations Interdisciplinary Field Experience</td>
<td></td>
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<tr>
<td>OR</td>
<td>EOH Field course</td>
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<tr>
<td>PHC6356</td>
<td>Industrial Hygiene</td>
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<td>PHC6351</td>
<td>Occupational Medicine</td>
<td>3</td>
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<tr>
<td>PHC 6354</td>
<td>Safety Health for Health Professionals</td>
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<td>PHC6977</td>
<td>Special Project</td>
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</tr>
<tr>
<td>PHC 6936</td>
<td>Public Health Capstone</td>
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</table>

61 Total Credit Hours

### Concurrent Degree M.S. in Nursing/M.P.H. in Public Health with Nursing Concentrations in Occupational Health / Adult-Gerontology Primary Care Nurse Practitioner (NOP)

Concentration Requirements – 80 Total Credit Hours

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NGR 6207C</td>
<td>Health Management of Adults and Older Adults I</td>
<td>6 (3/3)</td>
</tr>
<tr>
<td>NGR 6244C</td>
<td>Health Management of Adults and Older Adults II</td>
<td>6 (3/3)</td>
</tr>
<tr>
<td>NGR 6291C</td>
<td>Health Management of Adults and Older Adults – Special Topics</td>
<td>6 (3/3)</td>
</tr>
<tr>
<td>NGR 6650</td>
<td>Occupational Health Nursing I</td>
<td>2</td>
</tr>
<tr>
<td>NGR 6651</td>
<td>Occupational Health Nursing II</td>
<td>2</td>
</tr>
</tbody>
</table>

80 Total Credit Hours

http://health.usf.edu/nursing/
PHC 6357  Environmental and Occupational Health  3
PHC 6000  Epidemiology  3
PHC 6050  Biostatistics I  3
PHC 6102  Principles of Health Policy Management  3
PHC 6423  Occupational Health Law  2
PHC 6360  Safety Principles and Practices  2
PHC 6945  Supervised Field Experience**  2
PHC 6356  Industrial Hygiene  2
PHC 6351  Occupational Medicine  3
PHC 6354  Occupational Health and Safety Administration  2
PHC 6977  Special Project  3
PHC 6936  Public Health Capstone  3

** Can substitute PHC 6364 Plant Operations Interdisciplinary Field Experience course if filled

ADHERENCE TO DEGREE/PROGRAM PLANS

Admitted students are expected to meet with their professional advisor to determine the appropriate course sequence to meet the curriculum requirements. In some concentrations, the concentration director will develop the program plan with the student and forward the program plan to the professional advisor. Once a program plan is determined, students are expected to adhere to this plan unless special permission is obtained. As not all courses are offered each semester, a student who deviates from the program plan understands that delay in graduation can be expected. Priority is given to students who maintain initial degree plans.

Clinical and/or site placements are based on preceptor and/or site availability. While every effort is made to assign students to preceptor/clinical sites near their residence, it is not always possible, and thus, students will need to be flexible. Students may find it useful to meet with the concentration director to understand specialty course focus and/or clinical course demands and plan accordingly.

COURSES

See http://www.ugs.usf.edu/course-inventory/
NURSING

Doctor of Nursing Practice (D.N.P.) Degree

DEGREE INFORMATION
Priority Admission Application Deadlines:
Fall: February 15
Spring: October 15

International applicant deadlines: http://www.grad.usf.edu/majors

Minimum Total Hours: 30 hours post masters
75 hours post-bacc

Level: Doctoral
CIP Code: 51. 3818
Dept Code: NUR
Major/College Codes: NRS NR
Approved: 2006

Concentrations
Adult-Gerontology Acute Care Nursing (NAG)
Adult-Gerontology Primary Care Nursing (NPG)
Family Health Nursing (NFH)
Pediatric Health Nursing (NPH)

Concurrent Concentrations
Occupational Health/Adult-Gerontology Primary Care
(NOC)
Oncology/Adult-Gerontology Primary Care (NOA)

CONTACT INFORMATION
College: Nursing
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Nursing major prepares graduates for advanced independent clinical practice. Nursing practice, as defined by the American Association of Colleges of Nursing (AACN [2004]), refers to any nursing intervention that influences health care outcomes for individuals or populations. Objectives for the major are based upon recommendations for essential curriculum elements as identified by the AACN and the National Organization of Nurse Practitioner Faculties (NONPF).

D.N.P. Major Goals:
Prepare graduates:
• for practice at the most advanced level in a focused area of nursing practice
• to use information systems and technology to optimize the delivery of health care
• to apply knowledge of the cultural and socioeconomic dimensions of health to prevent disease and promote health for individuals, families, and populations
• to lead sustainable organizational and health system level changes to improve health care delivery and health outcomes
• to direct and develop new and innovative strategies to address current and evolving practice issues in an increasingly complex health care environment
• to critically appraise, synthesize, apply, and translate the knowledge created by researchers and theoretical scholars to improve health care quality and safety
• to use practice information systems and databases to support and inform decision making, improvement efforts, and the evaluation of health outcomes for individuals, families and populations

Accreditation:
Accredited by the Commission on Collegiate Nursing Education
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

D.N.P. - All applicants must have the following:

1. Submission of the following documents:
   a. Three letters of recommendation, indicating potential for graduate study, from persons who can attest to the applicant’s academic ability, clinical competence, and commitment. (Optimally, these letters will be from a nursing faculty or clinical supervisor.)
   b. Personal statement of goals
   c. Current resume or curriculum vitae
   d. Sealed official transcripts from all institutions of higher education attended

2. A personal interview with a designated faculty member may also be required.

3. The equivalent bachelors and/or graduate degrees in nursing from a foreign institution.

4. Current unencumbered license as a registered nurse in the United States upon matriculation. Current license as a registered nurse in the state of Florida before the first clinical course

5. Applicants to the Nursing Major are required to complete both a NursingCAS application and a USF Graduate Studies Application.

B.S. (in Nursing) – D.N.P.

1. A bachelor’s degree in nursing from a CCNE or ACEN and regionally accredited institution and satisfying at least one of the following criteria:
   “B” average or better in all work attempted while registered as an undergraduate student working for a degree, or:
   “B” average or better in all work attempted while registered as an upper division undergraduate student working for a baccalaureate degree.

2. Completion of a 3 credit hour or equivalent length undergraduate level statistics course with a grade of B or better.

M.S. (in Nursing) – D.N.P.

1. A Master’s degree in nursing from a CCNE or ACEN and regionally accredited institution.

2. Minimum 3.00 GPA at the graduate level

3. Licensure as an Advanced Practice Nurse

4. National certification in area of advanced practice

*It is recommended, but not required, to submit competitive GRE scores.

CURRICULUM REQUIREMENTS

Minimum Hours

30 credit hours post masters
75 credit hours post-bacc

The post-masters major of 30 hours minimum can be completed in one year by full-time students and two to three years for part-time students. The post-baccalaureate major of 75 hours minimum can be completed in three to four years by full-time students and five or more years for part-time students.

(MS-DNP)

<table>
<thead>
<tr>
<th>Knowledge Building Core (Required all DNP Students)</th>
<th>30 Minimum Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NGR 6673 Epidemiology for Advanced Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NGR 7767 Practice Management, Quality Improvement, &amp; Patient Safety</td>
<td>3</td>
</tr>
<tr>
<td>NGR 7848 Fundamentals of Statistics for Clinicians</td>
<td>3</td>
</tr>
</tbody>
</table>
Nursing (D.N.P.)

NGR 7874  Informatics & Patient Care Technology  3
NGR 7766  Health System Leadership & Interprofessional Practice  3
NGR 7892  Health Care Policy & Clinical Prevention  3
NGR 7974  Doctor of Nursing Practice Project  4
NGR 7945  Doctor of Nursing Practice Practicum  8*

*D.N.P. students must have a minimum of 1,000 post-baccalaureate supervised clinical hours at the time of graduation. The residency and research project are done over a minimum of two semesters.

Additional coursework will be determined through individual student evaluation.

The BS-DNP option consists of BS-DNP core courses; the BS-DNP concentration courses; and the DNP Knowledge Building Core courses (minimum 75 credit hours)

BS-DNP Core - 14 minimum credit hours
NGR 6002C  Health Assessment Across the Lifespan  4
NGR 6152  Advanced Physiology and Pathophysiology  4
NGR 6733  Organizational & Systems Leadership & Quality Improvement for Advanced Practice Nurses  3
NGR 6803  Research and Evidence-Based Practice  3

Concentrations - 31-49 credit hours
Required to choose one:
Adult-Gerontology Acute Care (NAG)
Adult-Gerontology Primary Care (NPG)
Concurrent Occupational Health/Adult-Gerontology (NOC)
Concurrent Oncology/Adult-Gerontology Primary Care (NOA)
Family Health (NFH)
Pediatric Health (NPH)

Adult-Gerontology Acute Care (NAG)  34 Credit Hours
NGR 6064C  Advanced Diagnostics & Procedures  3
NGR 6172  Pharmacology for Advanced Nurse Practitioners  4
NGR 6210C  Clinical Management of Acutely & Chronically Ill Adults  7 (4/3)
NGR 6211C  Acute Care of Adults & Older Adults: Special Topics  7 (4/3)
NGR 6232C  Clinical Management of Acute & Critically Ill Adults & Older Adults  7 (4/3)
NGR 6638  Health Promotion, , Clinical Prevention, & Population Health  3
NGR 6893  Systems & Population in Healthcare  3

Adult-Gerontology Primary Care (NPG)  31 Credit Hours
NGR 6064C  Advanced Diagnostics & Procedures  3
NGR 6172  Pharmacology for Advanced Nurse Practitioners  4
NGR 6638  Health Promotion, Clinical Prevention, & Population Health  3
NGR 6893  Systems & Population in Healthcare  3
NGR 6207C  Health Management of Adults & Older Adults I  6 (3/3)
NGR 6244C  Health Management of Adults & Older Adults II  6 (3/3)
NGR 6291C  Health Management of Adults & Older Adults: Special Topics  6 (3/3)

Concurrent Oncology/Adult-Gerontology Primary Care (NOA)  37 Credit Hours
NGR 6064C  Advanced Diagnostics & Procedures  3
NGR 6172  Pharmacotherapeutics for Advanced Practice Nursing  4
NGR 6638  Health Promotion, Clinical Prevention, & Population Health  3
NGR 6893  Systems & Population in Healthcare  3
NGR 6207C  Health Management of Adults & Older Adults I  6 (3/3)
NGR 6244C  Health Management of Adults & Older Adults II  6 (3/3)
NGR 6291C  Health Management of Adults & Older Adults: Special Topics  6 (3/3)
NGR 6220  Pathobiology of Neoplasia  3
NGR 6221  Oncology Nursing Concepts  3

http://health.usf.edu/nursing/
### Concurrent Occupational Health/Adult-Gerontology Primary Care (NOC)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>NGR 6064C</td>
<td>Advanced Diagnostics &amp; Procedures</td>
<td>3</td>
</tr>
<tr>
<td>NGR 6172</td>
<td>Pharmacotherapy for Advanced Practice Nursing</td>
<td>4</td>
</tr>
<tr>
<td>NGR 6638</td>
<td>Health Promotion, Clinical Prevention, &amp; Population Health</td>
<td>3</td>
</tr>
<tr>
<td>NGR 6893</td>
<td>Systems &amp; Population in Healthcare</td>
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<tr>
<td>NGR 6207C</td>
<td>Health Management of Adults &amp; Older Adults I</td>
<td>6 (3/3)</td>
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<tr>
<td>NGR 6244C</td>
<td>Health Management of Adults &amp; Older Adults II</td>
<td>6 (3/3)</td>
</tr>
<tr>
<td>NGR 6291C</td>
<td>Health Management of Adults &amp; Older Adults: Special Topics</td>
<td>6 (3/3)</td>
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<tr>
<td>NGR 6650</td>
<td>Occupational Health Nursing I</td>
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<tr>
<td>NGR 6651</td>
<td>Occupational Health Nursing II</td>
<td>2</td>
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<tr>
<td>PHC 6360</td>
<td>Safety Principles and Practices</td>
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<tr>
<td>PHC 6364</td>
<td>Industrial Hygiene Aspects of Plant Operations</td>
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<tr>
<td>OR</td>
<td>Supervised Field Experience: Plant Operations Interdisciplinary Field Experience</td>
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<tr>
<td>PHC 6356</td>
<td>Industrial Hygiene</td>
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</tr>
<tr>
<td>PHC 6351</td>
<td>Occupational Medicine for Health Professionals</td>
<td>3</td>
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<td>PHC 6354</td>
<td>Safety and Health Administration</td>
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<td>PHC 6977</td>
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### Family Health (NFH)

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</thead>
<tbody>
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<td>3</td>
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<tr>
<td>NGR 6172</td>
<td>Pharmacotherapy for Advanced Practice Nursing</td>
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<td>NGR 6638</td>
<td>Health Promotion, Clinical Prevention, &amp; Population Health for Advanced Nursing</td>
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<tr>
<td>NGR 6893</td>
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<tr>
<td>NGR 6207C</td>
<td>Health Management of Adults &amp; Older Adults I</td>
<td>6 (3/3)</td>
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<td>Health Management of Adults &amp; Older Adults II</td>
<td>6 (3/3)</td>
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<tr>
<td>NGR 6301C</td>
<td>Primary Care of Children &amp; Adolescents I</td>
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<td>NGR 6342</td>
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### Pediatric Health (NPH)

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<td>Advanced Diagnostics &amp; Procedures</td>
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</tr>
<tr>
<td>NGR 6172</td>
<td>Pharmacotherapy for Advanced Practice Nursing</td>
<td>4</td>
</tr>
<tr>
<td>NGR 6638</td>
<td>Health Promotion, Clinical Prevention, &amp; Population Health for Advanced Nursing</td>
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<td>NGR 6893</td>
<td>Systems &amp; Population in Healthcare</td>
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<tr>
<td>NGR 6301C</td>
<td>Primary Care of Children &amp; Adolescents I</td>
<td>6 (3/3)</td>
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<tr>
<td>NGR 6302C</td>
<td>Primary Care of Children &amp; Adolescents II</td>
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### Knowledge Building Core Courses (names)

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<th>Course Title</th>
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<tr>
<td>NGR 6673</td>
<td>Epidemiology for Advanced Nursing</td>
<td>3</td>
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<tr>
<td>NGR 7766</td>
<td>Health Systems Leadership and Inter-professional practice</td>
<td>3</td>
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<tr>
<td>NGR 7767</td>
<td>Practice Management, Quality Improvement, and Patient Safety</td>
<td>3</td>
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<tr>
<td>NGR 7848</td>
<td>Fundamentals of Statistics for Clinicians</td>
<td>3</td>
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<tr>
<td>NGR 7874</td>
<td>Informatics &amp; Patient Care Technology</td>
<td>3</td>
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<tr>
<td>NGR 7892</td>
<td>Health Care Policy and Clinical Prevention for Improvement Pop Health</td>
<td>3</td>
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<tr>
<td>NGR 7974</td>
<td>Doctor of Nursing Practice Project</td>
<td>4 (1-3)</td>
</tr>
<tr>
<td>NGR 7945</td>
<td>Doctor of Nursing Practice Practicum</td>
<td>8* (1-7)</td>
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</tbody>
</table>

*D.N.P. students must have a minimum of 1,000 post-baccalaureate supervised clinical hours at the time of graduation. The practicum and project are done over a minimum of two semesters.

### COURSES

See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
NURSING SCIENCE

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: December 15

International applicant deadlines: [Link to deadlines]

Minimum Total Hours:
- 57 post masters
- 87 post bachelors
- 45 post clinical doctorate

Level: Doctoral
CIP Code: 51.3808
Dept Code: NUR
Major/College Codes: NUS NR
Approved: 2003

CONTACT INFORMATION

College: Nursing
Contact Information: [Link to contact information]

MAJOR INFORMATION

The Ph.D. prepares scholars to:
- Conduct original research that informs practice and health policy;
- Apply professional and research ethics and judgment in the conduct of research;
- Disseminate research findings to lay and professional audiences and identify implications for policy, nursing practice and the profession;
- Use innovative approaches to advance nursing science;
- Enact the evolving roles and responsibilities of a nurse scientist;
- Contribute to team science and interdisciplinary collaborations;
- Provide leadership to community, professional, and scientific organizations; and
- Contribute to a global, inter-professional or interdisciplinary community of scholars.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- 3.00 GPA
- B.S. in Nursing from a regionally accredited program (for post-bacc program)*
- M.S. in Nursing from a regionally accredited program (for post-masters program)*
- Clinical Doctorate from a regionally accredited program (for post-clinical doctorate program)*
- Clear potential for research contributions
- Curriculum Vitae
- Demonstrated commitment to doctoral study and scholarly productivity
- Evidence of potential for leadership in nursing profession
- GRE
- Licensure as a registered nurse if performing clinical work (Current unencumbered license as a registered nurse in the United States upon matriculation. A current licence as a registered nurse in the state of Florida before the first clinical course.)
- Three letters of recommendation
- Written Statement of Professional Goals

[Link to health.usf.edu/nursing]
Prerequisite NGR 7848 or equivalent prior to full-time enrollment
Applicants to the Ph.D. program are required to complete both a NursingCAS application and a USF Graduate Studies Application.

*Applicants with degrees in other fields may also be considered

Requirements for Transfer of Credits:

- GPA – Credits transferred in must have a grade of B or higher
- For internal institutional credits the grade of the transferred course:
  - Will be calculated in the GPA at USF
  - Will be noted on the transcript as the grade earned
- For external institution credits the grade of the transferred course:
  - Will not be calculated in the GPA at USF
  - Will be noted on the transcript by a T from a non-USF institution
  - Will be noted on the transcript by a N/A if from a USF regionally accredited institution
- Credit Hours may not exceed 40% of the Ph.D. program requirements for total course hours. Credit hours from a professional doctorate may not count towards dissertation requirements.
- The doctoral committee will be responsible for evaluating, approving, and initiating the transfer as soon as possible following admission.

CURRICULUM REQUIREMENTS

There are three programs of study that lead to the Ph.D. in Nursing: MS-Ph.D., BS-Ph.D, and Clinical Doctorate-PhD.

M.S. - Ph.D.
Total Minimum Program Hours: 57 credit hours
Core – 33 hours
Advanced Directed Research – 3 hours
Cognate – 9 hours
Dissertation – 12 hours

A minimum of 57 hours post-master’s is required. The major can be completed in three to four years by full-time students and five or more years for part-time students. Specific major requirements are determined on an individual basis by the student’s supervisory committee.

Core Requirements – 33 hours
NGR 7111 3 Disciplinary Perspectives of Nursing Science
NGR 7125 3 Model Development for Nursing
NGR 7810 3 Design, Measurement and Analysis in Nursing Research I
NGR 7812 3 Design, Measurement and Analysis in Nursing Research II
NGR 7813 3 Design, Measurement and Analysis in Nursing Research III
NGR 7814 3 Design, Measurement and Analysis in Nursing Research IV
NGR 7881 2 Responsible Conduct of Research
NGR 7930 1 Scientific Inquiry Forum – required each semester prior to candidacy (4 hours minimum)
NGR 7837 3 Innovative Programs in Biobehavioral Research
NGR 7838 3 Innovative Programs in Symptom Management Research
NGR 7954 3 Communicating Nursing Science

Satisfactory completion of the Knowledge Building Core required courses prepares students to successfully complete the dissertation research.

Advanced Directed Research – minimum 3 Credits
Specialized individual participation in research activity, including but not limited to pilot studies and other investigative activities.

**Cognate - 12 Credits**
Students select a cognate area to further support the student’s area of expertise in nursing and the research problem that will be addressed by the dissertation research. Examples of appropriate areas of study for the cognate might be organizational administration, health policy, physiology, cognitive psychology, organizational psychology, gerontology, epidemiology, biostatistics, administration, applied anthropology, educational measurement or a nursing specialty.

**Qualifying Examinations:**
The qualifying examination is to be completed as soon as the majority of core and minor coursework is completed. The purpose of the qualifying examination is to assess the student’s level of scholarship and research skills and to determine if the student possesses the critical and analytical skills necessary to undertake the dissertation research. The qualifying examination consists of a one-day written exam covering core and specialty content.

**Dissertation - 12 Credits**
Students must complete and successfully defend a dissertation.

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**B.S. - Ph.D.**

**Total Minimum Hours:** 87 credit hours

- Core – 33 hours
- Content Area – 18 hours
- Additional Coursework – 12 hours
- Advanced Directed Research – 3 hours
- Cognate – 9 hours
- Dissertation – 12 hours

A minimum of 30 hours beyond the M.S., Ph.D. curriculum is required. The additional coursework must be approved by the student’s supervising committee. These 30 hours should provide students with the foundational knowledge to conduct their proposed research.

Students who wish to earn the MS degree must meet the progression and graduation requirements for the MS concentration. Students may select to complete the following master’s degree tracks in nursing to meet this requirement. Students who select one of these options are required to complete all of the required courses of these tracks.

- Adult-Gerontology Acute Care
- Adult-Gerontology Primary Care
- Family Health Nursing
- Nursing Education
- Pediatric Health Nursing

Alternatively, students may opt for a tailored plan of study developed in collaboration with their supervising committee. A minimum of 18 hours must be in an identifiable area of emphasis. Examples include entrepreneurship, informatics, medical sciences, and public health.

**Clinical Doctorate, - Ph.D.**

**Total Minimum Program Hours:** 45 credit hours post master’s

- Core – 33
- Dissertation – 12 hours

A minimum of 45 hours post-clinical doctorate is required. The program can be completed in two to three years by full-time students and four or more years for part-time students. Specific program requirements are determined on an individual basis by the student’s supervisory committee.
Core Requirements – 33 hours
NGR 7111 3 Disciplinary Perspectives of Nursing Science
NGR 7125 3 Model Development for Nursing
NGR 7810 3 Design, Measurement and Analysis in Nursing Research I
NGR 7812 3 Design, Measurement and Analysis in Nursing Research II
NGR 7813 3 Design, Measurement and Analysis in Nursing Research III
NGR 7814 3 Design, Measurement and Analysis in Nursing Research IV
NGR 7836 2 Responsible Conduct of Research
NGR 7920 1 Scientific Inquiry Forum – required each semester prior to candidacy (4 hours minimum)
NGR 7936 3 Innovative Programs in Biobehavioral Research
NGR 7938 3 Innovative Programs in Symptom Management Research
NGR 7954 3 Communicating Nursing Science

Satisfactory completion of the Knowledge Building Core required courses prepares students to successfully complete the dissertation research.

Qualifying Examinations:
The qualifying examination is to be completed as soon as the majority of core and minor coursework is completed. The purpose of the qualifying examination is to assess the student’s level of scholarship and research skills and to determine if the student possesses the critical and analytical skills necessary to undertake the dissertation research. The qualifying examination consists of a one-day written exam covering core and specialty content.

Dissertation -12 Credits
Students must complete and successfully defend a dissertation

NOTE: Students are to meet with curriculum advisor for individual program plan.

COURSES
See http://www.ups.usf.edu/course-inventory/
SECTION 22

COLLEGE OF PHARMACY

http://health.usf.edu/pharmacy/
## Changes to Note

The USF Graduate Council approved the following on the dates noted.

### Majors

<table>
<thead>
<tr>
<th>MAJOR</th>
<th>CHANGE</th>
<th>DATE</th>
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<tbody>
<tr>
<td>RX Pharmaceutical Nanotechnology M.S.P.N.</td>
<td>Change Major - Admissions, electives</td>
<td>10/3/2016</td>
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<td>Change Major – add Online option</td>
<td>9/26/2016</td>
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<td>Change Major - change to online and face-to-face</td>
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<tr>
<td>RX Pharmacy Pharm.D.</td>
<td>Add new Concentration in Pharmacy and Health Education (RXHE)</td>
<td>5/8/2017</td>
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</tbody>
</table>
University of South Florida
College of Pharmacy
12901 Bruce B. Downs Blvd.
Tampa, FL 33612

Web address: http://health.usf.edu/pharmacy/index.htm
Phone: 813-974-5699
Fax: 813-905-9890

College Dean: Kevin Sneed, Pharm.D.
Associate Dean for Academic Affairs: Amy H. Schwartz, Pharm.D.
Associate Dean, Graduate Programs: Shyam Mohapatra, Ph.D., M.B.A.

Accreditation:
The College of Pharmacy (COP) is accredited by the Accreditation Council for Pharmacy Education (ACPE). Additional information can be found on the USF and COP websites.

Mission Statement:
The USF College of Pharmacy’s mission is to Revolutionize Health by:

• Innovation of patient centered healthcare through education, research, and service
• Empowerment of students, professionals, and patients as catalysts for change at all levels of health.

Vision
By 2019, USF College of Pharmacy will achieve interprofessional excellence in:

• Geriatrics
• Personalized Medicine
• Informatics
• Leadership

Values
• Innovation
• Leadership
• Diversity
• Interprofessional collaboration
• Interdisciplinary research
• Evidence-based applications
• Teamwork
• Life-long learning

Research Facilities
The College of Pharmacy has established alliances and affiliations with a number of Centers and Institutes at USF in its efforts to:

1) Provide research and educational opportunities (faculty and students);
2) Foster and promote interdisciplinary research;
3) Advance research, innovation and academic entrepreneurship in emerging technologies.

The Centers with which the COP has established affiliations are as follows:

• Byrd Alzheimer’s Institute
• Center for Advanced Medical Learning and Simulation (CAML5)
• The Florida Center of Excellence for Drug Discovery and Innovation (CDDI)
• USF Nanomedicine Research Center
Major Research Areas
Faculty research areas are accessible through the following web link:
http://health.usf.edu/pharmacy/research/index.htm

College Information:
The USF College of Pharmacy (COP) was established in 2010 to offer the Doctor of Pharmacy (PharmD) degree. The COP mission aligns with the USF Mission by:
1. providing a competitive professional program in pharmacy;
2. producing knowledge, promoting intellectual development, and certifying student success in a global environment; and
3. providing interdisciplinary education, research, and service through health-related disciplines.

The Doctor of Pharmacy didactic and experiential curriculum encompasses interprofessional, patient-centered pharmaceutical care, translational research opportunities, and community-focused service learning in an effort to produce competent pharmacy practitioners. The COP plans to maximize the advantages associated with being part of Florida’s leading metropolitan research university through collaborations with other disciplines and programs across the USF campus.

COP founded its Office of Graduate Programs in 2013. The vision for graduate education at COP included developing cutting-edge research training and education including both didactic (on-line and in-class) in several areas of Pharmacy, creating a diverse learning environment for students and faculty and creating advanced learning opportunities using the emerging technologies.

Consistent with USF’s mission, the strategic goals of OGP include:
1. to enhance domestic and international recruitment, enrollment, and retention of graduate students that reflects diversity,
2. to strive to enhance the academic experience of and the quality of life for graduate students,
3. to pursue research funding and conduct and publish research that leads to opportunities for graduate student success,
4. to partner with the other USF Colleges and SUS institutions to develop creative initiatives that promote graduate student research, and
5. to serve as a leader in promoting interdisciplinary graduate programs.

A Master of Science in Pharmaceutical Nanotechnology was approved and OGP plans to develop additional initiatives for Graduate Certificates and a PhD degree program in addition to concurrent degree programs at the COP.

Degrees, Majors, and Concentrations Offered:

Master of Science in Pharmaceutical Nanotechnology (MSPN)
Pharmaceutical Nanotechnology (PNT)

Doctor of Pharmacy (PharmD)
Pharmacy
Pharmacy and Health Education (RXHE)

Graduate Certificates Offered:
http://www.usf.edu/innovative-education/programs/graduate-certificates/

For information on graduate majors and certificates offered through the College of Pharmacy, please contact Pharmacygraduateprogram@health.usf.edu or the Office of Graduate Certificates.
PHARMACEUTICAL NANOTECHNOLOGY

Master of Science in Pharmaceutical Nanotechnology (M.S.P.N.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
- Fall: February 15
- Spring: October 15
- Summer: February 15

Minimum Total Hours: 32
Level: Masters
CIP Code: 51.2099
Dept Code: ---
Major/College Codes: PNT / RX
Effective: Spring 2016

CONTACT INFORMATION

College: Pharmacy
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Master’s of Science degree in Pharmaceutical Nanotechnology is designed to train students in the skills they will need to understand the burgeoning technological advances in science at the nanoscale and how new nanomaterials and processes can be applied to drug delivery, diagnosis, treatment monitoring, tissue regeneration, personalized medicine and more. This major aims to bridge the gap between nanotechnology and medicine, providing students with advanced knowledge, skills and practical experience within the principles, technology and applications within this exciting and innovative area.

Major Research Areas:
Nano, Nanotechnology, Nano Pharmacy, Nano Pharmaceutics, Nano Pharmaceutical

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- Bachelor’s degree preferably in the biomedical, biological, chemical sciences or engineering from a regionally accredited institution with a minimum overall GPA of 3.00 and present a score on the Graduate Record Examination (GRE) Medical College Admission Test (MCAT), or PCAT or DAT score.
- GRE, MCAT or DAT standardized test scores or evidence of substantial health/sciences experience. The GRE may be waived if the overall undergraduate GPA is 3.80 or higher. GRE may be substituted by minimum MCAT score of 20, PCAT or score of 55% DAT score of 19.
- A language proficiency test for international applicants from non-English speaking countries or who have not earned a degree in the United States must provide a minimum IELTS score of 6.5 taken within 2 years of the desired term of entry, a minimum PTE-A score of 53 or a minimum TOEFL score of 79 (internet-based test), 213 (computer-based test) or 550 (written test).
- Minimum of two (2) (Maximum of five) Letters of Reference (preferably from previous professors, employers within the field of science – all must be fairly recent – within the last five years of coursework or employment)
- A resume
- Interview (Optional)
- Final determination for admission will be made by Graduate Director based on GPA, GRE, MCAT, PCAT or DAT scores, letters of recommendations, resume and personal statement combined.

http://health.usf.edu/pharmacy/
CURRICULUM REQUIREMENTS

Total Minimum Hours – 32 credit hours

Core Requirements – 14 credit hours
Non-thesis – 18 credit hours (including electives)
Thesis – 18 credit hours (8 Thesis; 10 electives)
Electives – 10-18 credit hours (depending on thesis/non-Thesis Option)

Core Requirements - 14 hours
PHA 6146 3 Introduction to Nanotechnology
PHA 6119 3 Micro-/Nanoscale Drug Delivery systems
PHA 6118 3 Nanomaterials, BioMEMs and Nanodevices in Medicine
PHA 6147 3 Nanotechnology and Risk Management
PHA 6797 1 Scientific Writing and Communication
PHA 6277 1 Ethics in Pharmaceutical Practice and Research

Non-Thesis Option – 18 hours
Students select from either the general or entrepreneurship Tracks:

General Track
In addition to the core requirements, students complete 18 hours of electives (see below) and submit a written document based on a systematic review of a selected topic as assigned by the major professor.

Entrepreneurship Track
In addition to the core requirements, students complete the following courses/internship, and 9 hours of electives and submission of a written document based on a systematic review of a selected topic as assigned by the major professor.

PHA 6225 3 Invention, Innovation & Entrepreneurship
PHA 7001 6 Graduate Program Internship in Pharmacy – Internship is in a matched industry, institute or center, as approved by the major advisor
Electives 9 (See below)

Thesis Option – 18 hours

Research Track
In addition to the core requirements, students complete a thesis and 10 hours of electives
PHA 6971 8 Thesis
Electives 10 See Below

Electives – 10 hours minimum
Students take a minimum of 10-18 hours of electives depending on if in the thesis/non-thesis option.
PHA 6148 3 Nanof ormulations and Nanopharmaceutics
PHA 6449 3 Pharmacogenomics- Current and Future Prospects
PHA 6222 3 Pharmacy Practice Management
GMS 6010 3 Personalized Medicine
PHA 6618 3 Principles of Geriatric Medicine
PHA 6622 3 Advanced Geriatric Pharmacy Care
PHA 6223C 3 Pharmacy Leadership
PHA 7930 1-3 Special Topics in Pharmacy
PHA 6533 1 Graduate Program Seminar in Pharmacy*
PHA 6336 3 Regenerative Medicine
GMS 6201 3 Basis Medical Biochemistry
GMS 6605 3 Basic Medical Anatomy
GMS 6505 3 Basics Medical Pharmacology
GMS 6183 3 Clinical Research Methods
GMS 6440 3 Basic Medical Physiology

http://health.usf.edu/pharmacy/
Additional Requirements:

General Track
*Submission of e-Portfolio to complete the major is required in this course:
PHA 6533 3 Graduate Program Seminar in Pharmacy

Internship Track
Students will experience hands-on training in specified area of discipline or project as approved by major advisor. They will be required to submit an evaluation of Satisfactory or greater from their project advisor to complete the major in the final Internship in Pharmacy course:
PHA 7001 6 Graduate Program Internship in Pharmacy

Thesis Track
Submission of a written thesis on a specific project based on experimental data for approval is required to complete the major in the last Thesis course.
PHA 6971 8 Thesis

Comprehensive Exam
For students in the thesis track, the thesis defense will be used in lieu of a comprehensive exam. For non-thesis students, the successful completion of the portfolio will be used in lieu of a comprehensive exam.

Possible Sequence
Fall – total 12 credit hours
PHA 6146 - Intro to Nanotechnology 3 Cr
PHA 6797 - Scientific Writing and Communication 1 Cr
PHA 6277- Ethics in Pharmaceutical Practice and Research 1 Cr
Approved Electives 7 Cr

Spring – total 12 credit hours
PHA 6119 – Micro-/Nano Drug Delivery Systems 3 Cr
PHA 6118 – Nanomaterials, BioMEMs and Nanodevices in Medicine 3 Cr
PHA 6147 - Nanotechnology and Risk Management 3 Cr
Approved Electives 3 Cr

Summer – total 8 credit hours
PHA 6148 - Nanoformulations and Nanopharmaceutics 3 Cr
Approved Electives 5 Cr

COURSES
See http://www.ugs.usf.edu/course-inventory/
PHARMACY

Doctor of Pharmacy (PharmD) Degree

DEGREE INFORMATION

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<th>Priority Admission Application Deadlines</th>
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<td>Fall</td>
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<tr>
<td>Early Decision: September 6</td>
<td>College of Pharmacy</td>
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<td>Regular Decision: February 1</td>
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Minimum Total Hours: 151 hours
Level: Doctoral / Professional
CIP Code: 51.2001
Dept Code: PHA
Major/College Codes: Rx / PRY
Approved: Effective Fall 2016

Concentration:
Pharmacy and Health Education (RXHE)

CONTACT INFORMATION

College: College of Pharmacy
Department: Department of Pharmacy
Contact information: www.health.usf.edu/pharmacy

Major Information

The USF COP curriculum is very similar to that offered by other schools and colleges across the state of Florida and country. This is purposeful as there are standards that must be upheld by all pharmacy programs must to remain in accordance with national accreditation, financial aid and state regulatory requirements. The USF COP Mission, Vision and Goals serve to guide curricular content as well as other COP endeavors. The integration of technology, student engagement in the educational process, and interprofessional activities serve as the foundation for each course. The faculty will utilize a variety of instructional methods to foster student attainment course objectives.

All students will be enrolled on a full-time basis. Several courses may be taught predominantly on-line, however the majority of courses will include classroom contact. Lectures will be limited so that peer and faculty interactions can be maximized. For many courses students may be required to listen to lectures on-line, or complete activities and/or assignments in preparation for class. The emphasis of the USF COP is the comprehension and assimilation of knowledge, with subsequent demonstration of competency (skills and abilities).

Accreditation

Accredited by the Accreditation Council for Pharmacy Education (ACPE).

Major Research Areas

http://health.usf.edu/pharmacy/research/index.htm

Admission Information

All applications undergo a holistic review process whereby careful consideration is given to all the credentials presented by applicants. By utilizing this process, applicants’ academic record along with experiences and attributes are assessed for potential academic and clinical success.

- US Citizen or US Permanent Resident
- ≥ 2.75 Overall GPA (preferred).
- Completion of at least 72 prerequisite coursework
- PCAT is required. While 65th percentile composite PCAT score is preferred, we will consider applicants with lower scores that may have other strong academic indicators providing evidence of success. PCAT scores older than 3 years will NOT be accepted.

http://health.usf.edu/pharmacy/
Curriculum Requirements:

Minimum Total Hours: 151 credit hours
Common Core Requirement: 135 hours
Concentration (Optional): 11 hours
Required Electives: 16-18 hours

Four year (9 term) major including 1 summer term

Common Core Requirements - Curriculum (Didactic and Experiential) – 135 hours

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<tr>
<th>Course Code</th>
<th>Credit Hours</th>
<th>Course Title</th>
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<tr>
<td>PHA 6114C</td>
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<td>Drug Delivery Systems I (with lab)</td>
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<tr>
<td>PHA 6115C</td>
<td>3</td>
<td>Drug Delivery Systems II (with lab)</td>
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<td>PHA 6124</td>
<td>3</td>
<td>Principles of Pharmacokinetics / Pharmacodynamics I</td>
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<tr>
<td>PHA 6129</td>
<td>3</td>
<td>Clinical Pharmacokinetics / Pharmacodynamics II</td>
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<td>PHA 6130C</td>
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<td>Translational Pharmacogenomics</td>
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<td>PHA 6233C</td>
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<td>Jurisprudence</td>
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<td>PHA 6243</td>
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<td>Medical Informatics &amp; Technology</td>
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<td>PHA 6261</td>
<td>3</td>
<td>Healthcare Administration &amp; Economics</td>
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<td>PHA 6270</td>
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<td>HealthCare &amp; Medication Safety</td>
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<td>PHA 6451</td>
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<td>Clinical Biochemistry</td>
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<td>PHA 6562</td>
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<td>PHA 6575</td>
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<td>PHA 6577</td>
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<td>Biochemical &amp; Molecular Principles of Drug Action</td>
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<td>PHA 6618C</td>
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<td>PHA 6740</td>
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<td>PHA 6755</td>
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<td>Medical Microbiology &amp; Immunology</td>
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<td>PHA 6760</td>
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<td>Non-Prescription &amp; Herbal Therapies</td>
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<td>PHA 6782C</td>
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<td>PHA 6792C</td>
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<td>Drug Information / Literature Evaluation</td>
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<td>PHA 6795</td>
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<td>Research Methods &amp; Biostatistics</td>
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<td>PHA 6804C</td>
<td>2</td>
<td>Pharmaceutical Calculations</td>
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<td>PHA 6870C</td>
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<td>PHA 6875C</td>
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<td>PHA 6898</td>
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<td>Foundations in Public Health</td>
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<td>PHA 6940</td>
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<td>Introductory Pharmacy Practice Experience I (IPPE)</td>
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<td>PHA 6948</td>
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<td>IPPE V - Institutional Practice</td>
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<td>PHA 7626</td>
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<td>APPE Advanced Institutional (Health Systems)</td>
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<td>PHA 7627</td>
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<td>APPE Advanced Community</td>
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<td>APPE Geriatrics</td>
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<td>APPE Ambulatory Care</td>
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<td>APPE Adult Medicine</td>
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<tr>
<td>PHA 7928C</td>
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<td>Professional Forum</td>
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Concentration Option
The Pharmacy and Health Education Concentration provides students with a background in teaching and learning theory and the skill sets necessary to provide Pharmacy and Health Education in various formats (e.g., continuing education, precepting, inservices). The Concentration also provides the opportunity to become engaged in the scholarship of teaching and learning. Students interested in pursuing the Concentration must formally notify the Concentration Coordinator by the end of their PY2 year.

Upon completion of the Pharmacy and Health Education Concentration coursework, a student will be able to:
1. Articulate the role of life-long learning in the Pharmacy Profession and utilize self-reflection to identify areas of need.
2. Describe career paths in health education and corresponding roles and responsibilities.
3. Employ effective teaching and assessment methods to provide appropriate education to various population (e.g., peers, other health professionals, and the general public).
4. Create effective learning environments, teaching tools and assessments based-upon evidence-based learning theory and cognitive practice.

Pharmacy and Health Education Concentration (RXHE) – 11 credit hours
HSC 6261 2  Teaching Essentials
HSC 6261L 1  Advanced Teaching Essentials Experience
PHA 7684 6  Elective 1 Pharmacy Practice Experience: Academia

And one of the following:
PHA 6877C 2  Critical Care Pharmacotherapy
PHA 6780C 2  Advanced Topics in Oncology Pharmacy Practice
PHA 6916* 3  Directed Independent Research

*Please contact Concentration Coordinator to ensure courses or project topics align with concentration for credit.

Students may enroll in HSC 6261 and HSC 6261L courses in their PY2 or PY3 year and may take this course on-top of another elective if desired. Due to the enhanced workload and rigors of the course, students must meet eligibility requirements in addition to completion of the application. Eligibility requirements are as follows:
1. PY2 or PY3 standing
2. GPA ≥ 3.00
3. Two (2) course coordinators or (1) coordinator and a Student Success Coach document support of the students endeavor via completion of a standardized form

The concentration will be noted on the USF official transcript. No other documentation or certificate will be provided by the College of Pharmacy. Additional details pertaining to the Concentration Track can be found at http://health.usf.edu/pharmacy/.

Electives – 16-18 hours minimum
Students complete 16-18 hours of electives minimum from the list below. Students in the Concentration complete the concentration requirements in lieu of 11 hours of the electives, and then complete additional electives from the list noted with (*) below.

PHA 6780C* 2  Oncology Pharmacy Practice
PHA 6877C* 2  Critical Care Pharmacotherapy
PHA 6916*  TBD  Directed Independent Research
PHA 7684* 12  APPE Elective X 2
PHA 6177 2  Advanced Compounding and Industrial Pharmacy
PHA 6185 2  Drug Discovery and Frontier
PHA 6221 2  Pharmacists Role In Transitions of Care
PHA 6223C 2  Pharmacy Leadership
PHA 6224 2  Pharmaceutical Debates On Recent Issues Affecting the Profession
PHA 6352 2  Herbal Medicines and Alternative Therapy
PHA 6428C 2  Advanced Topics In Metabolic Syndrome Treatment
PHA 6531 2  Basic Principles of Toxicology
PHA 6592C 2  Advanced Cardiology Pharmacotherapy
PHA 6598 2  Current Perspectives in Mental Health
PHA 6602 2  Pediatric Pharmacotherapy
PHA 6615C 2  Ambulatory Care Pharmacy Practice Elective

http://health.usf.edu/pharmacy/
Internship

**Introductory Pharmacy Practice Experiences (IPPE)**
The IPPE sequence begins during the second semester of the first year of the curriculum, and focuses on public health principles. Students will participate in local community health centers and other clinics that treat underserved populations (60 contact hours).

The second year IPPE encompasses activities within community pharmacy practice sites across the Tampa Bay region (retail, independent, supermarket, etc.). Students will participate in a minimum of 60 contact hours per semester, 120 hours for the academic year.

The third year IPPE encompasses activities within institutional pharmacy practice sites across the Tampa Bay region (hospitals, long-term care facilities, etc.). Students will participate in a minimum of 60 contact hours per semester, 120 hours for the academic year.

**Advanced Pharmacy Practice Experiences (APPE)**
The fourth professional year APPE begins the summer semester immediately following the conclusion of the third professional year. The APPE are comprised of seven six-week rotations, encompassing a minimum of 1600 hours of clinical instruction. The APPE will primarily occur within practice environments throughout the state of Florida. Students are able to pursue rotations beyond the state of Florida if the site and preceptor are deemed acceptable, and arrangements can be coordinated to align with the academic calendar.

**Graduation Requirements**
- A minimum cumulative grade point average (CGPA) of 2.50
- Successful completion of the following within 7 years from the original date of admission:
  - All Didactic (GPA 2.00 or higher)
  - Attend all MPJE and NAPLEX reviews
  - All Experiential Education (GPA 2.00 or higher)
  - Professionalism (proficiency in professionalism, clinical skills, effective judgment and decision making)
- Timely Submission of the application for graduation
  - Graduate application fee due at time of submission
SECTION 23

College of Public Health

http://health.usf.edu/publichealth/
# Changes to Note

Graduate Council approved the following on the dates noted.

## Concurrent Degree Options

<table>
<thead>
<tr>
<th>Program</th>
<th>Degree(s)</th>
<th>Change</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Administration/Public Health</td>
<td>M.H.A./M.P.H.</td>
<td>Update Curriculum; reduce from 70 to 67 hrs</td>
<td>12/5/2016</td>
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<tr>
<td>Public Health / Medicine</td>
<td>M.P.H./M.D.</td>
<td>New Concurrent Degree Option “MD=4 year program”</td>
<td>5/1/2017</td>
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<tr>
<td>Public Health/Medical Sciences</td>
<td>M.P.H. / Ph.D.</td>
<td>Terminate Concurrent Degree</td>
<td>3/6/2017</td>
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<tr>
<td>Public Health/Stetson Law</td>
<td>M.P.H./J.D.</td>
<td>Terminate Concurrent Degree Option</td>
<td>5/8/2017</td>
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</tbody>
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## Majors

<table>
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<tr>
<th>Program</th>
<th>Degree(s)</th>
<th>Change</th>
<th>Date</th>
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<tbody>
<tr>
<td>Health Administration</td>
<td>M.H.A.</td>
<td>Change Major- reduce hrs from 58 to 53</td>
<td>11/7/2016</td>
</tr>
<tr>
<td>Health Administration</td>
<td>M.H.A.</td>
<td>Change Admissions Deadlines - spring deadline to June 15</td>
<td>5/1/2017</td>
</tr>
<tr>
<td>Public Health</td>
<td>M.P.H.</td>
<td>Revise GRE Score language</td>
<td>11/7/2016</td>
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<tr>
<td>Public Health</td>
<td>M.P.H.</td>
<td>Terminate Concentration - Socio Health Sciences (SHS)</td>
<td>3/6/2017</td>
</tr>
<tr>
<td>Public Health</td>
<td>M.P.H.</td>
<td>Remove track from core courses</td>
<td>5/1/2017</td>
</tr>
<tr>
<td>Public Health</td>
<td>M.P.H.</td>
<td>Update Comp exam language</td>
<td>5/1/2017</td>
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<tr>
<td>Public Health</td>
<td>M.P.H.</td>
<td>Add new Concentration in Occupational Medicine Residency (OMR)</td>
<td>5/1/2017</td>
</tr>
<tr>
<td>Public Health</td>
<td>M.P.H.</td>
<td>Change Admissions Deadlines - spring deadline to June 15</td>
<td>5/1/2017</td>
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<tr>
<td>Public Health</td>
<td>M.S.P.H.</td>
<td>Change Industrial Hygiene name to Occupational Exposure Science (OES)</td>
<td>11/7/2016</td>
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<tr>
<td>Public Health</td>
<td>M.S.P.H.</td>
<td>Change Major - GRE Score language</td>
<td>11/7/2016</td>
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<tr>
<td>Public Health</td>
<td>M.S.P.H.</td>
<td>Change Major - remove track from core courses</td>
<td>5/1/2017</td>
</tr>
<tr>
<td>Public Health</td>
<td>M.S.P.H.</td>
<td>Change Admissions Deadlines - spring deadline to June 15</td>
<td>5/1/2017</td>
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<tr>
<td>Public Health</td>
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<td>Change Major - GRE Score language</td>
<td>11/7/2016</td>
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<tr>
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<td>Ph.D.</td>
<td>Change Admissions Deadlines - spring deadline to June 15</td>
<td>5/1/2017</td>
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<tr>
<td>Public Health</td>
<td>Ph.D.</td>
<td>Change core; terminate EOH Concentrations; add new concentration</td>
<td>5/8/2017</td>
</tr>
<tr>
<td>Public Health</td>
<td>Dr.PH</td>
<td>Change Major - GRE Score language</td>
<td>11/7/2016</td>
</tr>
<tr>
<td>Public Health</td>
<td>Dr.PH</td>
<td>Change Major - Replacement changes; Update Field Studies</td>
<td>2/6/2017</td>
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<td>Public Health</td>
<td>Dr.PH</td>
<td>Combined changes core with Ph.D. New Concentration: Advanced Practice Leadership in Public Health (APR) eff fall 2017</td>
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## Certificates

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<thead>
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<tr>
<td>Applied Biostatistics</td>
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</tr>
<tr>
<td>Epidemiology of Infectious Diseases</td>
<td>Change Certificate</td>
<td>4/3/2017</td>
</tr>
<tr>
<td>Health Management and Leadership</td>
<td>Change Certificate</td>
<td>5/8/2017</td>
</tr>
<tr>
<td>Public Health Policies &amp; Programs</td>
<td>Change Certificate</td>
<td>5/8/2017</td>
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<tr>
<td>Public Health Policy &amp; Programs</td>
<td>Change Certificate</td>
<td>11/7/2016</td>
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## Terminated Certificates

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<tr>
<td>Epidemiology</td>
<td>4/3/2017</td>
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<tr>
<td>Health Equity</td>
<td>5/8/2017</td>
</tr>
<tr>
<td>Violence and Injury: Prevention and Intervention</td>
<td>5/8/2017</td>
</tr>
</tbody>
</table>

[http://health.usf.edu/publichealth/](http://health.usf.edu/publichealth/)
DEPARTMENTS AND COLLEGE WIDE MAJORS

Community and Family Health
Adolescent health; Sexual Health; Reproductive and women’s health; Family violence; Injury control and prevention; Aging and public health; Social marketing; Maternal and child health; Behavioral health; Health needs of special populations; Social determinants of health; Health disparities; Community-based interventions; Development; implementation and evaluation of programs to support healthy lifestyles; Application of technology in public health.

Environmental and Occupational Health
Environmental and occupational toxicology and health risk assessment, Ergonomics and occupational heat stress, Occupational and environmental lung disease, inflammation and asthma, Environmental pollution assessment and modeling, bio-monitoring and management.

Epidemiology and Biostatistics
Epidemiology: Epidemiology of dementia and Alzheimer’s disease, Aging and occupational epidemiology, Cardiovascular disease epidemiology, Social epidemiology and public health geography, Cross-cultural studies, Cancer epidemiology, Perinatal epidemiology, Sleep disorders, Injury epidemiology, Osteoporosis and falls in aging population, Infectious disease epidemiology., Biostatistics: Methodologies for analysis of spatial and temporal data including multilevel, mixed-effects, and growth curve modeling, Bayesian methods, Survey and sampling, Missing data, Causal inference, Survival data analysis, and Data mining; Applications ranging from design and analysis of field trials for prevention of mental and behavioral disorders, design and analysis of clinical trials, analysis of social behavioral data, analysis of environmental data such as air pollution, health outcome evaluation, medical surveillance, modeling of biological system including dynamic models of HIV/AIDS trials, and health risk assessment.

Global Health
"Drug development and diagnosis of emerging and infectious diseases of developing countries, including malaria and tissue and soil transmitted dwelling helminths. Ecology and remote sensing prediction of diseases in developing countries. Ecology and control of vector borne diseases in Florida, especially endemic and emerging arboviruses. Chronic diseases and accident prevention in developing countries. Disaster cycle with emphasis on the recovery phase within the context of a Humanitarian Complex Emergency. Infection control practices and procedures in healthcare settings."

Health Policy and Management
Health care financial management, Health economics, Quantitative methods in health services, Health insurance, Health law, Quality management, Performance improvement, Community health assessment, Organizational theory and behavior applied to health settings, Health information management, Health policy, and Strategic planning.

College Wide Majors
Public Health Practice, Executive Public Health Weekend Major, Public Health Generalist, Healthy Communities, Health Equity.
Accreditation:
The College is fully accredited by the Council on Education for Public Health and the MSPH in Industrial Hygiene is accredited by the Applied Science Accreditation Commission of ABET, [http://www.abet.org](http://www.abet.org). The M.H.A. and concurrent M.H.A/M.P.H are accredited by the Commission on Accreditation of Healthcare Management Education.

Mission Statement:
The College of Public Health’s mission is to improve the public’s health through advancing discovery, learning, and service. Goals are related to building strong focused research programs that reward and encourage scholarship and creative activities, continual improvement of academic majors and student centered learning, a college culture that supports our mission, vision, and values, a strong sustainable infrastructure, and active service and meaningful community engagement.

The base of knowledge for public health comes from a variety of disciplines, ranging from social sciences to biological sciences and business, brought together by a commitment to improve the public’s health. Thus, the field is open to students from diverse academic disciplines including Health Sciences, Education, Business, Communication, Mathematics, Social and Natural Sciences. Graduates are prepared for interdisciplinary focused public health careers as administrators, managers, educators, researchers, and direct service providers.

The College’s five departments are Community and Family Health, Environmental and Occupational Health, Epidemiology and Biostatistics, Global Health, and Health Policy and Management. The major in Public Health Practice is College-wide.

Core content is directly related to addressing and meeting public health issues. Off campus or alternate calendar programs may reflect additional offerings to meet specific needs. The College accommodates the working professional as well as the full-time student by offering late afternoon and evening classes, online delivery of courses and graduate certificates, and a executive M.P.H. for experienced health professionals.

The College hosts several College and Departmental based centers that augment the learning opportunities for students. A few examples include the Center for Biological Defense, Center for Leadership in Public Health Practice, Center for Positive Health, the Florida Health Information Center, The James and Jennifer Harrell Center for the Study of Family Violence, the Lawton and Rhea Chiles Center for Healthy Mothers and Babies, and the Florida Prevention Research Center.

Degrees, Majors, Concentrations

**Master of Health Administration (M.H.A.)**
Health Administration (MHA)

**Master of Public Health (M.P.H.)**
Public Health (MPH)
- Behavioral Health (BHH)
- Biostatistics (BST)
- Environmental Health (EVH)
- Epidemiology (EPY)
- Epidemiology (ONLINE) (EPO)
- Epidemiology and Biostatistics (PEB)– concurrent concentration
- Epidemiology and Global Communicable Disease (EGC) – concurrent concentration
- Epidemiology and Global Health - (EGH)– concurrent concentration
- Epidemiology and Maternal & Child Health (EMC) – concurrent concentration
- Executive Program for Health Professionals (EPH)\(^{1,2}\)
- Food Safety (FOS)
- Global Communicable Disease (TCD)
- Global Disaster Management, Humanitarian Relief, and Homeland Security (GHH)
- Global Health Practice (GLO)
- Health Care Organizations and Management (HCO)
- Health Policies and Programs (HPP)
- Health Safety and Environment (HLE)
- Infection Control (IFC)
- Maternal and Child Health (PMC)
Nutrition and Dietetics (NUD)
Occupational Health (OCC) ³
Occupational Health for Nurses (OCP)
Occupational Medicine Residency (OMR)
Public Health Administration (PHA)
Public Health Education (PHN)
Public Health Practice Program (PHP) ¹, ²
Social Marketing (SOM)
Toxicology and Risk Assessment (TXY)

**Master of Science in Public Health (M.S.P.H.) Degree**

- Public Health (MSP)
  - Behavioral Health (PBH)
  - Bioinformatics (PBF)
  - Biostatistics (PBC)
  - Environmental Health (PEH)
  - Epidemiology (PEY)
  - Genetic Counseling (GTC)
  - Global Communicable Diseases (PGD)
  - International Public Health Research, Policy and Planning (PIP)
  - Maternal and Child Health (PMH)
  - Occupational Exposure Science (OES)
  - Occupational Health (POH) ⁴
  - Occupational Medicine Residency (POM)
  - Occupational Safety (POS)
  - Public Health Education (PPD)
  - Socio-Health Sciences (PSH)
  - Toxicology and Risk Assessment (PTX)

**Doctor of Philosophy (Ph.D.) Degree**

- Public Health
  - Biostatistics (BST)
  - Community and Family Health (CFH)
  - Environmental and Occupational Health (EOH)
  - Epidemiology (EPY)
  - Global Communicable Diseases (TCD)
  - Health Services Research (HPM)

**Doctor of Public Health (Dr.P.H.) Degree**

- Public Health
  - Advanced Practice Leadership in Public Health (APR)
Accelerated majors:
B.S. in Public Health and MPH in Public Health: Public Health Education Concentration (3+2 program)
M.S. in Environmental Science & Policy And M.P.H./M.S.P.H. in Public Health
Fast Track MPH/MSPH for USF Honors Students

Concurrent Degree Options:
Health Administration and Public Health: Health Policies/Programs M.H.A/M.P.H.
Public Health and Anthropology M.P.H./M.A. or Ph.D.
Public Health and Medicine M.P.H./M.D.
for already enrolled USF College of Medicine students.
Public Health and Social Work M.P.H./M.S.W.
Public Health (Occupational Health) and Nursing/Adult Nurse Practitioner M.P.H./M.S.
Public Health and Physical Therapy M.P.H./D.P.T.

Graduate Certificates Offered:
For the most current list go to: http://www.usf.edu/innovative-education/graduate-certificates/
Applied Biostatistics*
Biostatistics
Concepts and Tools of Epidemiology*
Diasporas and Health Disparities (shared with Africana Studies)
Disaster Management*
Environmental Health
Epidemiology
Epidemiology of Infectious Diseases*
Global Health in Latin America and Caribbean Studies
Global Health Practice
Health Management and Leadership
Health, Safety and Environment
Homeland Security
Humanitarian Assistance*
Infection Control*
Interdisciplinary Women’s Health
Maternal and Child Health
Maternal Child Health Epidemiology
Planning for Healthy Communities
Public Health Generalist*
Public Health Policy and Programs*
Safety Management
Social Marketing and Social Change*
Toxicology and Risk Assessment
Translational Research in Adolescent Behavioral Health
Water, Health, and Sustainability
*fully on-line
COLLEGE REQUIREMENTS

Attendance Policy
All Instructors teaching undergraduate and graduate courses are required to take attendance on the first day of class and to drop students who do not attend the first day of class. Students who experience extenuating circumstances that are beyond their control and who are unable to attend a first class meeting must notify the instructor or the department prior to the first class meeting to request waiver of the first class attendance requirement. Although instructors are authorized to affect the drop, students are fundamentally responsible for knowing their registration status, and the student must insure that his/her registration status reflects the drop by the end of the drop/add period.

Mission
The mission of the Doctor of Public Health is to prepare practitioners for leadership and advocacy in public health practice through a scientific, interdisciplinary approach to understanding and solving public health problems in the public and private sectors, the United States, and worldwide. This mission relates directly to the University of South Florida mission which includes creating a community of learners together with significant and sustainable university-community partnerships and collaborations; and designing, strengthening and building sustainable healthy communities and improving quality of life.

OTHER INFORMATION

Comprehensive Examination (M.H.A., M.P.H., M.S.P.H.)
The Core Comprehensive Examination covering core courses is a requirement for all students seeking an M.P.H. or M.S.P.H. degree in the College of Public Health.

The Department of Environmental and Occupational Health also requires a concentration comprehensive examination for some majors covering the concentration courses. Each department has detailed written guidelines which are listed on department websites. Additional information may be found at https://documents.health.usf.edu/display/COPHHB/guidebooks. Please consult individual departments for information.

Field Experience
The type and length of the field experience varies. All students in the M.H.A., M.P.H., and M.S.P.H. in Industrial Hygiene are required to complete a field experience. Each department has written guidelines and a field experience website is available to assist students in this portion of their major at http://health.usf.edu/publichealth/academicaffairs/fe/

Special Project
The special project is an in-depth study of a selected issue in public health. A topic will be selected according to student’s needs and interests.

Thesis (M.S.P.H.)
M.S.P.H. students MUST complete a Thesis.

Graduate Assistantships
Graduate assistants may perform research, teaching functions, assist in the production of seminars and workshops, or other work related to their specific disciplines. Graduate assistants are paid a biweekly stipend and may qualify to receive in-state tuition waivers. Assistantships are awarded on a competitive basis. Students must have a GPA of 3.0 or better in their upper division coursework, must be degree-seeking and enrolled full time.
MAJOR INFORMATION

The M.H.A. program prepares students for private and public sector leadership positions. In addition to the five core areas of public health, the curriculum helps students develop skills and knowledge in basic business disciplines with application to health services; a clinical and community perspective and professional skills. Students develop an understanding of organizational models and management principles applied to health settings; health care financial management and economics; quality and performance improvement; health policy and policy analysis; strategic planning and marketing; and health law and ethics.

The Master of Health Administration has the following competencies in which the graduate will be able to:

Management Science and Technology

- Understand and demonstrate the use of scientific operational definitions and their measurement, e.g., efficiency, effectiveness.
- Develop and use metrics to assess clinical and organizational performance.
- Comprehend the use and applications of information systems and technology in health services management, e.g., electronic medical records, decision support systems, and the use of software tools for decision-making.
- Demonstrate the application of quantitative analytic techniques (e.g., descriptive and inferential statistics, regression, forecasting) and the use of software tools, such as Excel, in management decision-making.
- Use process management methods and tools in performance and quality improvement, e.g., CQI, Six Sigma, flowcharts, Gantt charts, etc.
- Build analytical thinking acumen, e.g., the ability to understand relevant concepts and issues by delving into its pertinent components and formulating solutions.

Strategy and Leadership

- Understand all components of operational and strategic plans, e.g., environmental scanning, competitive analysis, strategy development.
- Apply marketing principles to management decision-making.
- Lead improvement upon organizational design and culture, e.g., formal and informal decision-making structures, and champion workforce diversity.
- Clarify the principles of change leadership and human resources management processes, e.g., staff development.
- Understand governance practices, e.g., board composition, relations and evaluation; committee structure; and clinical review, fiduciary, and ethical responsibilities.
• Understand the values, training and focus of physicians, the role of the medical staff in health care organizations, and managing physician-administrator relations.

Public Policies and Community Orientation
• Explain the organization and financing of the U.S. healthcare system.
• Assess community needs and values and the role of external relations, e.g., demographic/population contexts for business development.
• Comprehend and explain the legal and regulatory environment for health services.
• Comprehend the policy process and analyze public policy context and choices.
• Analyze the associations between provider cultural competencies and diversity and patient health disparities.

Economics and Financial Management
• Comprehend budgets, e.g., sources of revenue and expense, use of standards in budget development.
• Explain the principles and applications of cost accounting, e.g., the costing process, measurement, and control.
• Understand financial statements, e.g., net income and cash flow statements, ratio analysis, pro forma statements.
• Execute financial mathematics, e.g., time value of money calculations, capital budgeting, return on investment, risk analyses, payback.
• Understand differential reimbursement methodologies used by payers (e.g., Medicare, Medicaid, self-pay, commercial, managed care) and the major principles of health insurance.
• Perform differential reimbursement calculations by payers (e.g., Medicare/Medicaid, self-pay, managed care) and describe the major principles of health insurance.
• Explain economic evaluation, e.g. cost benefit/cost effectiveness analysis.

Professionalism and Communication Skills
• Demonstrate public health values and reinforce ethical decision making.
• Integrate and demonstrate effective written communication.
• Integrate and demonstrate effective oral communications with other individuals and in groups.
• Demonstrate professionalism, e.g., abilities to effectively work with others, to engage in relationship building, to be accountable, to act with integrity.

Accreditation:
The College is fully accredited by the Council on Education in Public Health. Accredited by the Commission on Accreditation of Healthcare Management Education (CAHME).

Major Research Areas:
Health care financial management, Health economics, Quantitative methods in health services, Health insurance, Health law, Quality management, Performance improvement, Community health assessment, Organizational theory and behavior applied to health settings, Health information management, Health policy, and Strategic planning.

ADMISSION INFORMATION
Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below. Meeting these criteria per se shall not be the only basis for admission.

• Public health course prerequisites:
  o Suggested/preferred undergraduate majors: Life sciences, social sciences, business, or health professions.
  o Prerequisite undergraduate courses: Microeconomics or equivalent (prerequisite must be completed prior to enrolling in PHC 6430 Health Economics I) and Accounting (prerequisite must be completed prior to enrolling in PHC 6160 Health Care Financial Management)

• Work experience: Preferred, but not required.

• Minimum undergrad GPA: 3.00 upper division (may be waived if GRE exceeds minimum subscores).
- Verbal GRE 50th percentile
- Quantitative GRE 50th percentile
- In lieu of the GRE, applicants may submit a minimum GMAT score of 500 for the MHA.
- Applicants admitted to the M.H.A. or an M.P.H. who have a score on the GRE Verbal of Analytical Writing test which is below the 40th percentile may be required to take REA 2105—Critical Reading and Writing—or an equivalent English composition course, during the first semester of enrollment, and pass with a grade of “B” or better in the class.

CURRICULUM REQUIREMENTS

Total minimum credit hours: 53 hrs

**CORE REQUIREMENTS**

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<th>Course Title</th>
<th>Credits</th>
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<td>PHC 6588</td>
<td>History and Systems of Public Health</td>
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<tr>
<td>PHC 6756</td>
<td>Population Assessment: Part I</td>
<td>5</td>
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<tr>
<td>PHC 6757</td>
<td>Population Assessment: Part II</td>
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**Management and Policy**

<table>
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<th>Course Title</th>
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<tr>
<td>PHC 6148</td>
<td>Strategic Planning and Healthcare Marketing</td>
<td>3</td>
</tr>
<tr>
<td>PHC 6147</td>
<td>Managing Quality in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>PHC 6151</td>
<td>Health Policy and Politics</td>
<td>3</td>
</tr>
<tr>
<td>PHC 6180</td>
<td>Health Services Management</td>
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</tr>
<tr>
<td>PHC 6181</td>
<td>Organizational Behavior in Health Services</td>
<td>3</td>
</tr>
<tr>
<td>PHC 6420</td>
<td>Health Care Law, Regulation and Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PHC 6435</td>
<td>Comparative Health Insurance Systems</td>
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**Finance, Economics and Decision Making Skills**

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<td>PHC 6160</td>
<td>Health Care Financial Management</td>
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<tr>
<td>QMB 6305</td>
<td>Managerial Decision Analysis</td>
<td>2</td>
</tr>
<tr>
<td>PHC 6161</td>
<td>Health Finance Applications</td>
<td>3</td>
</tr>
<tr>
<td>PHC 6191</td>
<td>Quantitative Analysis in Health Services</td>
<td>3</td>
</tr>
<tr>
<td>PHC 6196</td>
<td>Information Systems in Health Care Management</td>
<td>3</td>
</tr>
<tr>
<td>PHC 6430</td>
<td>Health Economics I</td>
<td>3</td>
</tr>
</tbody>
</table>

**Culminating Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHC 6945</td>
<td>Supervised Field Experience</td>
<td>1-2</td>
</tr>
</tbody>
</table>

- Students with little or no professional experience: 2 hours minimum;
- Students with substantial work experience can negotiate a reduced number of hours with their advisor (e.g., 1 hour) if the student has meaningful experience (involving decision-making) in a health care or related organization

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHC 6977</td>
<td>Special Project: MPH</td>
<td>3</td>
</tr>
<tr>
<td>PHC 6166</td>
<td>Advanced Seminar in Health Care Management</td>
<td>2</td>
</tr>
</tbody>
</table>

(Case-based capstone course that includes the final comprehensive exam)

COURSES

See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)
HEALTH ADMINISTRATION AND
PUBLIC HEALTH WITH A CONCENTRATION IN HEALTH POLICIES AND
PROGRAMS

Concurrent Degrees:
Master of Health Administration (M.H.A.) Degree and Master of Public Health (M.P.H.) Degree

DEGREE INFORMATION

Refer to each Major for admission deadline information

Minimum Total Hours: 67
Level: Masters
CIP Code: Refer to majors
Dept Code: Refer to majors
Major/College: MHA PH / MPH PH

CONTACT INFORMATION

College: Public Health
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The M.H.A./M.P.H. concurrent degree provides a unique opportunity for students who are interested in both health administration and health policy to pursue both interests, recognizing that the health care marketplace has professional opportunities that require both skill sets. For specific information on each degree, refer to that degree program’s listing in the Catalog.

Accreditation:
The College is fully accredited by the Council on Education in Public Health. Accredited by the Commission on Accreditation of Healthcare Management Education.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

Meeting these criteria per se shall not be the only basis for admission.

- Public health course prerequisites:
  - Suggested/preferred undergraduate majors: Life sciences, social sciences, business, or health professions.
  - Prerequisite undergraduate courses: Microeconomics or equivalent (prerequisite must be completed prior to enrolling in PHC 6430 Health Economics I) and Accounting (prerequisite must be completed prior to enrolling in PHC 6160 Health Care Financial Management)

- Work experience: Preferred, but not required.
- Minimum undergrad GPA: 3.0 upper division (some exceptions made if GRE exceeds minimum subscores).
- Verbal GRE 50th percentile preferred
- Quantitative GRE 50th percentile preferred
- In lieu of the GRE, applicants may submit a minimum GMAT score of 500 for the MHA.
- Applicants admitted to the M.H.A. or an M.P.H. with a concentration in the Department of Health Policy and Management who have a score on the GRE Verbal of Analytical Writing test which is below the 40th percentile may be required to take REA 2105—Critical Reading and Writing—or an equivalent English composition course, during the first semester of enrollment, and pass with a grade of “B” or better in the class.

http://health.usf.edu/publichealth/
CURRICULUM REQUIREMENTS

Plan of Study  Total minimum:  67 hrs

M.H.A. ONLY COURSES  29 hours
PHC 6147  Managing Quality in Health Care  3
PHC 6148  Strategic Planning and Health Care Marketing  3
PHC 6180  Health Services Management  3
PHC 6181  Organizational Behavior in Health Sciences  3
PHC 6160  Health Care Financial Management  3
PHC 6161  Health Finance Applications  3
QMB 6305  Managerial Decision Making  2
PHC 6196  Information Systems in Health Care Management  3
PHC 6191  Quantitative Analysis in Health Care Services  3
PHC 6196  Information Systems in Health Care Management  3
PHC 6191  Quantitative Analysis in Health Care Services  3
PHC 6166  Advanced Seminar in Health Care Management  2

M.P.H. in Health Policies and Programs ONLY COURSES  11 hours
PHC 6104  Management of Public Health Programs  3
PHC 6063  Public Health Data, Information, and Decision Making  3
PHC 6760  Research Methods in Public Health Programs  3
PHC 6945  Supervised Field Experience  2

SHARED COURSES  27 hours

Public Health Core, Foundation, and Required Requirements:
PHC 6588  History and Systems of Public Health  1
PHC 6756  Population Assessment I  5
PHC 6757  Population Assessment II  3
PHC 6145  Translation to Public Health Practice  3
PHC 6977  Special Project  3

Health Policy and Management Requirements
PHC 6435  Comparative Health Insurance Systems  3
PHC 6151  Health Policies and Politics  3
PHC 6430  Health Economics I  3
PHC 6420  Health Care Law, Regulation and Ethics  3

COURSES
See http://www.ups.usf.edu/course-inventory/
PUBLIC HEALTH

Master of Public Health (M.P.H.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: May 1
Spring: June 15
Summer: November 15

International applicant deadlines:
http://www.grad.usf.edu/majors

* Global Health Practice admits in Fall term only.

Minimum Total Hours: 42
Level: Masters
CIP Code: 51.2201
Dept Code: DEA
(Major/College): MPH/PH
Approved: 1981

Concentrations:
- Behavioral Health (BHH)
- Biostatistics (BST)
- Environmental Health (EVH)
- Epidemiology (EPY)
- Epidemiology and Biostatistics (PEB)
- Epidemiology and Global Communicable Diseases(EGD)
- Epidemiology and Global Health (EGH)
- Epidemiology and Maternal and Child Health (EMC)
- Executive Program for Health Professionals (EPH)
- Food Safety (FOS)
- Global Communicable Diseases (TCD)
- Global Disaster Management, Humanitarian Relief and Homeland Security (GHH)
- Global Health Practice (GLO)

CONTACT INFORMATION

College: Public Health

Contact Information: www.grad.usf.edu

Major Website: http://health.usf.edu/publichealth/apply/graduate-admissions/mph

Concentrations:
- Health Care Organizations and Management (HCO)
- Health Safety and Environment (HLE)
- Health Policies and Programs (HPP)
- Infection Control (IFC)
- Maternal and Child Health (PMC)
- Nutrition and Dietetics (NUD)
- Occupational Health (OCC)
- Occupational Health for Nurses (OCP)
- Occupational Medicine Residency (OMR)
- Occupational Safety (SFM)
- Public Health Administration (PHA)
- Public Health Education (PHN)
- Public Health Practice, PHP
- Social Marketing (SOM)
- Toxicology and Risk Assessment (TXY)

Also offered as Accelerated Major and Concurrent Degree Option. See below for information

1 Only available to concurrent M.S. Adult Nursing Students
2 Requires 3 years of health-related experience
3 Offered (1) executive program and (2) online
MAJOR INFORMATION

Accelerated majors options:
B.S. in Public Health and MPH in Public Health: Concentration in Public Health Education (3+2)

Concurrent Degrees Offered:
Public Health and Anthropology (M.P.H. with M.A. or Ph.D.)
Public Health and Medicine (M.P.H. / M.D.) for already enrolled USF College of Medicine Students

Public Health and Physical Therapy (D.P.T./M.P.H.)
- Designated for students in the DPT major in the School of Physical Therapy-M.P.H. availability collegewide

Public Health and Social Work (M.P.H. / M.S.W.)
- Behavioral Health
- Maternal and Child Health

Public Health (Occupational Health) and Nursing / Adult Nurse Practitioner (M.P.H. / M.S.)

Accreditation:
The College is fully accredited by the Council on Education in Public Health.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

All applicants must take the Graduate Record Exam (GRE) or have taken an equivalent admissions examination within the five years preceding application and must meet the following criteria.

- Equivalent exams include the GMAT, MCAT, DAT or PCAT.
- LSAT is not accepted in lieu of the GRE.
- Although there are no required minimum scores, the applicant’s GRE score will be compared to the applicant pool and the national GRE norms.
- Applicants who have a terminal degrees such as the PhD, ScD or EdD, and those with advanced professional degrees (MD, DDS, DO, DVM, JD, PharmD, DPT) from accredited institutions and who are individually licensed in the United States in their profession may request to waive the GRE (http://health.usf.edu/publichealth/pdf/GRE%20Waiver.pdf). The GRE waiver is not automatic and must be approved by the College of Public Health.
- Earned an undergraduate degree from an accredited institution;
  Earned a “B” average (3.0 on a 4 point scale) or better in all work attempted while registered as an upper division student working toward a baccalaureate degree
- Applicants admitted to the M.H.A. or M.P.H. who have a score on the GRE Verbal or Analytical Writing test which is below the 40th percentile may be required to take REA 2105–Critical Reading and Writing—or an equivalent English composition course, during the first semester of enrollment, with a grade of “B” or better in the course.

Meeting of these criteria per se shall not be the only basis for admission.
CURRICULUM REQUIREMENTS

Total Minimum Hours: 42 credit hours minimum

Core – 12 credit hours
Concentration/Electives - 26 credit hours minimum (varies with each concentration)
Field Experience – 1 credit hour minimum (varies with each concentration)
Special Project -3 credit hours
Comprehensive Exam

Students must complete the Major core requirements and then the requirements as specified for the Concentration.

Core Courses – 12 hours
PHC 6588 1 History & Systems of Public Health
PHC 6756 5 Population Assessment: Part 1
PHC 6757 3 Population Assessment: Part 2
PHC 6140 3 Translation to Public Health Practice

Concentration
Students select from one of the concentrations listed on the following pages. The Concentration section includes required electives and Field Experience information.

Electives
Students select from suggested electives listed with each Concentration on the following pages.

Field Experience
PHC 6945 1 hr min Supervised Field Experience (up to 12 credits) – During 2nd semester meet with advisor and begin planning field experience. See http://health.usf.edu/publichealth/academicaffairs/fe/

Special Project
PHC 6977 3 Special Project

Comprehensive Exam
- Passing the CPH exam is a requirement for graduation by all MPH students. Students must be enrolled for two credits the term taking the exam. 1st attempt the college of Public Health will pay funds permitting
- 2nd attempt student pays
- 3rd attempt is an oral exam given by the college of Public Health

Refer to concentration for any additional concentration-specific requirements.

CONCENTRATION OPTIONS
Students select from the following Concentrations:

http://health.usf.edu/publichealth/
BEHAVIORAL HEALTH (BHH)
Offered from the Department of Community & Family Health
The M.P.H. in Public Health with a Concentration in Behavioral Health is offered jointly with the USF Louis de la Parte Florida Mental Health Institute with a focus upon behavioral health (mental health and substance abuse) services. This concentration examines community and family issues in evaluation of systems performance and outcomes of public mental health and substance abuse services as well as children’s mental health, aging and mental, HIV and mental health services, and the planning, evaluation and accountability of mental health and substance abuse services. Graduates are prepared to work in mental health, alcohol and drug abuse organizations.

Concentration Admission Information
In addition to the Major Admission requirements, applicants must have the following:

- Suggested/preferred undergraduate majors: Undergraduate majors may be admitted from a wide range of backgrounds, although majors from the health sciences such as nursing, pre-med and allied health sciences, and from the social and behavioral sciences (psychology, social work, anthropology, educational psychology, and sociology) are especially appropriate.
- Work experience: Work experience in the field of public health, health, psychology, nursing, counseling, education, social works, etc., is considered extremely desirable.
- Minimum undergraduate GPA 3.0 in upper division course work
- Three letters of recommendation from academic and/or related professional sources.

Total Major Requirements with this concentration - 42 hours minimum
In addition to the 15 hours required for the Major (Core, Special Project, and Comp Exam), this Concentration requires:

Concentration Course Requirements – 15 credit hours
Electives – 9 credit hours
Field Experience – 3 credit hours minimum

Concentration Course Requirements - 15 hours minimum
MHS 7740 3 Survey of Mental Health Planning, Evaluation, and Accountability
PHC 6546 3 Epidemiology of Mental Disorders
PHC 6543 3 Foundations in Behavioral Health Systems
PHC 6708 3 Evaluation and Research Methods in Community Health
PHC 6035 3 Comorbidity of Mental and Physical Disorders

Electives - 9 hours minimum
(Examples of common elective options)
PHC 6413 3 Family & Community Violence in Public Health
PHC 6549 3 HIV & Mental Health
PHC 6547 3 Case Management in Community Mental Health
HSC 6552 3 Community-Based Prevention in Behavioral Health
PHC 6240 3 Cultural Competency in Children’s Mental Health
PHC 6934 3 End of Life Care
PHC 6544 3 Children’s Mental Health Services
PHC 6545 3 Evaluation in Mental Health
PHC 6934 3 Evidence-Based Practice in Behavioral Health
PHC 6548 3 Grant Writing in Mental Health
PHC 6401 3 Homelessness: Implications for Behavioral Healthcare
PHC 6934 3 Substance Abuse Treatment Services
MHS 6640 3 Mental Health Informatics
PHC 6934 3 Financing, Economics, and Policy in Behavioral Health
Field Experience – 3 hours minimum
PHC 6945  3-6 min  Supervised Field Experience (up to 12 credits) –
Students with little or professional experience - 6 hours minimum
Students with relevant professional experience -3 hours minimum

Professional experience would include at least 2 years of supervised work at a mental
health, alcohol, or drug abuse agency in a variety of specialty areas within behavioral health
services. These experiences might include work in program planning, program evaluation,
community prevention and education, etc.

BIOSTATISTICS (BST)
Offered from the Department of Epidemiology & Biostatistics
The MPH degree program in Public Health with a Concentration in Biostatistics provides educational opportunities for
students to acquire a broad knowledge in biostatistics and apply biostatistical methods to public health problems. The
intended audience of the major includes individuals with strong quantitative background and interests in a professional
career in a public health setting. The major trains students to be able to design studies, to implement data collection and
management plans, to formulate analysis plans and conduct analysis, and to report and communicate analytical results. The
major will also provide students with knowledge in statistical and computational methods and public health.

Concentration Admission Information
In addition to the Major Admission requirements, applicants must have the following:
• Suggested/preferred undergraduate majors: mathematics, statistics, computer sciences, natural sciences, biological
  sciences, engineering, medical sciences, environmental sciences, management information systems.
• Prerequisite undergraduate courses: linear algebra, calculus, basic computer skills (e.g. operating system, internet,
  word processing, spread sheet).
• Work experience: Prior work experience is preferred, but not required.
• Other criteria: Academic background, goal statement, student’s academic interest, references and availability of
  faculty and facility resources are also considered as part of the entrance evaluation.

Total Major requirements with this concentration – 44 hours minimum

In addition to the 15 hours required for the Major (Core Special Project and Comp Exam), this Concentration requires:

Concentration Course Requirements – 21 credit hours
Electives – 7 credit hours
Field Experience – 1 credit hour minimum

Prerequisites (Not included in total major hours) - 6 hours
Biostatistics course prerequisites
• MAC 2311  3  Calculus I
• MAC 1105  3  College Algebra
• Knowledge of Computer and SAS Programming
• Or an equivalent course is required

Concentration Course Requirements – 21 hours
PHC 6053  3  Categorical Data Analysis
PHC 6051  3  Biostatistics II
PHC 6060  3  Biostatistics Case Studies and Consulting I
HSC 6055  3  Survival Analysis
PHC 6020  3  Design and Conduct of Clinical Trials
PHC 6057  3  Biostatistical Inference I
PHC 6096  3  Fundamentals of Probability

Electives - 7 hours
Examples of common elective options
HSC 6054  3  Design and Analysis of Experiments for Health Researchers
HSC 6056  3  Survey Sampling Methods in Health Sciences
PHC 6934  3   Bayesian Data Analysis  
PHC 6934  3   Multilevel Data Analysis  
PHC 7053  3   Generalized Linear Model  
PHC 7056  3   Longitudinal Data Analysis  
PHC 6934  1   Base Programming in SAS  
PHC 6934  2   Advanced Programming in SAS  

Field Experience – 1 hours minimum  
PHC 6945   1-3 min  Supervised Field Experience (up to 12 credits) –
No experience, or less than two years using biostatistical principles in a work setting: 3 credits minimum.  Two or more years’ experience using biostatistical principles in a work setting: 1 credit minimum.  

ENVIRONMENTAL HEALTH (EVH)  
Offered from the Department of Environmental and Occupational Health

Students in the MPH degree program in Public Health with a Concentration in Environmental Health gain a broad perspective in the public health sciences and social sciences, and a fundamental education in the technical sciences with an emphasis on the protection and improvement of our environmental and public health. Students enrolled in the MPH program are likely to be recent graduates of a biological science, environmental science or medicine undergraduate major; employees of county or state agencies; in a military education program; or involved in environmental health & safety management with a company. The motivation for an MPH student to complete an advanced degree is to become an environmental scientist or manager; and increased competence as an environmental scientist or manager; or as pre-medical training or an opportunity to take and pass the US medical boards. Many MPH students are now or will become community leaders, for example, as U.S. Armed Services or Public Health Service Officers; as State Health Officers; or as Agency or Laboratory Directors.

Concentration Admission Information
In addition to the Major Admission requirements, applicants must have the following:

- Suggested/preferred undergraduate majors: biological, physical or chemical science; military science; engineering; nursing or medicine; environmental health and technology; environmental science and policy.  
- Prerequisite undergraduate courses: introductory college-level algebra, chemistry, and biology (or related course); calculus and organic chemistry preferred.  
- Work experience: None required: two years experience in environmental health preferred.  
- Minimum undergraduate GPA: 3.0  
- International applicants from non-English-speaking countries must provide a minimum TOEFL score of 213 (computer-based test) or 550 (written test), taken within 2 years of the desired term of entry.

Total Major requirements with this concentration - 42 hours minimum
In addition to the 15 hours required for the Major (Core, Special Project, and Comp Exam), this Concentration requires:

Concentration Course Requirements – 16 credit hours  
Electives – 10 credit hours  
Field Experience – 1 credit hour minimum
Concentration Requirement - 16 hours minimum
PHC 6301 3 Water Pollution and Treatment
PHC 6310 3 Environmental and Occupational Toxicology
PHC 6303 3 Community Air Pollution
PHC 6512 3 Vectors of Human Disease
PHC 6305 3 Environmental Analytical Lab
PHC 6930 1 Public Health Seminar

Electives - 10 hours minimum
Suggested Electives Related to Environmental Health:
PHC 6523 3 Food Safety
PHC 6510 3 Exotic and Emerging Infectious Diseases
PHC 6354 2 Safety and Health Administration
PHC 6353 2 Environmental Toxicology and Risk Assessment
PHC 6313 3 Indoor Environmental Quality
PHC 6422 2 Environmental Health Law

Field Experience – 1 hour minimum
PHC 6945 1-3 Supervised Field Experience (up to 12 credits)
Students with little or no professional experience: 3 hours minimum. Students with two or more years of professional experience in an environmental health field or as an environmental health educator: 1 hour minimum

EPIDEMIOLOGY (EPY)
Offered from the Department of Epidemiology & Biostatistics
The MPH degree program in Public Health with a Concentration in Epidemiology is a professional degree, intended for individuals who wish to obtain a broad understanding of public health, with an emphasis on epidemiologic principles and methods. The knowledge and skills obtained through the major will enable graduates to characterize the health status of communities, critically evaluate research on determinants of health-related events, formulate strategies to evaluate the impact of health-related interventions and foster the application of epidemiologic methods for health promotion/disease prevention activities at the community level.

Concentration Admission Information
In addition to the Major Admission requirements, applicants must have the following:

- Suggested/preferred undergraduate majors: Mathematics, statistics, computer sciences, natural sciences, biology, social sciences, nursing, medicine, dentistry, veterinary medicine, pharmacology, gerontology, allied health professions, environmental health, management information systems.
- Prerequisite undergraduate courses: College algebra, basic computer skills (e.g. operating system, internet, word processing, spread sheet), human structure and function, human health biology. Calculus is recommended.
- Work experience: Prior work experience is preferred, but not required.
- Other criteria: Academic background, goal statement, student’s academic interests, references and availability of faculty and facility resources are also considered as part of the entrance evaluation.

Total Major requirements with this concentration – 44 hours minimum
In addition to the 15 hours required for the Major (Core, Special Project, and Comp Exam), this Concentration requires:

Concentration Course Requirements – 15 credit hours
Electives – 13 credit hours
Field Experience – 1 credit hour minimum

Concentration Requirements - 15 hours
PHC 6051 3 Biostatistics II
PHC 6010 3 Epidemiology Methods I
PHC 6011 3 Epidemiology Methods II
PHC 6701 3 Computer Applications for Public Health Researchers
PHC 6053 3 Categorical Data Analysis
Electives - 13 hours
For Emphasis Area Support Courses, students will select additional coursework from the following categories:
- Infectious Disease Epidemiology (3 credits);
- Any Chronic Disease Epidemiology (3 credits);
- Epidemiology or Biostatistics methods course (3 credits);
- Four additional approved elective credit hours.

Field Experience – 1 hour minimum
PHC 6945  1-6  Supervised Field Experience (up to 12 credits)
No experience, or less than two years using epidemiologic principles in a work setting: 3 credits minimum, 6 preferred. Two or more years’ experience using epidemiologic principles in a work setting: 1 credit minimum

EPIDEMIOLOGY (ONLINE) (EPO)
Offered from the Department of Epidemiology & Biostatistics
The MPH degree program in Public Health with a Concentration in Epidemiology Online is a professional degree, intended for individuals who wish to obtain a broad understanding of public health, with an emphasis on epidemiologic principles and methods. The knowledge and skills obtained through the major will enable graduates to characterize the health status of communities, critically evaluate research on determinants of health-related events, formulate strategies to evaluate the impact of health related interventions and foster the application of epidemiologic methods for health promotion/ disease prevention activities at the community level.

Concentration Admission Information
In addition to the Major Admission requirements, applicants must have the following:

- Suggested/preferred undergraduate majors: Mathematics, statistics, computer sciences, natural sciences, biology, social sciences, nursing, medicine, dentistry, veterinary medicine, pharmacology, gerontology, allied health professions, environmental health, management information systems.
- Prerequisite undergraduate courses: College algebra, basic computer skills (e.g. operating system, internet, word processing, spread sheet), human structure and function, human health biology. Calculus is recommended.
- Work experience: Prior work experience is preferred, but not required.
- Other criteria: Academic background, goal statement, student’s academic interests, references and availability of faculty and facility resources are also considered as part of the entrance evaluation.

Total Major requirements with this concentration – 44 hours minimum
In addition to the 15 hours required for the Major (Core, Special Project, and Comp Exam), this Concentration requires:

Concentration Course Requirements -15 credit hours
Electives - 13 credit hours
Field Experience – 1 credit hour minimum

Concentration Requirements- 15 hours
PHC 60513  Biostatistics II
PHC 60103  Epidemiology Methods I
PHC 60113  Epidemiology Methods II
PHC 67013  Computer Applications for Public Health Researchers
PHC 60533  Categorical Data Analysis

Electives - 13 hours
For Emphasis Area Support Courses, students will select additional coursework from the following categories:
- Infectious Disease Epidemiology (3 credits);
- Any course in Chronic Disease Epidemiology (3 credits);
- Epidemiology or Biostatistics methods course (3 credits);
- Four additional approved elective credit hours.
Field Experience - 1 hour minimum
PHC 6945 Supervised Field Experience (up to 12 credits)
No experience, or less than two years using epidemiologic principles in a work setting: 3 credits minimum, 6 preferred. Two or more years’ experience using epidemiologic principles in a work setting: 1 credit minimum

EPIDEMIOLOGY AND BIOSTATISTICS (PEB)
Offered from the Departments of Epidemiology and Biostatistics
This concurrent concentration is a professional degree, intended for individuals who wish to obtain a broad understanding of public health, with a strong background in analytical skills and methods. The knowledge and skills obtained through this major will enable graduates to seek positions that characterize the health status of communities, critically evaluate research on determinants of health-related events, formulate strategies to evaluate the impact of health related interventions and foster the application of epidemiologic and biostatistical methods for health promotion/disease prevention activities.

Concentration Admission Information
In addition to the Major Admission requirements, applicants must have the following:

- Suggested/preferred undergraduate majors: mathematics, statistics, computer sciences, natural sciences, biological sciences, engineering, medical sciences, environmental sciences, management information systems.
- Prerequisite undergraduate courses: linear algebra, calculus, basic computer skills (e.g. operating system, internet, word processing, spread sheet).
- Work experience: Prior work experience is preferred, but not required.
- Other criteria: Academic background, goal statement, student’s academic interest, references and availability of faculty and facility resources are also considered as part of the entrance evaluation.

Total Major requirements with this concentration - 50 hours minimum
In addition to the 15 hours required for the Major (Core, Special Project, and Comp Exam), this Concentration requires:

Concentration Course Requirements – 27 credit hours
Electives – 7 credit hours
Field Experience – 1 credit hour minimum

Prerequisites (not included in total GPA hours) - 6 hours
- MAC 2311 3 Calculus I
- MAC 1105 3 College Algebra
- Knowledge of Computer and SAS Programming

Concentration Course Requirements - 27 hours
PHC 6051 3 Biostatistics II
PHC 6053 3 Categorical Data Analysis
HSC 6055 3 Survival Analysis
PHC 6020 3 Design and conduct of Clinical Trials
PHC 6010 3 Epidemiology Methods I
PHC 6011 3 Epidemiology Methods II
PHC 6060 3 Case Studies and Collaboration I
PHC 6057 3 Biostatistical Inference I
PHC 6096 3 Fundamentals of Probability

Electives - 7 hours
For Emphasis Area Support Courses, students will select additional coursework from the following categories:
Infectious Disease Epidemiology (3 credits);
Course in Chronic Disease Epidemiology (3 credits);
One additional approved elective credit hour.
Field Experience – 1 hour minimum
PHC 6945 1-6 Supervised Field Experience (up to 12 credits)
Must conduct data analysis project with both Epidemiology and Biostatistics features

EPIDEMIOLOGY AND GLOBAL COMMUNICABLE DISEASES CONCENTRATION (EGD)
Offered from the Departments of Epidemiology and Biostatistics, and Global Health
This concurrent concentration major is a professional degree, intended for individuals who wish to obtain a solid understanding of public health epidemiological practices, principles and applications, with an emphasis in global communicable disease issues, policies and programs. MPH concurrent concentration graduates will be prepared for positions in private agencies, non-governmental organizations (NGOs), international, federal and state health agencies that participate in the study of the spread and control of communicable diseases as well as policy and practice involved with the global aspects of epidemiologic issues.

As we face complex issues caused by rapid climate change, population growth, and highly mobile societies, outbreaks of communicable diseases, resulting in morbidity and mortality are an expanding threat to populations worldwide. Graduates from this concurrent concentration will have the tools to address epidemiologic spread of disease as well as the variety, frequency and location of vector borne and other communicable diseases. This concurrent major will provide graduates with the skills needed to function effectively in international as well as national and local public health arenas with knowledge of the global impact of communicable disease through epidemiological surveillance, and prevention programs to serve at risk populations.

Concentration Admission Information
In addition to the Major Admission requirements, applicants must have the following:
Students in this major require 2 advisors; One Epi., One Global Health.

Total Major requirements with this concentration - 55 hours minimum
In addition to the 15 hours required for the Major (Core, Special Project, and Comp Exam), this Concentration requires:

Concentration Course Requirements – 21 credit hours (12 GCD, 9 EPI)
Electives – 16 credit hours
Field Experience – 3 credit hour minimum

Concentration Requirements - 21 hours
Global Comm. Diseases Required Courses – 12 hours
Students graduating from the Major will receive training within four core domains which are central to the study of Global Communicable diseases:

- Tropical and Emerging Infections
- Microbiology
- Immunology and Genetics and
- Public Health Interventions and Disease Control

Students must take a minimum of 3 credits from within each domain. Course selection will be determined by the student and their advisor based on student interests and career goals.

Domains and examples of course selection

Tropical and Emerging Infections - 3 credits minimum
PHC 6512 3 Vectors of Human Disease
PHC 6510 3 Exotic and Emerging Infectious Disease
PHC 6513 3 Public Health Parasitology
PHC 6516 3 Tropical Diseases

Microbiology 3 credits minimum
PHC 6037 3 Public Health Virology
PHC 6562 3 Microbiology for Healthcare Workers

http://health.usf.edu/publichealth/
### Public Health (M.P.H.)

**PHC 7122** 3 Vaccinology*  
*with instructor consent

*Public Health Interventions and Disease Control - 3 credits minimum*
- PHC 6314 3 Infection Control Program Design
- PHC 6514 3 Infectious Disease Control in Developing Countries
- PHC 6517 3 Infectious Disease Prev. Strategies
- PHC 6251 3 Disease Surveillance and Monitoring
- PHC 6934 3 Public Health GIS

*Immunology and Genetics - 3 credits minimum*
- PHC 6511 3 Public Health Immunology
- PHC 6121 3 Vaccines
- PHC 6601 3 Human Genomics in Public Health and Personalized Medicine

**Epidemiology Required Courses - 9**
- PHC 6934 3 Application of Advanced Biostatistical Methods in Public Health OR
- PHC 6053 3 Categorical Data Analysis
- PHC 6010 3 Epidemiology Methods I
- PHC 6701 3 Computer Applications for Health Researchers

**Electives - 16 hours**

Global Health Options - 6
- Students will fulfill their Global Health elective credits in consultation with their advisor. It is recommended that students focus on one of the five domains, taking all courses within that domain.

Epidemiology options - 6
- 1 course in Infectious Disease Epidemiology
- 1 course in Chronic Disease Epidemiology
- 1 additional Departmental course from the following areas:
  - Infectious Disease Epidemiology
  - Epidemiology Methods or Biostatistics

Additional Electives – 4

**Field Experience – 3 hours minimum**
- PHC 6945 3 Supervised Field Experience (up to 12 credits)  
*Field Experience must be Epidemiologic in content.*

### EPIDEMIOLOGY AND GLOBAL HEALTH (EGH)

*Offered from the Departments of Epidemiology & Biostatistics, and Global Health*

In addition to the overall Master of Public Health degree competencies, Epidemiology and Global Health Practice concurrent concentration graduates will be able to meet the competencies from both the Epidemiology MPH and the Global Health Practice MPH.

**Concentration Admission Information**

In addition to the Major Admission requirements, applicants must have the following:  
- Students in this major require 2 advisors; One Epi., One Global Health.

**Total Major requirements with this concentration - 52 hours minimum**

In addition to the 15 hours required for the Major (Core, Special Project, and Comp Exam), this Concentration requires:

- Concentration Course Requirements – 21 credit hours
- Electives – 10 credit hours
- Field Experience – 6 credit hour minimum
**Concentration Course Requirements - 21 hours**

Global Health Required Courses - 12
- PHC 6764 3  Global Health Principles and Contemporary Issues
- PHC 6761 3  Global Health Assessment Strategies
- PHC 6106 3  Global Health Program Development and Administration
- PHC 6442 3  Global Health Applications in the Field

Epidemiology Required Courses - 9
- PHC 6010 3  Epidemiology Methods I
- PHC 6701 3  Computer Applications for Public Health Research
And one of the following:
- PHC 6934 3  Application of Advanced Biostatistical Methods in Public Health OR
- PHC 6053 3  Categorical Data Analysis

**Electives - 10 hours**

Emphasis area options:
- PHC 6002 3  Infectious Disease Epidemiology OR
- PHC 6011 3  Epidemiology Methods II OR
- PHC 6190 3  Public Health Database Management

One of the following courses from the Department of Global Health
- PHC 6511 3  Public Health Immunology OR
- PHC 6513 3  Public Health Parasitology OR
- PHC 6512 3  Vectors of Human Disease

Additional Electives – 4

**Field Experience – 6 hours minimum**
- PHC 6945 3  Supervised Field Experience (up to 12 credits)
Field Experience must be international and Epidemiologic in content. 6 hours minimum

**EPIDEMIOLOGY AND MATERNAL AND CHILD HEALTH (EMC) (Concurrent Concentration)**

Offered from the Department of Epidemiology and Biostatistics and the Department of Community and Family Health

In addition to the overall Master of Public Health degree competencies, Epidemiology and Maternal and Child Health concurrent concentration graduates will be able to meet the competencies from both the Epidemiology MPH and the Maternal and Child Health MPH.

**Concentration Admission Information**

In addition to the Major Admission requirements, applicants must have the following:
Students in this major require 2 advisors; One Epi., One Community and Family Health

**Total Major requirements with this concentration - 52 hours minimum**

In addition to the 15 hours required for the Major (Core, Special Project, and Comp Exam), this Concentration requires:

- Concentration Course Requirements – 27 credit hours
- Electives – 7 credit hours
- Field Experience – 3 credit hour minimum

http://health.usf.edu/publichealth/
Concentration Course Requirements - 27 hours
Maternal and Child Health Required Courses – 12
PHC 6530 3 Issues and Concepts in Maternal and Child Health
PHC 6537 3 Case Studies in MCH Programs, Policies, and Research
PHC 6505 3 Program Planning in Community Health
PHC 6197 3 Secondary Data Analysis for Maternal and Child Health

Epidemiology Required Courses - 15
PHC 6010 3 Epidemiology Methods I
PHC 6011 3 Epidemiology Methods II
PHC 6701 3 Computer Applications for Public Health Researchers
PHC 6934 3 Applications in Advanced Biostatistical Methods
PHC 6591 3 Reproductive and Perinatal Epidemiology

Electives - 7 hours
Emphasis Area Support Courses
Choose one of the following:
PHC 6934 3 Special Topics in Child Health
PHC 6532 3 Women’s Health Issues in Public Health
PHC 6414 3 Adolescent Health

Additional Electives - 4

Field Experience – 3 hours minimum
PHC 6945 3 Supervised Field Experience

EXECUTIVE PROGRAM FOR HEALTH PROFESSIONALS (EPH)
The Executive Weekend MPH concentration is a unique and customized program to serve the needs of the busy health care practitioner. Past and current students have represented many health care fields and specialties including physicians, nurses, dentists, pharmacists, occupational therapists and many more. This diversity provides students with the opportunity to meet and collaborate with colleagues from other specialties and geographic areas while enhancing the student’s ability to work in multi-disciplinary teams. Students gain strategic vision while participating on diverse teams with other students averaging three to 33 years of work experience in public health. Courses in this format are intensive, in-depth and offered one weekend a month on the Tampa campus. Small class sizes guarantee students individual attention and rich face to face interactions with experienced peers and faculty. Due to the customized nature of this program, additional fees are assessed and enrollment is limited. For more information, visit: http://publichealth.usf.edu/php/home.html.

Total Major requirements with this concentration - 43 hours minimum
In addition to the 15 hours required for the Major (Core, Special Project, and Comp Exam), this Concentration requires:

Concentration Course Requirements –12 credit hours
Electives – 15 credit hours
Field Experience – 1 credit hour minimum

Concentration Course Requirements - 12 hours
PHC 6120 3 Community Partnerships and Advocacy
PHC 6421 3 Public Health Law and Ethics
PHC 6104 3 Management of Public Health Programs
PHC 6146 3 Health Services Planning and Evaluation

Electives - 15 hours
Electives may be courses that apply towards a graduate certificate or from elective options.

Field Experience – 1 hour minimum
PHC 6945 1 Supervised Field Experience (up to 12 credits)
FOOD SAFETY (FOS)
Offered from the Department of Environmental and Occupational Health
Public health professionals play a pivotal role in preventing foodborne disease. As such, they require unique skills in food safety risk management. Their role will become increasingly important as the world’s population steadily climbs to an estimated 9.6 billion by 2050, and as food supply chain becomes highly global. Students in the MPH will gain a broad prospective in the public health sciences and technical experience in food safety emphasizing competencies in understanding foodborne hazards, controlling these through science-based food safety risk assessment and management, and developing effective food safety public health policies. Advance degree graduates with experience in both food safety and public health will be effective leaders for food companies, government agencies, and NGOs.

Concentration Admission Information
In addition to the Major Admission requirements, applicants must have the following:

- Suggested/preferred undergraduate majors: biological or chemical science.
- Prerequisite undergraduate courses: None required. Knowledge of Excel spreadsheets preferred.
- Work experience: None required.
- Minimum undergraduate GPA: 3.0
- International applicants from non-English-speaking countries must provide a minimum TOEFL score of 213 (computer-based test) or 550 (written test), taken within 2 years of the desired term of entry.

Total Major requirements with this concentration - 42 hours minimum
In addition to the 15 hours required for the Major (Core, Special Project, and Comp Exam), this Concentration requires:

Concentration Course Requirements –12 credit hours
Electives – 13 credit hours
Field Experience – 2 credit hours minimum

Concentration Course Requirements - 12 hours minimum
PHC 6522  3  Nutrition in Health and Disease
PHC 6520  3  Foodborne Diseases
PHC 6515  3  Food Safety
PHC 6353  3  Environ. Toxicology and Risk Assessment

Electives - 13 hours minimum
Suggested Electives Related to Food Safety:
PHC 6307  3  Principles of Exposure Assessment
PHC 6521  3  Public Health Nutrition
BSC 6932  3  Food Microbiology
ANG 6145  3  Ancient Diets
ANG 6566  3  Nutritional Anthropology
PHC 6310  3  Environ. and Occupational Toxicology
PHC 6251  3  Disease Surveillance and Monitoring
PHC 6562  3  Microbiology for Healthcare Workers

Field Experience – 2 hours minimum
PHC 6945  2-3  Supervised Field Experience (up to 12 credits)

GLOBAL COMMUNICABLE DISEASES (TCD)
Offered from the Department of Global Health
This concentration provides an opportunity for science-oriented students with an interest in communicable diseases to receive specialized training in the recognition, identification, diagnosis, surveillance, control, and prevention of public health problems related to communicable diseases throughout the world, with particular emphasis on the problems of Florida and underdeveloped nations. Preference for admission is given to students with a background or demonstrated skills in the biological sciences. Prerequisites may be required.

Students graduating from the major will receive training within five core domains which are central to the study of global communicable disease: 1) Tropical and Emerging Infections  2) Microbiology  3) Immunology and Genetics and 4) Public...
Health Interventions and Disease Control and 5) Applied Global Communicable Diseases. In addition to the MPH Core Courses students will be required to take a minimum of one course from within each domain. Students will then work with their faculty advisor to select a more narrow focus for elective course offerings. It is anticipated that students will take all of the courses within their specific domain of interest.

**Concentration Admission Information**

In addition to the Major Admission requirements, applicants must have the following:

- Suggested/preferred undergraduate majors: Biology, Zoology, Microbiology, Immunology
- Prerequisite undergraduate courses: None. Suggested undergraduate courses include general chemistry with laboratory, biology or zoology with laboratory, microbiology with laboratory, biochemistry with laboratory, immunology
- Work experience: None
- Other criteria: International applicants - TOEFL of 550 for paper-based instrument or 213 for computer-based instrument

**Total Major requirements with this concentration – 42 hours minimum**

In addition to the 15 hours required for the Major (Core, Special Project, and Comp Exam), this Concentration requires:

- Concentration Course Requirements – 15 credit hours
- Electives – 9 credit hours
- Field Experience – 3 credit hours minimum

**Concentration Course Requirements - 15 hours**

Students must take a minimum of 3 credits from within each domain. Course selection will be determined by the student and their advisor based on student interests and career goals.

Domains and examples of course selection

**Tropical and Emerging Infections - 3 credits minimum**

- PHC 6512 3 Vectors of Human Disease
- PHC 6510 3 Exotic and Emerging Infectious Disease
- PHC 6513 3 Public Health Parasitology
- PHC 6516 3 Tropical Diseases

**Microbiology - 3 credits minimum**

- PHC 6037 3 Public Health Virology
- PHC 6562 3 Microbiology for Healthcare Workers
- PHC 7935 3 Vaccinology*
  *with instructor consent

**Public Health Interventions and Disease Control- 3 credits minimum**

- PHC 6314 3 Infection Control Program Design
- PHC 6514 3 Infectious Disease Control in Developing Countries
- PHC 6517 3 Infectious Disease Prev. Strategies
- PHC 6251 3 Disease Surveillance and Monitoring
- PHC 5933 3 Intro to GIS

**Immunology and Genetics - 3 credits minimum**

- PHC 6511 3 Public Health Immunology
- PHC 6121 3 Vaccines
- PHC 6601 3 Human Genomics in Medicine and Public Health

**Applied Global Communicable Diseases - 3 credits minimum**

- PHC 6561 3 Lab Techniques in Public Health
- PHC 6560 3 The Public Health Lab System
- PHC 6934 3 Public Health GIS

http://health.usf.edu/publichealth/
Electives - 9 hours
Examples of common elective options. Students will fulfill their Global Health elective credits in consultation with their advisor. It is recommended that students focus on one of the five domains, taking all courses within that domain.

Field Experience – 3 hours minimum
PHC 6945 3 Supervised Field Experience (up to 12 credits)

GLOBAL DISASTER MANAGEMENT, HUMANITARIAN RELIEF AND HOMELAND SECURITY (GHH)
Offered from the Department of Global Health
The field of disaster management, and humanitarian relief and homeland security plays an important role in global health, especially in areas of armed conflict and natural disasters. With the increase in weapons of mass destruction, including nuclear and biological threats from terrorist groups and radical states, the need for formal training and education has increased. Local and international organizations, governments and United Nation agencies are in need of highly trained professionals to manage and direct programs to reduce both the homeland and global public health threats that continue to plague us. Where and when the next tsunami or earthquake will strike, or how the next terrorist group will respond is unknown. But the logic behind professionally mitigating and preparing for one of these incidences places us in a stronger position to respond.

This concentration builds on the existing framework of the College of Public Health core courses, field experience and special project. Combining this framework with the disaster management, humanitarian and homeland security courses will provide graduates with the ability to recognize, assess, implement and evaluate a global or local disaster.

Concentration Admission Information
In addition to the Major Admission requirements, applicants must have the following:

- Science, engineering, management, administration, international, business, public health
- Work experience: None required; however, disaster management, humanitarian assistance or homeland security, especially in a global setting, will be considered when determining the number of credits required for the Field Experience.
- Other criteria: Two letters of recommendation
- Applicants that completed courses in either the Graduate Certificate in Disaster Management, in Humanitarian Assistance or Homeland Security as a former non-degree seeking student may only transfer 12 credits into the M.P.H. major.

Total Major requirements with this concentration - 42 hours minimum
In addition to the 15 hours required for the Major (Core, Special Project, and Comp Exam), this Concentration requires:

Concentration Course Requirements –24 credit hours
Field Experience – 3 credit hours minimum

Concentration Course Requirements - 24 hours
General Courses (9 hours)
PHC 6230 3 Foundations of Humanitarian Assistance
PHC 6183 3 Overview of US & International Disaster Management
PHC 6254 3 Public Health Implications and Concerns in Homeland Security

Choose five courses from the following (15 hours)
Disaster Management
PHC 6185 3 Disaster Preparedness & Planning Concepts
PHC 6184 3 Disaster Recovery
PHC 6186 3 Public Health Emergencies in Large Populations

Humanitarian Assistance
PHC 6231 3 Organizing Emergency Humanitarian Action
PHC 6232 3 From Emergency to Development and Prevention
PHC 6233 3 Current Challenges in the Humanitarian Field
Homeland Security
PHC 6235 3 Critical Infrastructure Protection for Public Health Concepts
PHC 6236 3 Business Continuity for Global Health and Security
PHC 6255 3 Homeland Security: Law, Policy, and Public Health
PHC 6373 3 Protecting Public Health: Bioterrorism and Biodefense

Field Experience – 3 hours minimum
PHC 6945 3-6 Supervised Field Experience (up to 12 credits)

GLOBAL HEALTH PRACTICE (GLO)
Offered from the Department of Global Health (Fall term admission only)
This concentration will prepare students for achieving a professional position in the field of international public health, such as with international, bilateral, governmental and non-governmental agencies. The curriculum focuses on assessment and intervention strategies useful in resolving health problems of primarily undeveloped countries. Global Health Practice students have an opportunity to select courses that focus on areas such as epidemiology, maternal and child health, management and socio-cultural health.

Concentration Admission Information
In addition to the Major Admission requirements, applicants must have the following:

- Suggested/preferred undergraduate majors: none
- Work experience: not required
- Other criteria: Minimum technology requirements include intermediate computer skills, two letters of recommendation, resume, and goal statement.

Total Major requirements with this concentration - 45 hours minimum
In addition to the 15 hours required for the Major (Core, Special Project, and Comp Exam), this Concentration requires:

Concentration Course Requirements - 12 hours
PHC 6764 3 Global Health Principles and Contemporary Issues
PHC 6761 3 Global Health Assessment Strategies
PHC 6106 3 Global Health Program Development and Administration
PHC 6442 3 Global Health Applications in the Field

Electives - 12 hours
Courses not included on the list below may be approved by the student’s advisor.
PHC 6111 3 Global Primary Health Care Strategies
PHC 6146 3 Health Services Planning and Evaluation
PHC 6147 3 Managing Quality in Health Care
PHC 6511 3 Public Health Immunology
PHC 6512 3 Vectors of Human Disease
PHC 6513 3 Public Health Parasitology
PHC 6074 3 Epidemiology of Diseases of Major Public Health Importance
PHC 6700 3 Research Methods in Epidemiology
PHC 6934 3 Intermediate Infectious Disease Epidemiology
PHC 6535 3 International Maternal and Child Health
PHC 6765 3 International Health Education
PHC 6536 3 Population and Community Health
PHC 6532 3 Women’s Health Issues in Public Health
PHC 6121 3 Vaccines
PHC 6726 6 Community-Based Participatory Research for Tropical Health
PHC 6518 3 Eco Health & the Ecology of Tropical Infectious Diseases

http://health.usf.edu/publichealth/
Field Experience – 6 hours minimum
PHC 6945 6 Supervised Field Experience (up to 12 credits) (eight weeks abroad)

HEALTH CARE ORGANIZATIONS AND MANAGEMENT (HCO)
Offered from the Department of Health Policy and Management
The Health Care Organizations and Management concentration is designed for individuals interested in the management of hospitals, group practices, health departments, and other provider organizations. The concentration focuses on the structure and management of health care organizations. Students develop knowledge and skills in management science, leadership, and decision-making. The curriculum does not require students to develop all health administration quantitative and analytic skill areas typically required of senior management positions.

Concentration Admission Requirements:
In addition to the Major Admission requirements, applicants must have the following:

- Prerequisite undergraduate courses: Microeconomics or equivalent (prerequisite must be completed prior to enrolling in PHC 6430 Health Economics I) and Accounting (prerequisite must be completed prior to enrolling in PHC 6160 Health Care Financial Management) Undergraduate majors are diverse and include: Life sciences, social sciences, business, or health professions.
- Work experience: Preferred, but not required.
- Minimum undergrad GPA: 3.0 upper division

Total Major requirements with this concentration - 42 hours minimum
In addition to the 15 hours required for the Major (Core, Special Project, and Comp Exam), this Concentration requires:

Concentration Course Requirements – 18 credit hours
Electives – 8 credit hours minimum
Field Experience – 1 credit hour minimum

Concentration Course Requirements- 18 hours minimum
PHC 6151 3 Health Policy and Politics
PHC 6180 3 Health Services Management
PHC 6430 3 Health Economics I
PHC 6160 3 Health Care Financial Management

Additional Requirements (choose two)
PHC 6181 3 Org Behavior in Health Services
PHC 6148 3 Strategic Planning & Hlth Care Marketing
PHC 6196 3 Info Systems in H ealth Care Mgt

Electives - 8 hours minimum
Examples of common elective options:
PHC 6146 3 Health Services Planning and Evaluation
PHC 6147 3 Managing Quality in Health Care
PHC 6435 3 Perspectives on Health Insurance
PHC 6420 3 Health Care Law, Regulation and Ethics

Field Experience – 1 hour minimum
PHC 6945 1–3 Supervised Field Experience (up to 12 credits)
Students with little or no professional experience: 3 hours minimum. Students with relevant professional experience: 1-3 hours minimum. Students with substantial work experience can negotiate a reduced number of hours with their advisor (e.g., 1 or 2 hours) if the student has meaningful experience (involving decision-making) in a health care or related organization.
HEALTH POLICIES AND PROGRAMS (HPP)
Offered from the Department of Health Policy and Management
The MPH in Public Health degree Program with a Concentration in Health Policy and Programs is designed for individuals interested in development, analysis and evaluation of public policy for health services and public health programs. Students develop knowledge of theory and methods in policy analysis and program evaluation. Students are prepared to pursue policy analyst and program evaluation positions with federal, state or local agencies or with professional associations.

Concentration Admission Requirements:
In addition to the Major Admission requirements, applicants must have the following:

- Prerequisite undergraduate courses: Microeconomics or equivalent (prerequisite must be completed prior to enrolling in PHC 6430 Health Economics I) Undergraduate majors are diverse and include: Life sciences, social sciences, business, or health professions.
- Work experience: Preferred, but not required.
- Minimum undergraduate GPA: 3.00 upper division

Total Major requirements with this concentration - 42 hours minimum
In addition to the 15 hours required for the Major (Core, Special Project, and Comp Exam), this Concentration requires:

Concentration Course Requirements - 15 credit hours
Electives – 11 credit hours minimum
Field Experience – 1 credit hour minimum

Concentration Course Requirements - 15 hours minimum

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<th>Credits</th>
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Choose one of the following:

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Additional Requirements (choose one of the following)

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Electives - 11 hours
Examples of common elective options

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<td>PHC 6148</td>
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Field Experience – 1 hour minimum

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<td>PHC 6945</td>
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</table>

Supervised Field Experience (up to 12 credits)

Students with little or no professional experience: 3 hours minimum. Students with relevant professional experience: 1 hour minimum. Students with substantial work experience can negotiate a reduced number of hours with their advisor (e.g., 1 or 2 hours) if the student has meaningful experience (involving decision-making) in a health care or related organization.
HEALTH, SAFETY AND ENVIRONMENT (HLE)
Offered from the Department of Environmental and Occupational Health

Total Major requirements with this concentration - 43 hours minimum
In addition to the 15 hours required for the Major (Core, Special Project, and Comp Exam), this Concentration requires:

Concentration Course Requirements – 16 credit hours
Electives – 9 credit hour minimum
Field Experience – 3 credit hour minimum

Concentration Course Requirements - 16 hours minimum

- PHC 6307 3 Principles of Exposure Assessment and Control
- PHC 6300 3 Principles of Environmental Health
- PHC 6325 3 Environmental Laboratory Principles
- PHC 7931 1 Interdisciplinary Seminar: Case studies in EOH
  and 2 of the following 3 courses:
- PHC 6345 3 HSE Management and Administration
- PHC 6355 3 Principles of Occupational Safety
- PHD 6326 3 Global Issues in Environmental Health

Electives - 9 hours
Approved electives: Other electives may be approved by the assigned advisor.

- PHC 6310 3 Environmental and Occupational Toxicology
- PHC 6353 2 Environmental Toxicology Risk Assessment
- PHC 6350 3 Occupational Toxicology and Risk Assessment
- PHC 6515 3 Food Safety
- PHC 6186 3 Public Health Emergencies in Large Populations

Field Experience – 3 hour minimum
- PHC 6945 3 Supervised Field Experience (up to 12 credits)

INFECTION CONTROL (IFC)
Offered from the Department of Global Health

Total Major requirements with this concentration - 42 hours
In addition to the 15 hours required for the Major (Core, Special Project, and Comp Exam), this Concentration requires:

Concentration Course Requirements – 18 credit hours
Electives – 6 credit hour minimum
Field Experience – 3 credit hour minimum

Concentration Course Requirements - 18 hours minimum

- PHC 6251 3 Disease Surveillance and Monitoring
- PHC 6562 3 Microbiology for Healthcare Workers
- PHC 6517 3 Infectious Disease Prevention Strategies
- PHC 6314 3 Infection Control Program Design
- PHC 6186 3 Public Health Emergencies in Large Populations

An additional concentration course will be included from the College of Public Health; student must choose one from the two courses listed below:

- PHC 6002 3 Infectious Disease Epidemiology
  OR
- PHC 6190 3 Public Health Database Management

Depending upon student assessment results

http://health.usf.edu/publichealth/
Electives - 6 hours
Electives from within the College of Public Health, based upon student assessment, and approved by assigned advisor:
Examples include but are not limited to the following:
CFH PHC 6530  Maternal and Child Health I: Issues and Concepts
EOH PHC 6307  Exposure Assessment and Control
EOH PHC 6355  Principles of Occupational Safety
EOH PHC 6350  Occupational Toxicology and Risk Assessment
EOH PHC 6373  Protecting Public Health: Bioterrorism and Biodefense
EOH PHC 6556  Pathobiology of Human Disease I
EPB PHC 6074  Epidemiology of Diseases of Major Public Health Importance
EPB PHC 6591  Reproductive and Perinatal Epidemiology
HPM PHC 6104  Management of Public Health Programs
HPM PHC 6110  International Health and Health Care Systems
HPM PHC 6063  Public Health Data, Information and Decision Making

Field Experience – 3 hour minimum
PHC 6945  3  Supervised Field Experience (up to 12 credits)

MATERNAL AND CHILD HEALTH (PMC)
Offered from the Department of Community and Family Health
The MPH in Public Health with a Concentration in Maternal and Child Health prepares health professionals and individuals in related fields for leadership roles in community based organizations that focus on major public health problems of women, children and families, especially among culturally diverse and underserved populations. Using multidisciplinary approaches, students develop analytical, advocacy, programmatic and evaluative skills to address health disparities, and to emphasize health promotion and disease prevention among populations in need.

Concentration Admission Information
In addition to the Major Admission requirements, applicants must have the following:

- Suggested/preferred undergraduate majors: Undergraduate majors may be admitted from a wide range of backgrounds, although majors from the health sciences such as nursing, social work, counseling, pre-med, the natural sciences are desirable.
- Work experience: Work experience in the field of public health, health or natural sciences, counseling, communications, social work, etc. is considered extremely desirable.
- Minimum undergrad GPA: 3.0 in upper division courses
- Other criteria: Three letters of recommendation from academic and/or related professional sources, career goals statement

Total Major requirements with this concentration - 42 hours minimum
In addition to the 15 hours required for the Major (Core, Special Project, and Comp Exam), this Concentration requires:

Concentration Course Requirements –15 credit hours
Electives – 9 credit hour minimum
Field Experience – 3 credit hour minimum

Concentration Course Requirements - 15 hours
PHC 6530  3  Issues and Concepts in Maternal and Child Health I
PHC 6537  3  Case Studies in Maternal and Child Health Programs, Policies & Research
PHC 6197  3  Secondary Data Analysis in Maternal and Child Health
PHC 6505  3  Program Planning in Community Health
PHC 6708  3  Evaluation and Research Methods in Community Health
Electives - 9 hours

Examples of common elective options

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<td>Policies and Practices in Maternal and Child Nutrition</td>
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<td>PHC 6532</td>
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<td>Women’s health Issues in Public Health</td>
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<td>Reproductive Health Trends and Issues</td>
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<td>International Maternal and Child Health</td>
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<td>Adolescent Health</td>
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<tr>
<td>PHC 6934</td>
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<td>Selected Topics in Maternal Child Health</td>
</tr>
</tbody>
</table>

Field Experience – 3 hour minimum

PHC 6945 3-6 Supervised Field Experience (up to 12 credits)

Students with little or no professional experience: 6 hours minimum. Students with relevant professional experience: 3 hours minimum. An expectation of 2-3 years of experience in an MCH-related clinical background or agency constitutes the term “previous professional experience” worthy of lesser field experience. Documentation required if less than 6.

**Nutrition and Dietetics (NUD)**

Offered from the Department of Community & Family Health

The MPH in Public Health with a Concentration in Nutrition and Dietetics is offered by the Department of Community and Family Health. This concentration examines medical nutrition therapy, nutrition education, community practice and program evaluation, management and leadership, ethical standards and practice, and theoretical frameworks and models. Students who complete the concentration in Nutrition and Dietetics, in conjunction with an ACEND accredited dietetic internship and successfully passing the registration exam for dietitian, can practice as dietitian multiple areas of population health.

**Concentration Admission Information**

In addition to the Major Admission requirements, applicants must have the following:

- Acceptance into an ACEND accredited dietetic internship or a registered dietitian.
- Minimum undergraduate GPA 3.0 in upper division course work
- Three letters of recommendation from academic and/or related professional sources.

**Total Major Requirements with this concentration - 42 hours minimum**

In addition to the 15 hours required for the Major (Core, Special Project, and Comp Exam), this Concentration requires:

- Concentration Course Requirements – 15 Credit hours
- Electives – 3 credit hours (dietetic interns)/9 credit hours (dietitians only)
- Field Experience – 9 credit hours (dietetic interns)/ 3 credit hours (dietitians)

**Concentration Course Requirements - 15 hours minimum**

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<td>Leadership &amp; Management in Nutrition</td>
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<td>DIE 6248</td>
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<td>Advanced Clinical Nutrition</td>
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<tr>
<td>HUN 5265</td>
<td>1</td>
<td>Nutritional Assessment</td>
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<td>PHC 6521</td>
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<td>Public Health Nutrition</td>
</tr>
<tr>
<td>PHC 6522</td>
<td>3</td>
<td>Biological Role of Nutrition in Health</td>
</tr>
<tr>
<td>HUN 6804</td>
<td>3</td>
<td>Research Methods in Nutrition &amp; Dietetics</td>
</tr>
</tbody>
</table>

**Electives - 3 hours minimum (dietetic interns only)/9 hours minimum (dietitians only)**

(Examples of common elective options)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHC 6411</td>
<td>3</td>
<td>Introduction to Social Marketing</td>
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<tr>
<td>PHC 6500</td>
<td>3</td>
<td>Theoretical and Behavioral Basis for Health Ed</td>
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<tr>
<td>PHC 6505</td>
<td>3</td>
<td>Program Planning in Community Health</td>
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<tr>
<td>PHC 6507</td>
<td>3</td>
<td>Health Education Intervention Methods</td>
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<tr>
<td>PHC 6708</td>
<td>3</td>
<td>Evaluation &amp; Research Methods in Comm Health</td>
</tr>
<tr>
<td>PHC 6530</td>
<td>3</td>
<td>Issues and Concepts in Maternal and Child Health</td>
</tr>
<tr>
<td>PHC 6520</td>
<td>3</td>
<td>Foodborne Diseases</td>
</tr>
<tr>
<td>PHC 6515</td>
<td>3</td>
<td>Food Safety</td>
</tr>
</tbody>
</table>
Field Experience – 9 credit hours (dietetic interns)/ 3 credit hours (dietitians)

PHC 6945  3-9 min  Supervised Field Experience up to 12 credits –
Students with little or no professional experience (dietetic interns) - 9 hours minimum in clinical, community and foodservice practice. Students with relevant professional experience -3 hours minimum. Professional experience defined as at least 2 years of work as a registered dietitian.

Special Project  3 credit hours
PHC 6977  Special project synthesis didactic work and applies to an area of interest/need in practice setting identified by student with agreement from graduate director and field supervisor.

OCCUPATIONAL HEALTH (OCC)  
Offered from the Department of Environmental and Occupational Health
Note: The MPH in Public Health with a Concentration in Occupational Health is only available to concurrent MS Nursing Students or qualified health professionals.

The principal concerns of the occupational health professional are: the worker; the work environment and chemical, physical, and ergonomic and biological agents in the workplace. The curriculum is interdisciplinary in nature and scope, addressing topics in these broad areas. The MPH in Public Health with a Concentration in Occupational Health is a 45 credit major designed for either physicians in practice who are interested in the residency but can not spend 2 years away from their practice (They complete their MPH first while maintaining their practice and then spend only 1 year in the clinical residency program), or for other practicing health professionals.

Concentration Admission Information
In addition to the Major Admission requirements, applicants must have the following:

• Suggested/preferred undergraduate majors: A clinical degree required e.g. medicine, nursing, physical therapy, occupational therapy
• Prerequisite undergraduate courses: Science related courses used in preparation for clinical professional degree
• Work experience: Two years of clinical experience preferred
• Minimum undergrad GPA: 3.0 in last 60 hours of undergraduate degree
• Other criteria: Two letters of recommendation, computer skills, resume, goal statement

Total Major requirements with this concentration - 43 hours minimum
In addition to the 15 hours required for the Major (Core, Special Project, and Comp Exam), this Concentration requires:

Concentration Course Requirements –13 credit hours
Electives – 14 credit hour minimum
Field Experience – 1 credit hour minimum

During 2nd semester meet with advisor and begin planning field experience. See http://health.usf.edu/publichealth/academicaffairs/fe/

Concentration Course Requirements - 13 hours

PHC 6356  2  Industrial Hygiene
PHC 6423  2  Occupational Health Law
PHC 6351  3  Occupational Medicine for Health Professionals
PHC 6360  2  Safety Management Principles and Practice
PHC 6354  2  Occupational Health and Safety Administration
PHC 6364  2  Industrial Hygiene Aspects of Plant Operations

* Only available to concurrent M.S. Adult Nursing Students

http://health.usf.edu/publichealth/
Electives - 14 hours
Examples of common elective options:
PHC 7019  3  Occupational Epidemiology
PHC 6180  3  Health Services Management
ENV 5345  3  Solid Waste Control
PHC 6422  2  Environmental Health Law

Electives for Concurrent Nursing MS/MPH (Nursing Courses counting toward MPH) - 8 hours
Nursing Courses counting toward MPH
NGR 6650  2  Occupational Health Nursing I
NGR 6651  2  Occupational Health Nursing II
NGR 6152  4  Advanced Physiology and Pathophysiology

Field Experience – 1 hour minimum
PHC 6945  1-6  Supervised Field Experience (up to 12 credits)
(Concurrent Nursing M.S./M.P.H. take PHC 6291 instead)
Students with little or no professional experience (one year or less) in occupational health: at least three credits, preferably 6 credits minimum. Students with relevant professional experience: 1 hour minimum. Concurrent Nursing M.S./M.P.H. Students Only: PHC 6291 Health Management of Adults and Older Adults: Special Topics - Occupational Health Nursing - 6

OCCUPATIONAL HEALTH FOR NURSES (OCP)
Offered from the Department of Environmental and Occupational Health

Total Major requirements with this concentration - 42 hours minimum
In addition to the 15 hours required for the Major (Core, Special Project, and Comp Exam), this Concentration requires:

Concentration Course Requirements – 17 credit hours
Electives – 4 credit hours
Field Experience – 6 credit hour minimum

Concentration Course Requirements - 17 hours
PHC 6356  2  Industrial Hygiene
PHC 6423  2  Occupational Health Law
PHC 6351  3  Occupational Medicine for Health Professionals
PHC 6360  2  Safety Management Principles and Practice
PHC 6354  2  Occupational Health and Safety Administration
PHC 6364  2  Industrial Hygiene Aspects of Plant Operations

Nursing Courses Counting Toward MPH
NGR 6650  2  Occupational Health Nursing I
NGR 6651  2  Occupational Health Nursing II

Electives – 4 hours

Field Experience – 6 hour minimum
PHC 6945  6  Supervised Field Experience (up to 12 credits)
(Occupational Health Nursing)
Occupational Medicine Residency (OMR)
Offered from the Department of Environmental and Occupational Health

Total Major Requirements with this concentration – 43 hours minimum
In addition to the 15 hours required for the Major (Core, Special Project, and Comp Exam), this Concentration requires:

Concentration Course Requirements – 11 credit hours
Electives – 17 credit hours minimum
Field Experience – This requirement will be satisfied with 24 months of required clinical rotations. No credit hours will be given.

Comprehensive Exam: While strongly encouraged, students in this concentration are not required to take the CPH Exam. It may be a required component of some electives.
Concentration Exam: Students in this concentration are required to pass an Occupational Medicine Concentration Exam.

Concentration Course Requirements - 11 hours
PHC 6356 2 Industrial Hygiene
PHC 6351 3 Occupational Medicine for Health Professionals
PHC 6361 2 Industrial Ergonomics
PHC 6930 4 Public Health Seminar Occupational Medicine Seminar – 1 credit per semester for 4 semester

Electives – 17 hours minimum
Required Electives – 14 hours minimum
PHC 6360 2 Safety Management Principles and Practices or other approved Safety course
PHC 6364 2 Industrial Hygiene Aspects of Plant Operations
PHC 6423 2 Occupational Health Law
PHC 7019 3 Occupational Epidemiology
One of the following:
PHC 6354 2 Safety and Health Administration
PHC 6345 3 HSE Management and Administration
One of the following:
PHC 6310 3 Environmental Occupational Toxicology
PHC 6350 3 Occupational Toxicology and Risk Assessment

Additional Electives – 3 hours
(All elective choices should be discussed with your advisor. Examples of common electives.)
PHC 6370 Biological and Surface Monitoring
PHC 6373 Protecting Public Health: Bioterrorism/Biodefense
PHC 6517 Infectious Disease Prevention Strategies

OCCUPATIONAL SAFETY (SFM)
Offered from the Department of Environmental and Occupational Health
The Occupational Safety Concentration is intended for students with backgrounds in science or engineering seeking a professional public health career in occupational safety. In addition to core public health courses, the major builds upon a variety of courses enabling the student to recognize, evaluate and control existing and potential safety hazards due to faulty equipment, process design, chemical storage and handling. Students are trained to apply these safety principles in assessing engineering controls, personal protective techniques, administrative practices, conducting facility audits and to know when to consult with other environmental and occupational health and safety professionals to prevent or control work related injuries, illnesses or discomfort in the workplace. The major is a collaborative effort between the College of Public Health and the College of Engineering.

Concentration Admission Information
In addition to the Major Admission requirements, applicants must have the following:

- Suggested/preferred undergraduate majors: science, engineering, technology and management.
- Prerequisite undergraduate courses: No specific courses, however 60 credit hours of science, mathematics, engineering and technology with at least 15 credit hours in upper division classes.
• Work experience: None required; however occupational work experience is beneficial.
• Other criteria: Two Letters of recommendation

**Total Major requirements with this concentration - 44 hours minimum**
In addition to the 15 hours required for the Major (Core, Special Project, and Comp Exam), this Concentration requires:

Concentration Course Requirements – 20 credit hours
Electives – 8 credit hour minimum
Field Experience – 1 credit hour minimum

**Concentration Course Requirements - 20 hours**

- PHC 6356 2 Industrial Hygiene
- PHC 6310 3 Environmental and Occupational Toxicology
- PHC 6361 2 Industrial Ergonomics
- PHC 6354 2 Safety and Health Administration
- PHC 6423 2 Occupational Health Law
- EIN 6215 3 Engineering System Safety
- EIN 6216 3 Occupational Safety Engineering
- PHC 6360 2 Safety Management Principles and Practice
- PHC 6930 1 Public Health Seminar

**Electives - 8 Hours**

- PHC 6303 3 Community Air Pollutions
- PHC 6350 3 Occupational Toxicology and Risk Assessment
- PHC 6351 2 Occupational Medicine for Health Professionals
- PHC 6422 2 Environmental Health Law
- PHC 6364 2 Industrial Hygiene Aspects of Plant Operations
- INP 6056 3 Industrial/Organizational Psychology
- INP 7937 3 Occupational Health Psychology

**Field Experience – 1 hour minimum**

PHC 6945 1-3 Supervised Field Experience (up to 12 credits)
Students with little or no professional experience: 3 hours minimum. Students with relevant professional experience: 1 hour minimum working in or associated with an occupational health and safety function with orientation in the recognition, evaluation and control of occupational hazards and disease for at least a year.

**Comprehensive Exam**
In addition to the Comprehensive Exam required by the College, there is a Concentration Exam (no credit, 2 credit hours enrollment requirement).
Concentration Exam (no credit, 2 credit hours enrollment requirement)

**PUBLIC HEALTH ADMINISTRATION (PHA)**

**Offered from the Department of Health Policy and Management**
The MPH in Public Health Administration concentration is designed for individuals interested in pursuing leadership and administrative positions in public health agencies or programs or in other initiatives focused on population health. The curriculum centers on management principles and methods to advance the health of communities. Students develop knowledge and skills in public health, management and planning, law and ethics, and financial management.

**Concentration Admission Requirements:**
In addition to the Major Admission requirements, applicants must have the following:

- Undergraduate majors are diverse and include: Life sciences, social sciences, business, or health professions.
- Prerequisite undergraduate course: Accounting (prerequisite must be completed prior to enrollment in PHC 6160 Health Care Financial Management)
- Work experience: Two years of full-time, meaningful work experience in a health care or related organization are required.
- Minimum undergrad GPA: 3.0 upper division

[http://health.usf.edu/publichealth/]
Total Major requirements with this concentration - 42 hours minimum  
(Note: corrected Error from 43 to 42 on 10/13/17)  
In addition to the 15 hours required for the Major (Core, Special Project, and Comp Exam), this Concentration requires:

Concentration Course Requirements –15 credit hours  
Electives – 12 credit hour minimum  
Field Experience – 1 credit hour minimum

Concentration Course Requirements - 15 hours minimum
PHC 6146  3  Health Services Planning and Evaluation  
PHC 6147  3  Managing Quality in Health Care  
PHC 6104  3  Management of Public Health Programs  
PHC 6421  3  Public Health Law and Ethics  
PHC 6063  3  Public Health Data, Information and Decision Making

Approved Electives - 11 hours - (note: corrected error from 12 to 11 hours on 10/13/17)
Field Experience – 1 hour minimum  
PHC 6945 1-3  Supervised Field Experience (up to 6 credits)  
Students with little or no professional experience: 3 hours minimum. Students with substantial work experience can negotiate a reduced number of hours with their advisor (e.g., 1 or 2 hours) if the student has meaningful experience (involving decision making) in a health care or related organization.

PUBLIC HEALTH EDUCATION (PHN)  
Offered from the Department of Community and Family Health  
Health educators, using health promotion principles, assist individuals and communities in the adoption and maintenance of healthy lifestyles. This MPH concentration prepares health educators to collect and analyze data to identify diverse community needs prior to planning, implementing, monitoring and evaluating health promotion programs; communicate health and health promotion needs; and plan, implement and evaluate health promotion programs using ethical standards and theoretical frameworks and models. The curriculum helps students acquire relevant theoretical and practical knowledge in diverse fields of endeavor, such as the social and behavioral sciences, communication dynamics, educational theory and design, and community organization. Students who complete a degree in public health education are eligible to sit for the national Certified Health Education Specialist (CHES) examination.

Concentration Admission Information  
In addition to the Major Admission requirements, applicants must have the following:

- Suggested/preferred undergraduate majors: Undergraduate majors may be admitted from a wide range of backgrounds, although majors from nursing, the natural sciences, psychology, sociology, anthropology, and education are desirable.
- Work experience: Work experience in the field of public health and health education is appropriate, but not necessary.
- Minimum undergrad GPA Three letters of recommendation from academic and/or related professional sources.
- Career goal statement

Total Major requirements with this concentration - 44 hours minimum  
In addition to the 15 hours required for the Major (Core, Special Project, and Comp Exam), this Concentration requires:

Concentration Course Requirements – 17 credit hours  
Electives – 6 credit hours minimum  
Field Experience – 6 credit hours minimum

Concentration Course Requirements - 17 hours
HSC 5036  1  Professional Foundations of Health Ed  
PHC 6500  4  Theoretical and Behavioral Basis for Health Ed  
PHC 6505  3  Program Planning in Community Health  
PHC 6507  3*  Health Education Intervention Methods
PHC 6412 3 Health Disparities and Social Determinants
PHC 6708 3 Evaluation and Research Methods in Community Health

Health Education Support/Elective – 6 hours minimum
Examples of common elective options

PHC 6580 3 Prevention and Control of Unintentional Injuries
PHC 6193 3 Qualitative Methods in Community Health Research
PHC 6411 3 Introduction to Social Marketing for Public Health
PHC 6414 3 Adolescent Health
PHC 6506 3 Community Health Education
PHC 6533 3 Health Program Development and Change Process
PHC 6705 3 Formative Research Methods in Social Marketing
PHC 6725 3 Focus Group Research Strategies
PHC 6708 3 Evaluation Methods in Community Health
PHC 6715 3 Research Foundations in Public Health
PHC 6934 1-6 Health Message Design in Public Health

*Students must take PHC 6500 and PHC 6505 prior to PHC 6507

Field Experience – 6 hour minimum
PHC 6945 6 Supervised Field Experience (up to 12 credits)
Students with little or no professional experience: 6 hours minimum. Students with relevant professional experience: minimum 6 hours; in this case we try to find field experience in which the student lacks experience.

PUBLIC HEALTH PRACTICE (PHP)5,6
Offered as a College Wide Concentration
The Master of Public Health with a Concentration in Public Health Practice is a college-wide interdisciplinary major designed to prepare experienced health professionals to assume leadership roles as members of multidisciplinary teams so that they are able to develop, implement, and evaluate programs that have an impact on the health of the public. The Public Health Practice MPH provides a broad spectrum of skills and knowledge important for effective health professionals working in public health settings. Students in the major will gain skills related to: public health practice; epidemiology; program analysis and inference from data; development of programs that take into account cultural, social, economic, ethical and legal factors; community-based health policy and program planning; and budgeting and management.

The MPH in Public Health with a Concentration in Public Health Practice is offered in two formats: Online MPH degree Program via distance learning and Executive Weekend MPH. The Online MPH via distance learning is primarily intended for off-campus students who are unable to come to campus for their education. The Executive MPH is a unique and customized weekend program to serve the needs of the busy health care practitioner. Classes in this format are offered one weekend a month. Each program has specialized staff to assist students. The concentration includes:

- Five core discipline areas (Biostatistics, Environmental Health Sciences, Epidemiology, Health Policy Management, and Social and Behavioral Sciences)
- An integrated interdisciplinary, cross-cutting set of overall competency domains (Communication and Informatics, Diversity and Culture, Leadership, Professionalism, Program Planning, Public Health Biology, and Systems Thinking)

Online MPH via Distance Learning
The Online MPH via Distance Learning offers a convenient and affordable avenue for off-campus health care professionals to earn a Master’s degree through distance learning. The courses in the Online MPH in Public Health Practice are delivered using web-based technologies. With the help of skilled instructional designers, faculty create course content that is delivered using multimedia technologies such as the Internet, DVDs, CDs, videotape, streaming media, web-based tutorials, and so on. Faculty within these courses utilize email, web conferencing, discussion forums and virtual chat features to enhance instruction. Students can complete almost all degree requirements for the online MPH with minimal on-campus requirements of no more than one calendar week. Courses are available in the online format in the Fall, Spring and Summer.

5 Requires 3 years of health-related experience
6 Offered (1) executive program and (2) online

http://health.usf.edu/publichealth/
semesters. The time required to complete the online MPH degree program ranges from approximately 2.5 to 5 years, depending on time of entry into the major, course sequence and availability, as well as student circumstances and academic status. Students must meet certain technology requirements and are required to pay a technology fee to participate in all online courses.

**Total Major requirements with this concentration – 43 hours minimum**
In addition to the 15 hours required for the Major (Core, Special Project, and Comp Exam), this Concentration requires:

Concentration Course Requirements – 12 credit hours
Electives – 15 credit hours minimum
Field Experience – 1 credit hour minimum

**Concentration Course Requirements - 12 hours**
- PHC 6120 3 Community Partnerships and Advocacy
- PHC 6421 3 Public Health Law and Ethics
- PHC 6104 3 Management of Public Health Programs
- PHC 6146 3 Health Services Planning and Evaluation

**Electives - 15 hours**
Electives may be courses that apply towards a graduate certificate or from elective options.

**Field Experience – 1 hour minimum**
- PHC 6945 1 Supervised Field Experience (up to 12 credits)

**SOCIAL MARKETING (SOM)**
Offered in the Department of Community and Family Health
Social Marketing integrates marketing concepts with other public health approaches to design products, promote policies, and influence behaviors for the greater social good. This MPH concentration equips students with the public health and social marketing skills needed to tackle complex health problems by applying marketing principles and social change tools to design, implement, and evaluate behavioral interventions and policy changes. The curriculum trains students in marketing and social change theoretical models, formative research skills, program management skills, program evaluation techniques, and ethical principles that guide social marketers. The concentration may be completed exclusively online or as a blend of courses offered on the Tampa campus and online.

**Concentration Admission Information**
In addition to the Major Admission requirements, applicants must have the following:

1. Suggested/preferred undergraduate majors: Undergraduate majors may be admitted from a wide range of backgrounds, although majors from nursing, the natural sciences, psychology, sociology, anthropology, marketing, and education are desirable.
2. Work experience: Work experience in the field of public health and social marketing is appropriate, but not necessary.
3. Minimum undergrad GPA - 3.0
4. Three letters of recommendation from academic and/or related professional sources.
5. Career goal statement

**Total Major requirements with this concentration - 42 hours minimum**
In addition to the 15 hours required for the Major (Core, Special Project, and Comp Exam), this Concentration requires:

Concentration Course Requirements – 12 credit hours
Electives – 12 credit hours minimum
Field Experience – 3 credit hours minimum
Concentration Course Requirements - 12 hours
PHC 6411 3 Introduction to Social Marketing
PHC 6705 3 Formative Research in Social Marketing
PHC 6460 3 Social Marketing Program Management
PHC 6461 3 Advanced Social Marketing

Electives - 12 hours
Field Experience – 3 hour minimum
PHC 6945 3 Supervised Field Experience (up to 12 credits)

TOXICOLOGY AND RISK ASSESSMENT (TXY)
Offered from the Department of Environmental and Occupational Health
This concentration area will provide a broad foundation in the biomedical sciences with general training in toxicology. The major is designed with a balanced curriculum in the areas necessary for understanding the response of organisms to chemical insult and to introduce individuals in the research approaches necessary for the evaluation of these responses. Students will be able to make decisions on the basis of available research findings on potential chemical hazards for humans and animals and to adapt to a rapidly growing body of new knowledge in toxicology.

Concentration Admission Information
In addition to the Major Admission requirements, applicants must have the following:

- Public health course prerequisites: College requires HSC 4551 Survey of Human Diseases or comparable course for students who do not have public health or biology courses or experience.
- Suggested/preferred undergraduate majors: Sciences such as biology, chemistry, physics, and environmental science.
- Prerequisites undergraduate courses: Courses in biology and chemistry.
- Work experience: Not required.
- Minimum undergrad GPA: 3.0.
- Other criteria: TOEFL Score (International Students) 550.

Total Major requirements with this concentration - 44 hours minimum
In addition to the 15 hours required for the Major (Core, Special Project, and Comp Exam), this Concentration requires:

Concentration Course Requirements – 23 credit hours
Electives – 4 credit hours
Field Experience – 2 credit hours minimum

Concentration Course Requirements - 23 hours
HSC 6556 3 Pathobiology of Human Disease I
PHC 6353 3 Environmental Toxicology and Risk Assessment
PHC 6310 3 Environmental and Occupational Toxicology
PHC 6359 3 Xenobiotic Metabolism in Environmental and Occupational Health
PHC 6369 2 Industrial Toxicology
PHC 6350 3 Occupational Toxicology and Risk Assessment
PHC 6934 2 Special Topics in Public Health
PHC 6930 1 Public Health Seminar
HSC 6557 3 Pathobiology of Human Disease II

Electives – 4 hours
Field Experience – 2 hour minimum
PHC 6945 2-3 Supervised Field Experience (up to 12 credits)
Students with little or no professional experience: 3 hours minimum. Students with relevant professional experience: 2 hours minimum. Has worked as a professional in the field of toxicology for a period of at least one year constitutes the term "relevant professional experience" and is worthy of lesser field experience.
For information on major requirements, refer to the college website:
http://health.usf.edu/publichealth/eoh/~/link.aspx?_id=E3649390675E4F16A23170C292AFC86E&_z=z

OTHER INFORMATION

Certificates:
(for information click on the graduate certificates at
http://www.usf.edu/innovative-education/programs/graduate-certificates/

COURSES
See http://www.ups.usf.edu/course-inventory/
PUBLIC HEALTH AND MEDICINE

Concurrent Degrees: Master of Public Health (M.P.H.)/Doctorate of Medicine (M.D.) Degrees

DEGREE INFORMATION
Refer to each major for deadlines

Minimum Total Hours: 42 (MPH), 4-year program (MD)
Total hours shared: 9 credit hours
Level: Masters/Doctorate
CIP Codes: 51.2201 / 51.1201
Dept. Codes: Refer to the Major
(Major/College): MPH/PH, MD/MD

CONTACT INFORMATION
Colleges: Public Health/Medicine
Contact Information: www.grad.usf.edu

MAJOR INFORMATION
The concurrent MPH/MD degree provides a unique opportunity for medical students who are interested in blending their field of medicine with the discipline of public health. The students recognize the value of inter-professional education within health as well as the professional opportunities that require concurrent skill sets.

The two majors review applicants independently and admission to one major in no way guarantees admission into the other major. Medical students must be admitted and in good standing when applying for the MPH degree. Upon completion of all requirements for the concurrent degrees, the student submit separate applications for graduation. Both (MPH and MD) degrees are certified individually by each college prior to graduation. Students receive two diplomas.

Accreditation:
The College is fully accredited by the Council on Education in Public Health.

ADMISSION INFORMATION
Applicants must meet University Admission Requirements (see Graduate Admissions section) and USF Medical School admission requirements as well as the requirements for each major. Refer to the individual listings for the MPH and MD for admission requirements specific to the major.

CURRICULUM REQUIREMENTS
For specific information on the requirements for the major, please refer the Catalog listing for that major.

M.P.H. in Public Health – total minimum hours – 42 credit hours
M.D. in Medicine – total minimum hours – 369 hours – (This is a 4-year major, resulting in 369 hours)

411 Total hours, with 9 credit hours shared, resulting in total combined: 402 hours

Shared Courses: The following courses are approved to be shared with both majors:
Transferred from MD degree
BMS 5005 Professions of Health 2 credits
BMS 6825 Doctoring I 7 out of 12 credits

For all other curriculum requirements, including Thesis/non-Thesis, Internship, Comprehensive Examination, etc., refer to the Catalog listing for that major.
# PUBLIC HEALTH

## Master of Science in Public Health (M.S.P.H.) Degree

### DEGREE INFORMATION

<table>
<thead>
<tr>
<th>Priority Admission Application Deadlines:</th>
<th>CONTACT INFORMATION</th>
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<tbody>
<tr>
<td>Fall: May 1</td>
<td>College: Public Health</td>
</tr>
<tr>
<td>Spring: June 15</td>
<td>Contact Information: <a href="http://www.grad.usf.edu">www.grad.usf.edu</a></td>
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<td>Summer: November 15</td>
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</table>

International applicant deadlines:
[http://www.grad.usf.edu/majors](http://www.grad.usf.edu/majors)

*Global Communicable Disease and Genetic Counseling begin in fall term only.*

**Minimum Total Hours:** 42  
**Level:** Masters  
**CIP Code:** 51.2299  
**Dept Code:** DEA  
(Major/College): MSP PH  
Approved: 2002

### Concentrations and total hours for the Major with that concentration:

- Behavioral Health (PBH) – 44  
- Bioinformatics (PBF) – 42  
- Biostatistics (PBC) – 45  
- Environmental Health (PEH) – 42  
- Epidemiology (PEY) – 48  
*Genetic Counseling (GTC) – 42  
*Global Communicable Disease (PGD) – 42  
International Public Health Research, Policy and Planning (PIP) – 42  
Maternal and Child Health (PMH) – 44  
Occupational Exposure Science (OES) – 45  
Occupational Health (POH) – 46  
Occupational Medicine Residency (POM) – 46  
Occupational Safety (POS) – 46  
Public Health Education (PPD) – 44  
Socio-Health Sciences (PSH) – 44  
Toxicology and Risk Assessment (PTX) – 44

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* Only for health professionals
MAJOR INFORMATION

The base of knowledge for public health comes from a variety of disciplines, ranging from social sciences to biological sciences and business, brought together by a commitment to improve the public’s health. Thus, the field of public health is broad and is open to students from diverse academic disciplines including Health Sciences, Education, Engineering, Business, Communications, Mathematics, Social Sciences and Natural Sciences. Graduates are prepared for interdisciplinary focused public health professional careers as administrators, managers, educators, researchers, and direct service providers.

The College’s five departments are: Community and Family Health, Environmental and Occupational Health, Epidemiology and Biostatistics, Global Health, and Health Policy and Management. Public Health Practice is a college-wide major. Core content is directly related to addressing and meeting public health issues.

The College accommodates the working professional as well as the full-time student by offering late afternoon and evening classes, online course delivery, partnerships with international schools to expand options, a variety of graduate certificates, and a professional M.P.H. for experienced Health Care professionals.

Accreditation:

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

All applicants must take the Graduate Record Exam (GRE) or have taken an equivalent admissions examination within the five years preceding application and must meet the following criteria:

Equivalent exams include the GMAT, MCAT, DAT or PCAT.

- LSAT is not accepted in lieu of the GRE.
- Although there are no required minimum scores, the applicant’s GRE score will be compared to the applicant pool and the national GRE norms.
- Applicants who have a terminal degrees such as the PhD, ScD or EdD, and those with advanced professional degrees (MD, DDS, DO, DVM, JD, PharmD, DPT) from accredited institutions and who are individually licensed in the United States in their profession may request to waive the GRE (http://health.usf.edu/publichealth/pdf/GRE%20Waiver.pdf). The GRE waiver is not automatic and must be approved by the College of Public Health.
- Shall have earned an undergraduate degree from an accredited institution;
  Shall have earned a "B" average (3.00 on a 4 point scale) or better in all work attempted while registered as an upper division student working toward a baccalaureate degree.

Meeting of these criteria per se shall not be the only basis for admission.
CURRICULUM REQUIREMENTS

Total Minimum Hours: 42 credit hours

Core Requirements – 9 hours
Concentration Course Requirements – 27 hours (varies by concentration, includes research courses and electives)
Thesis – 6 hours minimum

Core Course – 9 hours
PHC 6588 1 History and Systems of Public Health
PHC 6756 5 Population Assessment: Part 1
PHC 6757 3 Population Assessment: Part 2

Concentrations – 27 credit hours minimum (including Research Hours and Electives)
Students select from one of the concentrations listed on the following pages. The Concentration section includes Concentration Course Requirements, any required Research courses, Electives, and any concentration specific requirements for the Comprehensive Exam.

Research Courses
Specific course requirements are listed with the Concentration. Industrial Hygiene and Occupational Medicine Residency are practice-based and do not have specific research hours required.

Electives
Elective options are listed with the Concentration.

Thesis – 6 credit hours
PHC 6971 6 Thesis

Comprehensive Exam
Must be registered for at least 2 credit hours of coursework. Thesis proposal defense may be used in lieu of the comprehensive exam.

MSPH in Public Health CONCENTRATION OPTIONS
Students select from the Concentrations listed on the following pages.

BEHAVIORAL HEALTH (PBH)
Pre-requisites and Admissions Information
In addition to meeting the Major admission requirements for the Master of Science in Public Health in Public Health, applicants should also meet these concentration prerequisites:

- Public health course prerequisite: None
- Suggested/preferred undergraduate majors: Social or Behavioral Sciences, International Studies, Women Studies, Public Health, Regional Studies (i.e., Latin America and Caribbean) and Health Sciences.
- Prerequisite undergraduate courses: None
- Work experience: some public health experience preferred but not required
- Three letters of recommendation from academic and/or related professional sources, goal statement

Total Major Requirements with this concentration - 44 hours minimum

In addition to the 15 hours required for the Major Core Requirements and the thesis hours, this Concentration requires:

Concentration Course Requirements – 12 credit hours
Research Courses – 9 credit hours
Electives – 8 credit hours
Concentration Course Requirements – 12 credit hours
Required Specialization Area Courses: Courses depend on the area of specialization.

Research Courses – 9 credit hours
PHC 6051  
Biostatistics II
Two Research Methods courses as determined by advisory committee

Elective Courses – 8 credit hours
Examples of common options are:
ANG 6469  
Selected Topics in Medical Anthropology
PHC 6536  
Population and Community Health
PHC 6411  
Introduction to Social Marketing for Public Health
PHC 6708  
Evaluation Methods in Community Health

Comprehensive Exam
Comprehensive exam or thesis proposal defense may be used in lieu of the comprehensive exam

BIOINFORMATICS (PBF)
Total Major Requirements with this concentration - 42 hours minimum

In addition to the 15 hours minimum required for the Major Core Requirements and the thesis hours, this Concentration requires:

Concentration Course Requirements – 27 credit hours
Research Courses – 9 credit hours
Comprehensive Exam

BIOSTATISTICS (PBC)
Pre-requisites and Admissions Information
In addition to meeting the Major admission requirements for the Master of Science in Public Health in Public Health, applicants should also meet these concentration prerequisites:

- Biostatistics course prerequisites:
  - MAC 2311 3 Calculus I
  - MAC 1105 3 College Algebra
  - Knowledge of Computer and SAS Programming
  - Or an equivalent course is required.
- Suggested/preferred undergraduate majors: Mathematics, statistics, computer sciences, natural sciences, biological sciences, medical sciences, environmental sciences, management information systems.
- Prerequisite undergraduate courses: Linear algebra, calculus, computer skills (e.g. operating system, internet, word processing, spreadsheet)
- Work experience: Prior work experience is preferred, but not required.
- Other criteria: Academic background, goal statement, student's academic interests, references and availability of faculty and facility resources are also considered as part of the entrance evaluation.

Total Major Requirements with this concentration – 45 hours minimum

In addition to the 15 hours required for the Major Core Requirements and the thesis hours, this Concentration requires:

Concentration Course Requirements – 12 credit hours
Research Courses – 9 credit hours
Electives – 9 credit hours
Concentration Course Requirements – 15 credit hours
PHC 6010 3 Epidemiology Methods I
PHC 6060 3 Biostatistical Case Studies and Collaboration I
PHC 6020 3 Design and Conduct of Clinical Trials
PHC 6057 3 Biostatistical Inference I
PHC 6096 3 Fundamentals of Probability

Research Courses – 9 credit hours
PHC 6051 3 Biostatistics II
PHC 6053 3 Categorical Data Analysis
HSC 6055 3 Survival Analysis

Elective Courses – 6 credit hours
Examples of common elective options:
HSC 6056 3 Survey Sampling Methods in Health Sciences
PHC 7098 3 Generalized Linear Models
PHC 7056 3 Longitudinal Data Analysis
STA 6746 3 Multivariate Analysis
PHC 6934 3 Bayesian Data Analysis
PHC 6934 3 Multilevel Data Analysis
PHC 6934 1 Base Programming in SAS
PHC 6934 2 Advanced Programming in SAS
HSC 6054 3 Design and Analysis of Experiments for Health Researchers
PHC 6907 1-6 Independent Study

Comprehensive Exam
Comprehensive exam or thesis proposal defense may be used in lieu of the comprehensive exam

ENVIRONMENTAL HEALTH (PEH)
Pre-requisites and Admissions Information
In addition to meeting the Major admission requirements for the Master of Science in Public Health in Public Health, applicants should also meet these concentration prerequisites:

- Suggested/preferred undergraduate majors: biological, physical or chemical science; military science; engineering; nursing or medicine; environmental health and technology; environmental science and policy.
- Prerequisite undergraduate courses: introductory college-level algebra, chemistry, and biology (or related course); calculus and organic chemistry preferred.
- Work experience: None required.
- International applicants from non English-speaking countries must provide a minimum TOEFL score of 213 (computer-based test) or 550 (written test), taken within 2 years of the desired term of entry.

Total Major Requirements with this concentration – 42 credit hours minimum
In addition to the 15 hours required for the Major Core Requirements and the thesis hours, this Concentration requires:

Concentration Course Requirements – 15 credit hours
Research Courses – 9 credit hours
Electives – 9 credit hours

Concentration Course Requirements – 15 credit hours
PHC 6301 3 Water Pollution and Treatment
PHC 6310 3 Environmental Occupational Toxicology
PHC 6303 3 Community Air Pollution
PHC 6512 3 Vectors of Human Disease
PHC 6356 2 Industrial Hygiene (or approved course)
PHC 6930 1 Public Health Seminar

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Research Courses – 3 credit hours
PHC 6051  3  Biostatistics II

Elective Courses – 9 credit hours
Examples of Electives Related to Environmental Health:
PHC 6701  3  Computer Applications for Public Health Researchers
PHC 6510  3  Exotic and Emerging Infectious Diseases
PHC 6934  3  Selected Topics: Water Resources Management Principles
PHC 6353  3  Environmental Toxicology and Risk Assessment
PHC 6313  3  Indoor Environmental Quality
PHC 6934  1  Selected Topics: Water & Wastewater Analysis Laboratory

Comprehensive Exam
Comprehensive exam or thesis proposal defense may be used in lieu of the comprehensive exam

EPIDEMIOLOGY (PEY)
Pre-requisites and Admissions Information
In addition to meeting the major admission requirements for the Master of Science in Public Health in Public Health, applicants should also meet these concentration prerequisites:

- Suggested/preferred undergraduate majors: Public health, social sciences, natural sciences, biology, nursing, medicine, dentistry, veterinary medicine, pharmacology, gerontology, allied health professions, environmental health, management information systems, mathematics, statistics, computer sciences.
- Prerequisite undergraduate courses: college algebra, basic computerskills (e.g. operating system, internet, word processing, spread sheet), human structure and function, human health biology or equivalent. Calculus is strongly recommended.
- Work experience: Prior work experience is preferred, but not required.
- Minimum undergrad GPA: 3.0 on a 4 point scale in the upper division coursework.
- Other criteria: Academic background, goal statement, student’s academic interest, references and availability of faculty and facility resources also are considered part of the entrance evaluation.

Total Major Requirements with this concentration 48 hours minimum
In addition to the 15 hours required for the Major Core Requirements and the thesis hours, this Concentration requires:

Concentration Course Requirements – 15 credit hours
Research Courses – 9 credit hours
Electives – 9 credit hours

Concentration Course Requirements – 15 credit hours minimum
PHC 6701  3  Computer Applications for Public Health Researchers
PHC 6051  3  Biostatistics II
PHC 6010  3  Epidemiology Methods I
PHC 6053  3  Categorical Data Analysis
PHC 7935  3  Special Topics: Intermediate SAS

Research Courses – 9 credit hours
PHC 7703  3  Advanced Research Methods in Epidemiology
HSC 6055  3  Survival Analysis
PHC 6011  3  Epidemiology Methods II

Elective Courses – 9 credit hours
Two courses in Disease Epidemiology (6 hours)
One additional departmental elective (3 hours)

Comprehensive Exam
Comprehensive exam or thesis proposal defense may be used in lieu of the comprehensive exam
GENETIC COUNSELING (GTC)
This Master’s concentration is a unique combination of public health, medical genetics/genomics and clinical training in patient centered medicine that provides the technology and counseling training to compete in the rapidly emerging fields of precision medicine.

Graduates with this major and concentration will have job opportunities in clinical genetic counseling practice, public health genetics/genomics, industry and academic genomics research. The major curriculum and clinical rotation requirements meet or exceed the required competencies and standards needed to apply for and achieve major accreditation from the Accreditation Council for Genetic Counseling (ACGC). Accreditation of the MSPH program will be sought in 2016.

Pre-requisites and Admissions Information
In addition to meeting the Major admission requirements for the Master of Science in Public Health, applicants should also meet these concentration prerequisites:

- Suggested/Preferred Undergraduate Majors: We encourage applicants from any undergraduate major, however the following undergraduate courses/experiences are preferred for the MSPH Genetic Counseling major:
  - 1-2 semesters of biology (this would include any molecular biology course)
  - 1 semester of statistics
  - 1 semester of genetics
  - Prior counseling or advocacy experience: Work or volunteer experience(s) in a counseling or advocacy setting is not required, although this will be considered in applications to the major. A few examples include: peer counseling, crisis hotlines, a pregnancy counseling center, or working with individuals who have a genetic condition or disability.
- Minimum undergraduate GPA 3.0.
- Special Admission Requirements
  - This concentration area only admits students during fall semester
  - Previous experience in counseling, advocacy, or genetic counseling settings would be advantageous
  - Three letters of recommendation from academic and/or related professional sources.

Total Major Requirements with this concentration - 42 hours minimum
In addition to the 9 hours required for the Major Core Requirements and the 6 hours minimum thesis/practice-based clinical research, this Concentration requires:

Concentration Course Requirements – 24 credit hours
Research Courses – 3 credit hours

Concentration Course Requirements – 24 credit hours
Required Concentration Courses
PHC 6030 1 Introduction to Genetic Counseling
PHC 6358 3 Patient Centered Communication and Professionalism
PHC 6601 3 Human Genetics/Genomics in Medicine and Public Health
PHC 6434 3 Health Education and Counseling
GMS 6604 3 Embryology
GMS 6520 3 Applied Clinical Genetics
GMS 6521 1 Clinical Genetics Case Conference
PHC 6593 1 Professional Development in Genetic Counseling
PHC 6572 3 Quantitative Genetics and Genomics
PHC 6940 3 min Practice Based Clinical Research

Research Courses – 3 credit hours
PHC 6911 1 Clinical Research I
PHC 6913 1 Clinical Research II
PHC 6915 1 Clinical Research III

Comprehensive Exam
Must be registered for at least 2 credit hours of coursework. Comprehensive exam or thesis proposal defense may be used in lieu of the comprehensive exam

http://health.usf.edu/publichealth/
GLOBAL COMMUNICABLE DISEASE (PGD)

Pre-requisites and Admissions Information
In addition to meeting the Major admission requirements for the Master of Science in Public Health in Public Health, applicants should also meet these concentration prerequisites:

- Suggested/Preferred undergraduate majors: Biology, Zoology, Microbiology, Immunology
- Prerequisites undergraduate courses: None; Suggested undergraduate courses include general chemistry with laboratory, biology or zoology with laboratory, micorbiology with laboratory, biochemistry with laboratory, immunology
- Work Experience: None
- Other criteria: International applicants: TOEFL of 550 for paper-based instrument or 213 for computer-based instrument
- Special Admission Requirements
  - This Concentration area only admits students during fall semester
  - Preference for admission is given to students with a background or demonstrated skills in the biological sciences. Prerequisites may be required.
  - Previous research experience would be advantageous
  - A short statement (250 words or less) of research interest is required

Total Major Requirements with this concentration - 42 hours minimum
In addition to the 15 hours required for the Major Core Requirements and the thesis the thesis hours, this Concentration requires:

Concentration Course Requirements – 18 credit hours
Research Courses – 9 credit hours

**Concentration Course Requirements – 18 credit hours**
Suggested Concentration Courses
PHC 6002 3 Infectious Disease Epidemiology
PHC 6251 3 Disease Surveillance and Monitoring
PHC 6314 3 Infection Control Program Design
PHC 6510 3 Exotic and Emerging Infectious Diseases
PHC 6511 3 Public Health Immunology
PHC 6512 3 Vectors of Human Disease
PHC 6513 3 Public Health Parasitology
PHC 6514 3 Infectious Disease Control in Developing Countries
PHC 6517 3 Infectious Disease Prevention Strategies
PHC 6562 3 Microbiology for Healthcare Workers
PHC 6930 1-3 Public Health Seminar
PHC 6934 1-6 Selected Topics: HIV in Public Health
PHC 6934 1-6 Selected Topics: Intermediate Infectious Disease Epidemiology
PHC 6515 1-6 Food Safety
PHC 6037 3 Public Health Virology
PHC 7931 1-3 Adv Interdisciplinary Seminar in PH: Global Health Infectious Disease Research

**Research Courses – 9 credit hours**
PHC 6051 3 Biostatistics II
PHC 6561 3 Laboratory Techniques in Public Health
PHC 6722 3 Laboratory Rotations in Global Health Research

**Comprehensive Exam**
Comprehensive exam or thesis proposal defense may be used in lieu of the comprehensive exam
OCCUPATIONAL EXPOSURE SCIENCE (OES)
Pre-requisites and Admissions Information
In addition to meeting the Major admission requirements for the Master of Science in Public Health in Public Health, applicants should also meet these concentration prerequisites:

- Preferred undergraduate majors: science, math, or engineering.
- Prerequisite undergraduate courses: substantial evidence of successful performance in science, mathematics, engineering and technology courses.
- Work experience: None required; however, occupational health related work experience is beneficial.
- Preferred undergraduate GPA: Upper division GPA $\geq$ 3.0.
- Recommendations: Three letters of recommendation are required.

Total Major Requirements with this concentration – 45 hours minimum

In addition to the 15 hours required for the Major Core Requirements and the thesis hours, this Concentration requires:

Concentration Course Requirements – 22 credit hours
Elective courses – 6 credit hours
Culminating Experience – 2 credit hours

Concentration Course Requirements – 22 credit hours*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHC 6356</td>
<td>Industrial Hygiene (PR: CI)</td>
<td>2</td>
</tr>
<tr>
<td>PHC 6358</td>
<td>Physical Agents – Assessment and Control (PR: CI)</td>
<td>2</td>
</tr>
<tr>
<td>PHC 6310</td>
<td>Environmental Occupational Toxicology (PR: CI)</td>
<td>3</td>
</tr>
<tr>
<td>PHC 6361</td>
<td>Industrial Ergonomics (PR: CI)</td>
<td>2</td>
</tr>
<tr>
<td>PHC 6365C</td>
<td>Analytical Methods in Industrial Hygiene I (PR: CI)</td>
<td>2</td>
</tr>
<tr>
<td>PHC 6366C</td>
<td>Analytical Methods in Industrial Hygiene II (PR: CI)</td>
<td>2</td>
</tr>
<tr>
<td>PHC 6423</td>
<td>Occupational Health Law (PR: PHC 6357 or CI)</td>
<td>2</td>
</tr>
<tr>
<td>PHC 6360</td>
<td>Safety Management Principles and Practices (PR: CI)</td>
<td>2</td>
</tr>
<tr>
<td>PHC 6362</td>
<td>Industrial Ventilation (PR: PHC 6356 or CI)</td>
<td>2</td>
</tr>
<tr>
<td>PHC 6345</td>
<td>HSE Management and Administration</td>
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</tbody>
</table>

*Because this is a practice program, Biostatistics II is not required

Elective Courses – 6 credit hours

Examples of electives:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>PHC 6303</td>
<td>Community Air Pollution</td>
</tr>
<tr>
<td>PHC 6350</td>
<td>Occupational Toxicology and Risk Assessment</td>
</tr>
<tr>
<td>PHC 6351</td>
<td>Occupational Medicine for Health Professionals</td>
</tr>
<tr>
<td>PHC 6422</td>
<td>Environmental Health Law</td>
</tr>
<tr>
<td>PHC 6364</td>
<td>Industrial Hygiene Aspects of Plant Operations</td>
</tr>
<tr>
<td>PHC 6313</td>
<td>Indoor Environmental Quality</td>
</tr>
<tr>
<td>EIN 6216</td>
<td>Occupational Safety Engineering</td>
</tr>
<tr>
<td>PHC 7368</td>
<td>Aerosol Technology in Industrial Hygiene</td>
</tr>
<tr>
<td>EIN 6215</td>
<td>Engineering System Safety</td>
</tr>
<tr>
<td>PHC 7317</td>
<td>Risk Communication in Public Health</td>
</tr>
<tr>
<td>PHC 6369</td>
<td>Industrial Toxicology</td>
</tr>
<tr>
<td>PHC 6354</td>
<td>Safety and Health Administration</td>
</tr>
<tr>
<td>PHC 6051</td>
<td>Biostatistics II (Because this is a practice degree, Biostatistics II is not required)</td>
</tr>
<tr>
<td>PHC 7018</td>
<td>Environmental Epidemiology</td>
</tr>
</tbody>
</table>

Culminating Experience – 2 credit hours

<table>
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<tr>
<th>Course Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHC 6945</td>
<td>Supervised Field Experience</td>
</tr>
</tbody>
</table>
Comprehensive Exam

Students must take the Occupational Exposure Science Concentration Exam in a term when the student is enrolled for a minimum of 2 credit hours. Students may elect to be exempt from this requirement upon demonstration of successfully passing one of the following:

- American Board of Industrial Hygiene’s certification exam (CIH)
- Board of Certification for Safety Professionals (CSP core exam)

Students must provide to student’s advisor and the Department Chair evidence of having attained one of these certifications, and request and receive written approval to be exempt from the this concentration exam.

INTERNATIONAL PUBLIC HEALTH RESEARCH, POLICY AND PLANNING (PIP)

Total Major Requirements with this concentration – 42 hours minimum

In addition to the 15 hours required for the Major Core Requirements and the thesis hours, this Concentration requires:

Concentration Course Requirements – 6 credit hours
Research Courses – 9 credit hours
Elective courses – 11 credit hours
Culminating Experience – 1 credit hour minimum

Concentration Course Requirements – 6 credit hours
PHC 6110 3 International Health and Health Care Systems (web)
PHC 6146 3 Health Services Planning and Evaluation (web)

Research Courses – 9 credit hours
PHC 6701 3 Computer Applications for Public Health Researchers
PHC 6934 3 Selected Topics: Ecology and Health
PHC 6051 3 Biostatistics II

Elective Courses – 11 credit hours

Culminating Experience – 1 credit hour
Interdisciplinary Research Seminar – 1 hour

Comprehensive Exam

MATERNAL AND CHILD HEALTH (PMH)

Pre-requisites and Admissions Information
In addition to meeting the Major admission requirements for the Master of Science in Public Health in Public Health, applicants should also meet these concentration prerequisites:

- Public health course prerequisite: None
- Suggested/preferred undergraduate majors: Social or Behavioral Sciences, International Studies, Women Studies, Public Health, Regional Studies (i.e., Latin America and Caribbean) and Health Sciences.
- Prerequisite undergraduate courses: None
- Work experience: some public health experience preferred but not required
- Three letters of recommendation from academic and/or related professional sources, goal statement

Total Major Requirements with this concentration – 44 hours minimum

In addition to the 15 hours required for the Major Core Requirements and the thesis hours, this Concentration requires:

Concentration Course Requirements – 12 credit hours
Research Courses – 9 credit hours
Elective courses – 8 credit hours

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Concentration Course Requirements – 12 credit hours
Required Specialization Area Courses: Courses depend on the area of specialization.

Research Courses – 9 credit hours

PHC 6051  3  Biostatistics II

6 hours of other research courses selected by the student and committee.

Elective Courses – 8 credit hours
Examples of common electives are:
ANG 6469    3  Selected Topics in Medical Anthropology
PHC 6536    3  Population and Community Health
PHC 6411    3  Introduction to Social Marketing for Public Health
PHC 6708    3  Evaluation Methods in Community Health

Comprehensive Exam
Comprehensive exam or thesis proposal defense may be used in lieu of the comprehensive exam

OCCUPATIONAL HEALTH FOR HEALTH PROFESSIONALS (POH)8
Pre-requisites and Admissions Information
In addition to meeting the Major admission requirements for the Master of Science in Public Health in Public Health, applicants should also meet these concentration prerequisites:

• Public health course prerequisites: None required.
• Suggested/preferred undergraduate majors: Majors that prepared candidates for matriculation into medical school; undergraduate majors in other clinical disciplines, e.g. nursing, physical therapy, occupational therapy are acceptable.
• For residency program: Acceptance into the residency requires graduation from an approved medical school and completion of at least two years of clinical training in a primary care specialty. Consideration will also be given for resident applicants with considerable occupational medicine practice experience and only one year of residency training.
• Prerequisite undergraduate courses: Clinical courses associated with a clinical profession.
  ▪ Residency Program: Two years of a primary care specialty residency program is preferred. Candidates with significant experience or skills will be considered with one year of primary care training.
  ▪ Other health professionals: two years clinical experience preferred. Residency program or other physicians with a valid U.S. unrestricted medical license
  ▪ Other health professionals 3.0 in last 60 credits of undergraduate major and a valid clinical license.
  ▪ Residency Program: waived with documentation of unrestricted valid U.S. medical license.
  ▪ Other health professionals: Must meet MSPH minimums

Total Major Requirements with this concentration – 47 credit hours minimum
In addition to the 15 hours required for the Major Core Requirements and the thesis hours, this Concentration requires:
Concentration Course Requirements – 23 credit hours
Elective courses – 9 credit hours

Concentration Course Requirements – 23 credit hours
PHC 6356    2  Industrial Hygiene
PHC 6351    3  Occupational Medicine for Health Professionals
PHC 6364    2  Industrial Hygiene Aspects of Plant Operations
PHC 6360    2  Safety Management Principles and Practices or other approved safety course
PHC 6930    4  Public Health Seminar: Occupational and Environmental Research (1 credit each semester for a minimum of 4 semesters)
PHC 6423    2  Occupational Health Law

8 Only for health professionals
PHC 6354  2  Safety and Health Administration  
PHC 7019  3  Occupational Epidemiology  

Select ONE of the following:  
PHC 6310  3  Environmental Occupational Toxicology  
PHC 6350  3  Occupational Toxicology and Risk Assessment  

Elective Courses – 9 credit hours  
Examples of elective courses:  
PHC 6350  3  Occupational Toxicology and Risk Assessment  
PHC 6370  2  Biological and Surface Monitoring  
PHC 6361  2  Industrial Ergonomics  

Comprehensive Exam  
This concentration requires a combined core comprehensive/concentration exam.  

OCCUPATIONAL MEDICINE RESIDENCY (POM)  
Pre-requisites and Admissions Information  
In addition to meeting the Major admission requirements for the Master of Science in Public Health in Public Health, applicants should also meet these concentration prerequisites:  

• Public health course prerequisites: None required.  
• Suggested/preferred undergraduate majors: Majors that prepared candidates for matriculation into medical school; undergraduate majors in other clinical disciplines, e.g. nursing, physical therapy, occupational therapy are acceptable  
• For residency program: Acceptance into the residency requires graduation from an approved medical school and completion of at least two years of clinical training in a primary care specialty. Consideration will also be given for resident applicants with considerable occupational medicine practice experience and only one year of residency training.  
• Prerequisite undergraduate courses: Clinical courses associated with a clinical profession.  
• Residency Program: Two years of a primary care specialty residency program is preferred. Candidates with significant experience or skills will be considered with one year of primary care training.  
• Other health professionals: two years clinical experience preferred.  
• Residency program or other physicians with a valid U.S. unrestricted medical license  
• Other health professionals 3.0 in last 60 credits of undergraduate major and a valid clinical license.  
• Residency Program: waived with documentation of unrestricted valid U.S. medical license.  
• Other health professionals: Must meet MSPH minimums  

Total Major Requirements with this concentration – 47 credit hours minimum  
In addition to the 15 hours required for the Major Core Requirements and the thesis hours, this Concentration requires:  

Concentration Course Requirements – 23 credit hours  
Elective courses – 9 credit hours  

Concentration Course Requirements – 23 credit hours  
PHC 6356  2  Industrial Hygiene  
PHC 6351  3  Occupational Medicine for Health Professionals  
PHC 6364  2  Industrial Hygiene Aspects of Plant Operations  
PHC 6360  2  Safety Management Principles and Practices or other approved safety course  
PHC 6930  4  Public Health Seminar: Occ. and Environmental Research (1 credit each semester for a minimum of 4 semesters)  
PHC 6423  2  Occupational Health Law  
PHC 6354  2  Safety and Health Administration  
PHC 7019  3  Occupational Epidemiology  

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Select ONE of the following:
PHC 6310 3 Environmental Occupational Toxicology
PHC 6350 3 Occupational Toxicology and Risk Assessment

Elective Courses – 9 credit hours
Examples of elective courses:
PHC 6350 3 Occupational Toxicology and Risk Assessment
PHC 6370 2 Biological and Surface Monitoring
PHC 6361 2 Industrial Ergonomics

Comprehensive Exam
This concentration requires a combined core comprehensive/concentration exam.

OCCUPATIONAL SAFETY (POS)
Pre-requisites and Admissions Information
In addition to meeting the Major admission requirements for the Master of Science in Public Health in Public Health, applicants should also meet these concentration prerequisites:

- Public health course prerequisites: None.
- Suggested/preferred undergraduate majors: science, engineering, technology and management, and psychology.
- Prerequisite undergraduate courses: None
- Work experience: None required; however occupational work experience is beneficial.
- Minimum undergrad GPA: Upper division GPA 3.0.
- Other criteria: Two Letters of recommendation.

Total Major Requirements with this concentration - 46 credit hours minimum
In addition to the 15 hours required for the Major Core Requirements and the thesis hours, this Concentration requires:

Concentration Course Requirements – 20 credit hours
Research Courses – 6 credit hours
Elective courses – 5 credit hours

Concentration Course Requirements – 20 credit hours
PHC 6360 2 Safety Management Principles and Practices
PHC 6354 2 Safety and Health Administration
EIN 6216 3 Occupational Safety Engineering
EIN 6215 3 Engineering System Safety
PHC 6423 2 Occupational Health Law
PHC 6361 2 Industrial Ergonomics
PHC 6356 2 Industrial Hygiene
PHC 6310 3 Environmental Occupational Toxicology
PHC 6930 1 Public Health Seminar

Research Courses – 6 credit hours
PHC 6051 3 Biostatistics II
One research course (3 credits) as approved by the major

Elective Courses – 5 credit hours
Electives: Two required from the following or other approved electives:
PHC 7934 2 Work and Environmental Physiology
INP 6935 3 Topics in Industrial-Organizational Psychology: Personnel or Organizational Psychology
INP 7937 3 Graduate Seminar in Industrial-Organizational Psychology: Occupational Health Psychology

Comprehensive Exam
Additional Culminating Experience
Safety Concentration Examination or ASP Exam (no credit)

PUBLIC HEALTH EDUCATION (PPD)
Pre-requisites and Admissions Information
In addition to meeting the Major admission requirements for the Master of Science in Public Health in Public Health, applicants should also meet these concentration prerequisites:

- Public health course prerequisite: None
- Suggested/preferred undergraduate majors: Social or Behavioral Sciences, International Studies, Women Studies, Public Health, Regional Studies (i.e., Latin America and Caribbean) and Health Sciences.
- Prerequisite undergraduate courses: None
- Work experience: some public health experience preferred but not required
- Three letters of recommendation from academic and/or related professional sources, goal statement

Total Major Requirements with this concentration – 44 credit hours minimum
In addition to the 15 hours required for the Major Core Requirements and the thesis hours, this Concentration requires:

Concentration Course Requirements – 12 credit hours
Research Courses – 9 credit hours
Elective courses – 8 credit hours

Research Courses – 9 credit hours
PHC 6051 3 Biostatistics II

6 hours of other research courses selected by the student and committee.

Elective Courses – 8 credit hours
Examples of common electives are:
ANG 6469 3 Selected Topics in Medical Anthropology
PHC 6536 3 Population and Community Health
PHC 6411 3 Introduction to Social Marketing for Public Health
PHC 6708 3 Evaluation Methods in Community Health

SOCIO-HEALTH SCIENCES (PSH)
Pre-requisites and Admissions Information
In addition to meeting the Major admission requirements for the Master of Science in Public Health in Public Health, applicants should also meet these concentration prerequisites:

- Public health course prerequisite: None
- Suggested/preferred undergraduate majors: Social or Behavioral Sciences, International Studies, Women Studies, Public Health, Regional Studies (i.e., Latin America and Caribbean) and Health Sciences.
- Prerequisite undergraduate courses: None
- Work experience: some public health experience preferred but not required
- Three letters of recommendation from academic and/or related professional sources, goal statement

Total Major Requirements with this concentration - 44 credit hours minimum
In addition to the 15 hours required for the Major Core Requirements and the thesis hours, this Concentration requires:

Concentration Course Requirements – 12 credit hours
Research Courses – 9 credit hours
Elective courses – 8 credit hours

Concentration Course Requirements – 12 credit hours
Required Specialization Area Courses: Courses depend on the area of specialization.

Research Courses – 9 credit hours

PHC 6051 3 Biostatistics II

6 hours of other research courses selected by the student and committee.

Elective Courses – 8 credit hours
Examples of common electives are:
ANG 6469 3 Selected Topics in Medical Anthropology
PHC 6536 3 Population and Community Health
PHC 6411 3 Introduction to Social Marketing for Public Health
PHC 6708 3 Evaluation Methods in Community Health

TOXICOLOGY AND RISK ASSESSMENT (PTX)
Pre-requisites and Admissions Information
In addition to meeting the Major admission requirements for the Master of Science in Public Health in Public Health, applicants should also meet these concentration prerequisites:

• Suggested/preferred undergraduate majors: Sciences - biology, chemistry, physics, and environmental science.
• Prerequisites undergraduate courses: Courses in biology and chemistry.
• Work experience: Not required.

Total Major Requirements with this concentration – 44 credit hours minimum
In addition to the 15 hours required for the Major Core Requirements and the thesis hours, this Concentration requires:

Concentration Course Requirements – 23 credit hours
Research Courses – 9 credit hours
Elective courses – 3 credit hours

Concentration Course Requirements – 23 credit hours
HSC 6556 3 Pathobiology of Human Disease I
PHC 6353 3 Environmental Toxicology and Risk Assessment
PHC 6310 3 Environmental Occupational Toxicology
PHC 6359 3 Xenobiotic Metabolism in Environmental and Occupational Health
PHC 6369 2 Industrial Toxicology
PHC 6350 3 Occupational Toxicology and Risk Assessment
PHC 6934 2 Selected Topics in Public Health
PHC 6930 1 Public Health Seminar
HSC 6557 3 Pathobiology of Human Disease II

Research Courses – 3 credit hours
PHC 6051 3 Biostatistics II

Elective Courses – 3 credit hours
Culminating Experiences:
This concentration requires a core comprehensive exam.

Comprehensive Exam (must be registered for at least 2 credit hours of coursework)
or Thesis proposal defense

OTHER MAJOR INFORMATION

Certificates:
For information click on the graduate certificates at http://www.usf.edu/innovative-education/graduate-certificates/

COURSES
See http://www.ugs.usf.edu/course-inventory/
PUBLIC HEALTH

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15
Spring: June 15
Summer: November 15

Applicants must submit their application by November 15th in order to be considered for a financial aid package in the following fall semester, even though admission can be granted later.

International applicant deadlines: http://www.grad.usf.edu/majors

Minimum Total Hours: 55 post master’s
Level: Doctoral
CIP Code: 51.2201
Dept Code: DEA
(Major/College): PPH PH
Approved: 1987

Concentrations:
Biostatistics (BST)
Community and Family Health (CFH)
Environmental and Occupational Health (EOH)
Epidemiology (EPY)
Global Communicable Disease (TCD)
Health Services Research (HPM)

CONTACT INFORMATION

College: Public Health
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The base of knowledge for public health comes from a variety of disciplines, ranging from social sciences to biological sciences and business, brought together by a commitment to improve the public’s health. Thus, the field of public health is broad and is open to students from diverse academic disciplines including Health Sciences, Education, Engineering, Business, Communications, Mathematics, Social and Natural Sciences. Graduates are prepared for interdisciplinary focused public health professional careers as administrators, managers, educators, researchers, and direct service providers.

The College’s five departments are: Community and Family Health, Environmental and Occupational Health, Epidemiology and Biostatistics, Global Health, and Health Policy and Management. Core content is directly related to addressing and meeting public health issues.

The College accommodates the working professional as well as the full-time student by offering late afternoon and evening classes, online course delivery, partnerships with international schools to expand options, a variety of graduate certificates, and a professional M.P.H. for experienced Health Care professionals.

Accreditation:
The College is fully accredited by the Council on Education in Public Health.

Major Research Areas:
Faculty major research areas are listed at: http://health.usf.edu/publichealth/index.htm

http://health.usf.edu/publichealth/
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below. Applicants to the doctoral major in Public Health must meet the following minimum criteria in order to be considered for admission. However, the meeting of these criteria per se, shall not be the only basis for admission.

- Applicants to the Ph.D. major are required to complete both a SOPHAS application and a USF Graduate Studies Application (applicants will receive a request for the $30 fee once the SOPHAS application enters the USF system).
- USF Graduate School application fee
- Required Documentation (all items are required regardless of GPA or GRE scores):
  - GRE Scores. All applicants must take the Graduate Record Exam (GRE) or have taken an equivalent admissions examination within the five years preceding application.
    - Equivalent exams include the GMAT, MCAT, DAT or PCAT.
    - LSAT is not accepted in lieu of the GRE.
    - Although there are no required minimum scores, the applicant’s GRE score will be compared to the applicant pool and the national GRE norms.
    - Applicants who have a terminal degrees such as the PhD, ScD or EdD, and those with advanced professional degrees (MD, DDS, DO, DVM, JD, PharmD, DPT) from accredited institutions and who are individually licensed in the United States in their profession may request to waive the GRE (http://health.usf.edu/publichealth/pdf/GRE%20Waiver.pdf). The GRE waiver is not automatic and must be approved by the College of Public Health.
  - Grade point average of 3.0
  - Transcripts
  - Resume or curriculum vitae
  - Each applicant must submit at least two formal Letters of Recommendation.
  - Each applicant must submit evidence of written/analytical skills to the College of Public Health which will take two-forms:
    - A graduate level term paper, thesis, or research paper of which the student is the sole author, publication on which the student is the first author; and
    - A detailed personal statement of less than five pages that describes why the applicant wishes to obtain a Ph.D. degree in Public Health.

MAJOR REQUIREMENTS

Total minimum hours – 55

Core: 13 credit hours
Concentration: 6-12 credit hours minimum
Electives: 12-18 credit hours minimum
Dissertation: 18 credit hours minimum

Prerequisites
The doctoral committee or the department may require prerequisites. These courses are not included in the minimum number of hours a student needs to complete the Ph.D. and are expected to be completed early in the course of study.

Total Minimum Hours: 55 hours post-master’s
Concentration Options (students select one of the following concentrations):

### Biostatistics - 12 credit hours
- PHC 6061 3 Biostatistics Case and Collaboration II
- PHC 7098 3 Generalized Linear Models
- PHC 7059 3 Advanced Survival Data Analysis
- PHC 7056 3 Longitudinal Data Analysis

### Community and Family Health - 12 credit hours
- PHC 7405 3 Theoretical Application to Public Health Issues
- PHC 7702 3 Advanced Public Health Research and Evaluation Methods
- PHC 7704 3 Applied Research Methods in Community and Family Health
- PHC 7152 3 Policy and Practice in Community and Family Health Programs

### Environmental and Occupational Health - 12 credit hours
- PHC 6356 2 Industrial Hygiene
- PHC 6310 3 Environmental & Occupational Toxicology
- PHC 6303 3 Community Air Pollution
- PHC 7317 2 Risk Communication in Public Health
- PHC 6423 2 Occupational Health Law

### Epidemiology - 12 credit hours
- PHC 6011 3 Epidemiology Methods II
- PHC 7042 3 Practical Issues in Epidemiology
- PHC 6081 3 Intermediate SAS in Epidemiology
- PHC 6934 3 Selected Topics: Foundations of Clinical Trials

### Global Communicable Diseases – 6 credit hours minimum
Select at least six credits of the following courses. Course choices should be approved following consultation with the student’s committee. Course substitutions will be permitted with the student committee’s approval.
- ANG 6701 3 Contemporary Applied Anthropology
- ANG 6732 3 Global Health from an Anthropological Perspective
- ANG 6469 3 Selected Topics in Medical Anthropology
- BCH 6889 3 Bioinformatics II
- BSC 6932 3 Selected Topics: Proteomics
- GIS 6306 3 Environmental Applications GIS
- GIS 6038C 3 Remote Sensing
- GMS 6101 3 Molecular and Cellular Immunology
- GMS 6110 2 Microbial Pathogens and Host-Parasite Interactions
- GMS 6200C 5 Biochemistry, Molecular and Cellular Biology
- GMS 7930 2 Selected Topics: Medical Parasitology & Mycology
- PCB 6525 3 Molecular Genetics
- PHC 6010 3 Epidemiology Methods I
- PHC 6106 3 Global Health Program Development and Administration
- PHC 6190 3 Public Health Database Management
- PHC 6251 3 Disease Surveillance and Monitoring
- PHC 6373 3 Protecting Public Health: Bioterrorism/Biodefense
- PHC 6442 3 Global Health Applications in the Field
- PHC 6511 3 Public Health Immunology
- PHC 6512 3 Vectors of Human Disease
- PHC 6513 3 Public Health Parasitology
- PHC 6761 3 Global Health Assessment Strategies
- PHC 6764 3 Global Health Principles and Contemporary Issues
- PHC 6934 3 Selected Topics: Public Health GIS
- PHC 7908 3 Specialized Study in Public Health
- PHC 7122 3 Vaccinology
- PHC 7935 3 Special Topics in Public Health: Field Methods I: EcoHealth & Ecology
- PHC 7935 3 Special Topics in Public Health: Infection Control in Developing Countries
Health Services Research – 12 credit hours
QMB 7565  3  Introduction to Research Methods
QMB 7566  3  Applied Multivariate Statistical Methods
PHC 7936  3  Seminar in Health Care Outcomes Measurement
PHC 7437  3  Applications in Health Economics

Electives - 12 credit hours minimum

Dissertation - 18 credit hours
PHC 7980  18  Dissertation: Doctorate

Teaching
All doctoral students will demonstrate or document proficiency in teaching academic courses at the university level.

Qualifying Exam
When all required coursework is satisfactorily completed (including tools of research and prerequisites), the student must pass a comprehensive qualifying examination covering the subject matter in the major and related fields. The Department will set the specific criteria.

The qualifying exam will comprise of a written portion and may include an oral component. The exam will cover at least three major areas including: a) Broad area of public health; b) Focus area of study; c) Research methods. The student may have no longer than 10 weeks to complete the exam upon receipt of the exam from the Doctoral Supervisory Committee. The format and duration of the qualifying exam is the responsibility of the Doctoral Supervisory Committee following consultation with the student and consistent with departmental, college and university guidelines. The Doctoral Supervisory Committee will have up to three weeks to review the exam and determine the outcome of either Pass or Fail. No more than two attempts will be allowed for the student to take the qualifying exam and earn a Pass. If the student receives a Fail on the qualifying exam on the first attempt and the Doctoral Supervisory Committee recommends that the student complete remedial work, the second attempt at the qualifying exam must be initiation within three-months of completion of remedial work. If the student earns a Fail on the first attempt, and the Committee determines that no remedial work is needed, the student will have a second attempt to pass which must be initiated within three-months. If the student does not earn a Pass on the qualifying exam on his/her second attempt, the student will not be admitted into doctoral candidacy. After successful completion of the qualifying exam and appropriate paperwork is submitted to the Office of Graduate Studies, the student is admitted to candidacy and may register for dissertation hours.

Dissertation
All students must follow the University’s “Guidelines for Dissertations and Theses” found at http://www.grad.usf.edu/ETD-res-main.php. The Dissertation must conform to one of the following two available options per USF degree requirements. For details, consult the USF Graduate Catalog Degree Requirements Section.

Option 1: Traditional format inclusive of Part 1 Preliminary Pages, Part II Text, Part III References/Appendices, Part IV About the Author.

Option 2: Collection of articles/papers instead of chapters inclusive of Part I Preliminary Pages, Part II Collection of Articles/Papers, Part III References/Appendices.

After the Doctoral Dissertation Committee has determined that the final draft of the Dissertation is suitable for presentation, the Committee will request the scheduling and announcement of the Dissertation Defense. Consistent with USF Graduate Degree Requirements, a copy of the announcement should be sent to the USF Office of Graduate Studies and posted in a public forum preferably two weeks in advance of the defense date.

In addition, the Concentration in Biostatistics and the Concentration in Epidemiology have additional format requirements. Consult the Department for information on the format options and requirements for these two concentrations.

Guidelines for student progress:
Each Ph.D. student will undergo an annual review consistent with departmental guidelines. A summary of the annual review will be provided to the student and placed in the student’s advising file.

http://health.usf.edu/publichealth/
OTHER INFORMATION

Certificates: (for information click on the graduate certificates at http://www.usf.edu/innovative-education/majors/graduate-certificates/)

COURSES
See http://www.ugs.usf.edu/course-inventory
PUBLIC HEALTH

Doctor of Public Health (Dr.P.H.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: November 15
Annually

Minimum Total Hours: 43 post-masters
Level: Doctoral
CIP Code: 51.2201
Dept Code: DEA
Major/College: DPH PH

CONTACT INFORMATION

College: Public Health
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Doctor of Public Health (DrPH) is a professional, practice-oriented research degree that is granted in recognition of the attainment of a broad set of practice, analytic and evaluative skills, including demonstrated public health leadership skills. The Dr.P.H. prepares individuals for leadership roles in practice-based settings such as health departments, non-profit organizations, health services, international agencies, and community-based organizations. Accordingly, the emphasis of the Dr.P.H. is placed on fostering advanced expertise in developing, implementing, and evaluating evidence-based public health practice.

The Dr.P.H. degree has one concentration in Advanced Practice Leadership in Public Health, with a core and concentration curriculum applicable to four domains of knowledge: Community Engagement, Leadership and Management, Communication and Education, and Evidence-Based Public Health. Dr.P.H. student are expected to collaborate with senior public health practitioners as mentors through applied practice experiences, and are required to complete a field-based doctoral project that influences public health programs, policies, or systems. The Dr.P.H. requires a minimum of 43 semester hours beyond the Masters degree, with at least 13 credits at the 7000 level.

Mission
The mission of the Dr.P.H. degree is to prepare practitioners for leadership and advocacy in public health practice through an evidence-based, interdisciplinary approach to understanding and solving public health problems in public and private sectors in the U.S. and worldwide.

Mode of Delivery
The USF College of Public Health Dr.P.H. degree is completed through a combination of distance-learning and blended courses that include on-campus learning via three one-week Dr.P.H. Institutes. Students are expected to attend an Institute in the first semester of their admission, and then in the subsequent two summer semesters. This combination of delivery formats allows working professionals to broaden their grasp of public health leadership, practice, and research without interrupting their careers.

Accreditation:
The College of Public Health is accredited by the Council on Education in Public Health (CEPH).
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

Required Application Documentation
Applicants to the Dr.P.H. degree are required to complete both a SOPHAS application and a USF Office of Graduate Studies application. Required Documentation (all items are required regardless of GPA or GRE scores):

- Completed USF Office of Graduate Studies application, and
- Completed SOPHAS application (requires the following):
  1. Transcripts
  2. GRE taken within five years preceding application or equivalent scores.
  3. Minimum of three letters of Recommendation
  4. Detailed personal statement of less than five pages that describes why you wish to obtain a Dr.P.H. degree in Public Health
  5. Resume or curriculum vitae
  6. Applicants whose native language is not English or who have not earned a degree in the United States must also submit TOEFL scores earned within two (2) years of the desired term of entry. A minimum total of 79 on the internet-based test, 213 on the computer-based test, or 550 on the paper-based test are required. Applications submitted with TOEFL scores that do not meet the minimum requirements will be denied with no exceptions. (Section 6.2 Admissions Tests Information for more information)

Applicants to the DrPH degree are initially required to complete a SOPHAS application. Once that application is verified by SOPHAS, we will invite the applicant to submit a shortened USF Office of Graduate Studies application. Applicants must meet the University requirements (see Graduate Admissions) as well as the requirements listed below. However, these criteria are not the only basis for admission.

Major Admission and Documentation Requirements

1. Applicants must have an MPH, MHA, MSPH, or other relevant Masters degree from an accredited institution with a minimum GPA of 3.0. Applicants must submit transcripts for all college-level coursework, with a transcript evaluation for coursework from foreign institutions.
2. Applicants must submit a GRE test score taken within five (5) years preceding application, or results from an equivalent exam (GMAT, MCAT, DAT, or PCAT, but not LSAT). The GRE score will be compared to the applicant pool and national GRE norms when admission is considered. This requirement can be waived if the student has at least a 3.5 GPA, or has a terminal degree (PhD, ScD, or EdD) from an accredited institution, or an advanced professional degree (MD, DDS, DVM, JD, PharmD, DPT) with licensure in the United States. Any student seeking a waiver must submit a GRE waiver request with supporting documentation.
3. Applicants whose native language is not English or who have not earned a degree in the United States must also submit TOEFL scores earned within two (2) years of the desired term of entry. A minimum total of 79 on the internet-based test, 213 on the computer-based test, or 550 on the paper-based test is required. Applications submitted with TOEFL scores that do not meet the minimum requirements will be denied with no exceptions.
4. Applicants must submit a resume or curriculum vitae, three letters of recommendation, and a personal statement of less than five pages that describes why the applicant wishes to obtain a DrPH degree in Public Health. This document should explain the applicant’s public health background, current public health practice interests, and how the DrPH is expected to affect the applicant’s current practice.
5. To be admitted, applicants must have a minimum of two years advanced work experience in public health, and must demonstrate public health leadership potential in their statement of purpose and letters of recommendation. Admission also depends on the availability of a Faculty Advisor who can advise the student in their area of interest. The final decision on admission is made by the faculty of the College.
6. Applicants must also be fully prepared to attend three DrPH Institutes on-campus.

Financial Aid
Students seeking financial aid should contact the USF financial aid office for federal guidelines. DrPH students are not eligible for a doctoral fellowship in the College of Public Health as it requires admission to a fully on-campus degree program. DrPH students are eligible for current student scholarships and awards that are announced each year. Please see http://health.usf.edu/publichealth/FinAid.html.
CURRICULUM REQUIREMENTS

Total minimum hours – 43 credits post-master’s
Common core – 13 hours
Concentration – 12 hours
Electives – 12 hours
Doctoral Project – 6

Pre-Requisites
Students are expected to come into the DrPH degree program with foundational public health knowledge. Students who have an MPH or MHA degree from a CEPH-accredited institution meet this requirement. Students with other degrees meet this requirement if they have taken the equivalent of the MPH core coursework at a CEPH-accredited institution, or if they take the courses at USF listed below. One or more of these pre-requisite courses can be waived if the student can demonstrate prior learning or work experience that fulfills the same knowledge and competency goals.

Pre-Requisite Public Health Core Courses - 9 credit hours
PHC 6588 History and Systems of Public Health
PHC 6756 Population Assessment I
PHC 6757 Population Assessment II

Total Minimum Hours - minimum 43 credit hours

The total minimum hours required are 43 credit hours post-masters. At least 13 hours have to be completed at the 7000 level. A maximum of 12 hours can be transferred into the major, if the coursework was completed post-masters. Students may seek approval to waive courses if they can demonstrate prior learning or work experience that fulfills the same knowledge and competency goals, but must take other courses for an equivalent amount of credits.

Doctoral Common Public Health Core Courses - 13 credit hours
PHC 7935/7116 1 Introduction to Public Health Doctoral Training
PHC 7103 3 Transforming Public Health Practice
PHC 7154 3 Evidence-Informed Public Health I
PHC 7149 1 Practical Applications II: Public Health Leadership
PHC 7934 3 Writing for Scholarly Publications in Health Sciences
HSC 7268 2 Professional Foundations III: Joining the Academy

Advanced Practice Leadership in Public Health Concentration - 12 credit hours
PHC 7932 1 Practical Applications I: Policy, Advocacy and Public Health
PHC 7466 1 Health Disparities and Cultural Competency in Public Health
PHC 7119 3 Organizational Behavior in Public Health Systems
PHC 7504 1 Innovative Education in Public Health
PHC 6411 3 Introduction to Social Marketing for Public Health
PHC 7156 3 Evidence-Informed Public Health II

Electives – 12 credit hours minimum
These courses can be selected from the COPH online majors: http://health.usf.edu/publichealth/onlineprograms/

Culminating Requirements – 6 credit hours minimum
These lead to a field-based doctoral project that influences public health majors, policies, or systems:
  Applied Practice Experiences
  Qualifying Exam
  PHC 7908 6 Doctoral Project: Specialized Study in Public Health
Culminating Requirements

Applied Practice Experiences
All DrPH students will engage in applied practice experiences to advance their leadership and professional skills in public health. Within their courses, students will select at least five DrPH competencies and propose projects in a public health or related organization that will develop these competencies, with advice from a practice-based mentor in the proposed setting. These studies will be jointly planned by the student, the mentor, and the Faculty Advisor, and may consist of one project, or several projects, depending on the scope and competency goals. The final practice experience deliverables must be approved by the Faculty Advisor, verifying that the student has demonstrated achievement of the proposed competencies.

Doctoral Project Committee
The student will be assigned one or more Faculty Advisor(s) at the time of admission. The Faculty Advisor(s) will guide the student through the program of study in the initial stages. Within the second year of the major, the student should establish a doctoral project committee. The doctoral project committee will consist of a minimum of one Faculty Chair and one Faculty Member (or two Faculty co-Chairs) from the faculty of the College of Public Health, as well as an external public health professional or practitioner who is a mentor to the student.

Qualifying Exam
When the majority of the student’s coursework is satisfactorily completed, the student must pass a qualifying examination. The student is required to submit a concept paper describing the proposed doctoral project, followed by an oral examination that relates the content, approach, and deliverables of the project to the DrPH curriculum domains in the student’s concentration. The examination will be administered and evaluated by the student’s doctoral project committee. The student must enroll in at least two credits in the semester the exam is completed.

Doctoral Project
After successfully completing the qualifying examination, the student must complete a field-based doctoral project that is designed to influence programs, policies, or systems applicable to public health practice. The doctoral project must include a minimum of three high-quality, evidence-based deliverables, with at least one written product. The doctoral project must also demonstrate synthesis of competencies across all DrPH curriculum domains in the student’s concentration.

To complete the doctoral project, the student will be required to enroll in a minimum of six credits of PHC 7908: Specialized Study in Public Health. The final doctoral project deliverables must be approved by the doctoral project committee prior to graduation, and the student must be enrolled in a minimum of two credits in the semester the doctoral project is completed and approved.

Time to Degree
Students may be able to complete the DrPH degree program in a minimum of three years, with two years for the coursework and one year for the culminating experiences. All requirements for doctoral degrees must be completed within seven calendar years from the student’s date of admission for doctoral study.

COURSES
COPH course syllabi are available here: https://documents.health.usf.edu/display/COPHHB/Course+Listing
USF course descriptions are available here: http://www.ugs.usf.edu/course-inventory/
COLLEGE OF THE ARTS
Changes to Note

The USF Graduate Council approved the following on the date noted.

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<th>Changes to Majors</th>
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<td>Art MFA</td>
<td>Change curriculum</td>
<td>4/3/17</td>
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http://www.arts.usf.edu/
University of South Florida
College of The Arts
4202 E. Fowler Ave FAH110
Tampa, FL 33620

Web address:  http://www.arts.usf.edu/
Email:  info@arts.usf.edu
Phone:  813-974-2301
Fax:  813-974-2091

College Dean:  James S. Moy, Ph.D.
Associate Dean:  Barton Lee

Mission Statement:
The mission of the USF College of The Arts is to conduct scholarly and creative research and to challenge and inspire students to make significant contributions in the arts. The College provides a learning environment that is engaged locally and nationally in contemporary issues and initiatives. The College offers graduate degree programs in Architecture, Art, Art History, Music, Music Education, and Urban and Community Design, as well as graduate certificates and advanced graduate certificates.

Major Research Areas:  Contact College for information.

Degrees, Majors, Concentrations

Master of Architecture (M.Arch.)
Architecture (ARC)

Master of Arts (M.A.)
Art History (ATH)
Music Education (MUE)

Master of Fine Arts (M.F.A.)
Art (MFA)

Master of Music (M.M.)
Music (MUS)
  Chamber Music (MCL)
  Choral Conducting (MCC)
  Composition (MMC)
  Electro-Acoustic Music (MEM)
  Instrumental Conducting (MID)
  Jazz Composition (MJC)
  Jazz Performance (MJP)
  Performance (MMP)*
  Piano Pedagogy (MPP)
  Theory (MMT)
  *Choral Conducting, Band/Wind Ensemble Conducting, Voice, Piano, Saxophone, Trombone, etc.
Master of Urban and Community Design (M.U.C.D.)
Urban and Community Design (UCD)

Doctor of Philosophy (Ph.D.)
Music (DMS)
Music Education (MDE)

Graduate Certificates Offered:
See Graduate Certificates

COLLEGE REQUIREMENTS

College Activities and Events
The College of Visual and Performing Arts arranges a full schedule of concerts, plays, lectures, exhibitions, and workshops featuring students, faculty, and visiting artists/scholars. Events are open to the general public and are presented both during the day and in the evening. Special ticket privileges are available to USF students. For more information, contact the CVPA Events Office. Refer to the College website for more information.
ARCHITECTURE

Master of Architecture (M.Arch.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall Deadline: February 1
Fall admissions only.

Minimum Total Hours: 108
Level: Masters
CIP Code: 04.0201
Department Code: DEA
Major/Coll Codes: ARC AR
Approved: 1995

CONTACT INFORMATION

College: The Arts
Dept: School of Architecture and Community Design
Contact Information: www.grad.usf.edu

School of Architecture and Community Design Mission Statement:
Our mission is to provide graduate level education that:
- Provides a holistic design curriculum and instruction through a variety of pedagogical approaches.
- Encourages individual and collaborative discoveries.
- Emphasizes continuity between design and construction.
- Builds technical and professional proficiency.
- Offers wide ranging global learning experiences.
- Provides opportunities for engagement with diverse communities.

and for students and faculty to conduct scholarly research and creative activity that:
- Is innovative, disciplinary, and interdisciplinary.
- Advances the understanding of the built environment as it relates to society and culture.
- Contributes to theory and practice in the disciplines of architecture and urbanism.
- Is relevant to local communities.
- Advances the contemporary state of critical practice.
- Provokes (stimulates/instigates) critical discourse on architecture and urbanism.
- Explores (embraces) emerging technologies.

Our aim is to graduate professionals who will be recognized for their design excellence in enhancing the quality of the built environment.

MAJOR INFORMATION

The major leading to the accredited Master of Architecture degree is intended for students who have completed baccalaureate degrees in non-architectural majors or with a pre-professional undergraduate major in one of the design professions. The comprehensive and rigorous curriculum prepares graduates for a full range of professional activities. The course of study emphasizes urban architecture and related topics to take advantage of its diverse metropolitan setting in Florida’s Tampa Bay.

The School of Architecture and Community Design (SACD) is home to the Florida Center for Community Design and Research, is a non-profit public service institute of the School of Architecture and Community Design. It was founded in 1986 to assist the citizens of Florida in the creation of more livable and sustainable communities through applied community design, multi-disciplinary research, and public education. The diverse staff includes architecture faculty and students, research scientists, and programmer analysts. In addition, the Center has affiliated faculty or graduate students from the Department of Anthropology, Biology, Fine Arts, Geography, and Social Work.

http://www.arts.usf.edu/
Accreditation and Licensure:
Applicants for architectural licensure in Florida, and most jurisdictions in the United States, normally must have:

- earned a professional degree from a School accredited by the National Architectural Accrediting Board (NAAB)
- completed the Intern Development Program (IDP)
- passed the Architect Registration Examination (ARE)

According to the 2004 edition of the NAAB Conditions and Procedures: “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 Accrediting Board (NAAB), which is the sole agency authorized to accredit US professional degree programs in architecture, recognized two types of degrees: the Bachelor of Architecture and the Master of Architecture. A program may be granted a six-year, three-year, or two-year term of accreditation, depending on its degree of conformance with established educational standards. Masters 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.”

Major Research Areas:
Architecture and Community Design

ADMISSION INFORMATION
In order to enroll in the M.Arch. major, students must be accepted by the Office of Graduate Studies and the School of Architecture and Community Design. These are separate admission processes that involve different application forms, supportive materials, and deadlines. For more detailed information, students should see Graduate Admissions online and visit the SACD website.

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

The Master of Architecture (M.Arch.) requires
- a 3.00 undergraduate GPA
- GRE Test Score
- Portfolio of creative work
- Completed 3 prerequisite courses: Physics, Calculus, and AutoCAD
- Written Statement of Intent
- Three letters of recommendation

CURRICULUM REQUIREMENTS
Minimum Hours Required: 108 hours

(Minimum hours for the entire 2+4 program is 165-168)

The M.Arch. Degree normally requires 108 credit hours of coursework for students with baccalaureate degrees in non-architectural subjects. In order to complete the major in a timely manner, students must complete 15-17 credit hours per semester. Students with undergraduate degrees in architecture or related fields may receive waivers for some required courses for which a grade of B or better was earned.

51 hrs* – Students with four-year pre-professional degrees must complete a minimum of 51 credit hours in the Master of Architecture major.

*The total required credit hours and courses are determined on an individual basis and are dependent upon the school’s review of the student’s individual portfolio and undergraduate transcript upon application for admission.
30 hours** - Students with five or six year professional degrees from a NAAB/CAAB accredited program (U.S. and Canada) must complete a minimum of 30 credit hours in the major.

**The total required credit hours and courses are determined on an individual basis and dependent upon the school’s review of the student’s individual portfolio and accredited program professional degree upon application for admission.

For more detailed information, interested students should contact the School directly or visit its website.

### Course Requirements:

Students who are required to take the minimum of 105 hours must take all of the following:

#### Prerequisites:

College level:
- Physics***
- Calculus***
- Computer-aided Design
- Competence in design/graphics (portfolio)

#### Design/Graphics

- ARC 5361 – Core Design I 9***
- ARC 5362 – Core Design II 9***
- ARC 5363 – Core Design III 6***
- ARC 5364 – Advanced Design A 6***
- ARC 5365 – Advanced Design B 6
- ARC 5366– Advanced Design C 6
- ARC 6367 – Advanced Design D 6
- ARC 5256 – Design Theory 3***
- ARC 5731 – Architectural History I 3***
- ARC 5732 – Architectural History II 3***
- ARC 6398 – Introduction to Community and Urban Design 3

#### Technology

- ARC 5470 – Intro to Technology 3***
- ARC 5467– Materials and Methods of Construction 3***
- ARC 5587 – Structures I 3***
- ARC 5588 – Structures II 3***
- ARC 5689 – Environmental Technology 3***
- ARC 6481– Design Development 3

#### Professional Practice

- ARC 6287 – Professional Practice I 3
- ARC 6288 – Professional Practice II 3

#### Research/Thesis

- ARC 6936 – Research Methods in Architecture 2
- ARC 6974 – Master’s Project Planning 2
- ARC 6976 – Master’s Project 5

#### Electives

- ARC ___ - Elective 1 3
- ARC ___ - Elective 2 3
- ARC ___ - Elective 3 3
- ARC ___ - Elective 4 3
- ARC ___ - Elective 5 3

***Courses marked by asterisks (*) may be completed in undergraduate pre-professional or similar programs with a grade of B or above and with approval of faculty advisor.
OTHER REQUIREMENTS

Computers
The School of Architecture and Community Design requires each student enrolled in the Advanced Design Studios level, or higher, to possess (through purchase or lease) a NOTEBOOK COMPUTER system.

The notebook computer requirement allows students to conduct the majority of digital work, which is an integral aspect of advanced architectural design education and professional practice, in the design studio. The studio is the primary place for the exchange of design ideas, critique, and synthesis, and the Architecture faculty believes that the student’s regular presence in the studio is critical for maximizing her or his architectural design learning.

The notebook system is required in lieu of a desktop in order to address the limited design studio space available to each student. The mobility of the notebook allows the student to easily and quickly transform a relatively small desk space into a variety of configurations suitable for physical model-making, hand-drawing, hand-drafting, design research, and design writing as well as digital drawing, modeling, and graphic design. The battery-powered notebook allows for maximum computer use within environments with limited electrical power outlets.

The School will continue to maintain high-powered computer systems in the laboratory for intensive computing required for manipulating large digital models, renderings, etc. Students may begin their digital work on their laptops and, if needed, use removable storage and network connections to transfer files to the lab systems for final development. The School provides black and white printers, color and black and white plotters, and scanners in the computer laboratory.

Because the notebook computer system is an educational requirement of the School, the cost of a new computer purchase can be factored in determining a student’s financial need. The student must contact the USF Office of Financial Aid (813-974-4700) to request additional information and a “Budget Adjustment for Computer Purchase” form prior to ordering a computer. The decision regarding a student’s budget adjustment may take 6-8 weeks, so students are strongly encouraged to plan ahead. Only one financial aid budget adjustment up to $2,500 for a new computer can be issued during a three year period.

Portfolios
The faculty requires the submission of portfolios of academic work by each student at two formal portfolio reviews. Students must pass these portfolio reviews in order to advance in the major. The portfolio policy can be found on the School’s website. Students are advised to prepare their design work for inclusion in their portfolios at the end of each design semester, instead of waiting until just before the portfolio due dates. Some expense, varying widely according to reproduction technique and/or ambition, should be anticipated.

Field Trips
Each year students in the fall term beginning students in take a field trip to Savannah, GA. Transportation, lodging and meals ($200-300) are paid by the students. Students in design studios take field trips to such cities as New York, Boston and Chicago in the spring. The cost of these trips may be $200-600 per student.

Student Work
Student work, submitted to the School in satisfaction of course or degree requirements, becomes the physical property of the School. This work may include papers, drawings, models, and other materials in either physical or electronic form. The School assumes no responsibility for safeguarding such materials. At its discretion, this School may retain, return, or discard such materials. The School will not normally discard the materials of currently enrolled students without giving the student a chance to reclaim them.

GPA of 3.00 in Design
In addition to the state-wide requirement that students maintain an overall grade point average(GPA) of 3.00 or better, the Architecture faculty also requires that students maintain a GPA of 3.00 or better in all design courses.

COURSES
See www.ugs.usf.edu/course-inventory
ART

Master of Fine Arts (M.F.A.) Degree

DEGREE INFORMATION

Priority Admission Deadlines:
Fall: January 15
Fall admission only

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 60
Level: Masters
CIP Code: 50.0702
Dept Code: ART
Major/College Codes: MFA FA
Approved: 1967

CONTACT INFORMATION

College: The Arts
Department: School of Art and Art History
Contact Information: www.grad.usf.edu
Other Resources: www.art.usf.edu

MAJOR INFORMATION

The nationally ranked MFA Degree Program in Art has been carefully designed as a course of study that will maximize the student’s potential for in depth investigation of his or her chosen artistic ideas, themes and/or media. Students are encouraged to acquire technical and conceptual skills in more than one medium or studio discipline and to work toward developing techniques that best communicate the content of their artistic pursuits.

Accreditation:
Accredited by the National Association of Schools of Art and Design.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.
• A Bachelor’s degree or equivalent from a regionally accredited university or art school
• Meet at least one of the following criteria
  o Earned a “B” (3.00 on a 4.00 scale) average or better in all upper division studies as an undergraduate student.
  o Earned a graduate degree from a regionally accredited institution.
• Approved portfolios are required for admission into the M.F.A. Art Major (see website).

CURRICULUM REQUIREMENTS

Total Minimum Hours: 60 credit hours

Core Requirements - 19
ARH 6798 4  Seminar in Art History: Critical Perspectives in Contemporary Art
ART 6895 3  Graduate Seminar I
ART 6896 3  Graduate Seminar II
ART 6816 3  MFA Professional Practices
ARH 6798 4  Seminar in Art History (various specialized topics) or ARH 6055 4  Art History
ART 6956 2  M.F.A. Research Project
Electives – 41 credits
ART 5000 and 6000 Studio and Discretionary Electives

ART 6937 1-4 Graduate Instruction Methods
(This course is an elective option for students who have not worked as a Teaching Assistant.)

M.F.A. Research Project:
Exhibition/Orals/Written Document

Other Requirements:
A course in 20th Century Art History should have been successfully completed at the undergraduate level prior to entering the M.F.A.. If not, new students must enroll in the USF course during the first semester of graduate study. The School of Art and Art History highly recommends that all students seeking an advanced degree in Art take a minimum of one course in Electronic Media.

The remainder of the major is discretionary and is designed by the student with the guidance of the Graduate Art Advisor, during the first three semesters, and with the student’s Graduate Supervisory Committee thereafter.

Directed Studies
As part of the student’s studio and discretionary electives, he/she may register with a faculty member under a Directed Study Contract. All M.F.A. students are required to take coursework for a grade until they have formed their Supervisory Committees.

The descriptions for Directed Study are as follows:

ART 6940, Selected Topics in Art, Grading option Regular (For a grade), 1-4 credits
Suitable for coursework by contract in an area in which the student has prior skill.

ART 5910, Research, Grading option Regular (For a grade), 1-4 credits
Suitable for coursework by contract in an area in which the student has little or no prior skill.

Suitable for graduate level coursework in any area for which the student does not wish a letter grade, or which justifies more than 4 hours of credit. May be used only after the student’s Supervisory Committee is formed. (See S/U Grades)

ART 6911, Directed Research, Grading option Regular (For a grade), 1-19 credits.
Suitable for graduate level coursework in any area that justifies more than 4 hours of credit. May be used only after the student’s Supervisory Committee is formed.

As noted, ART 6907 and ART 6911 are not for use by M.F.A. students who have not yet established their Supervisory Committees. The other, media specific, course numbers such as Sculpture or Painting are not often used as they are fixed at 4 credit hours.

Transfer Credits
Requests for use of transfer credits or credits earned under non-degree seeking student status should be made when the student applies to the graduate major. The faculty will decide at the time of admission whether or not transfer credits and credits earned will be used toward the requirements for the M.F.A. degree. Transfer credit and credit earned as a non-degree seeking student to be used toward the students’ M.F.A. degree is limited to 8 semester hours.

S-U Grades
A Student may not take any course work for a grade of "S/U" until they have elected a supervisory committee, usually by the fourth semester. All course work taken during the first three semesters must be taken in course work assigning letter grades that designate quality points. Appropriate contract numbers would include graduate level studios such as Sculpture or Painting, and ART 5910 Research for an area in which a graduate student did not have prior skill, or ART 6940 Selected Topics for studies in an area where prior skill exists but the student requires variable credit or the research does not conform to clear categorization by discipline. ART 6907 Independent Study offers the S/U grading option and is not to be used until after the student has elected a supervisory committee.
Graduate Supervisory Committees
The Graduate Supervisory Committee consists of a chair and two members from the Studio Art faculty. The Supervisory Committee must be approved by the MFA Coordinator. Exceptions only with approval of the MFA Faculty Coordinator and the Director of the School.

Faculty Evaluations at the end of first, second, and third semesters
At the end of the first, second and third semesters, students will receive a written evaluation from a faculty committee regarding their progress in the major based on a presentation of their work. A student receiving “unsatisfactory” evaluation for any two of these three semester reviews will be dropped from the major. The full faculty will review a student with two unsatisfactory evaluations before they can be dismissed from the major.

M.F.A. Research Project Proposals
During the fourth semester students will present a proposal for their MFA Research Project. The student must form and meet with their Graduate Supervisory Committee before the conclusion of their second year. The student must present a body of work and written paper supporting the student’s proposed direction.

If a student’s proposal is satisfactory, he/she will select a graduate Supervisory Committee to oversee the realization of the research project. If a student’s project proposal is not satisfactory, another proposal can be presented before the end of the fourth semester. If the student’s proposal and re-proposal are voted unsatisfactory the student will be dismissed from the major.

M.F.A. Research Project Exhibition/Orals/Written Document
The exhibition, written document and the orals defense conclude the student’s graduate major and take place after all course work is completed. The exhibition is usually during the term the student plans to graduate, typically the second semester of the third year. M.F.A. Research Project exhibitions cannot be scheduled for the summer term. Information regarding the exhibition, the written document and the orals defense will be distributed to students prior to the final semester.

COURSES
See [www.ugs.usf.edu/course-inventory](http://www.ugs.usf.edu/course-inventory)
ART HISTORY

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: January 15
Fall admission only.

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 38
Level: Masters
CIP Code: 50.0703
Dept Code: ART
Major/College Codes: ATH FA
Approved: 1985

CONTACT INFORMATION

College: The Arts
Department: School of Art and Art History
Contact Information: www.grad.usf.edu
Other Resources: www.art.usf.edu

MAJOR INFORMATION

The School of Art and Art History offers MA studies in art history from the Renaissance to the present. Students receive individual attention from an active, award-winning research faculty, who expose students to the most recent approaches in the field. The major is unique in featuring small, intensive seminar-style courses. We see art history as an integral part of social and cultural history in a global context and our classes are interdisciplinary in scope. Course work can be supplemented by international travel and study-abroad programs sponsored by the School of Art and Art History. Our graduate curriculum is supplemented by additional course options at the University of Florida through our consortium agreement with UF: MA students may take graduate seminars in art history offered at UF and UF graduate students participate in our classes. Our strong links with area museums facilitate internships and future employment. The major provides an excellent foundation in graduate level art-historical analysis, research, and writing, an outstanding springboard for either continuing graduate studies (PhD) or professional work in a variety of arts fields.

Proficiency in a foreign language relevant to the student’s area of specialization is required. Students consult with their advisors to determine the foreign language most appropriate to their scholarly interests.

Accreditation:
Accredited by the National Association of Schools of Art and Design.

Major Research Areas:
M.A. Art History students are guided by the art history faculty in selecting their area of research after completing a year of graduate study. This major features an endowed chair in modern and contemporary art history.
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

Admissions is competitive. The MA Art History major accepts applications for fall admissions only. The electronic application and fee payment for USF Graduate Admissions must be completed by January 15 at https://secure.vzcollegeapp.com/usf/ Supportive application materials can be submitted online beginning September 30 to January 15 at https://usf.slideroom.com/#/login. All official transcripts must be postmarked by January 15 and sent directly to the School of Art and Art History.

- Departmental Requirements plus a research paper dealing directly with Art History or a related discipline (literature, political history, psychology, philosophy or classical studies).
- Three letters of recommendation from people who can professionally assess the applicant’s ability to do scholarly and academic work.
- A short essay of one to two pages explaining the applicant’s research interests and goals for graduate study in art history.
- A personal interview by the Art History faculty may be requested.

Undergraduate Deficiencies in Art History

- Students pursuing graduate studies in Art History, who do not have an undergraduate degree in Art History will be expected to complete four undergraduate Art History survey courses plus two courses in critical studies.
- Exceptions can be granted only with consent of the Art History faculty.

Language Requirements

Reading knowledge of the foreign language most relevant for study and research in the student’s area of specialization must be acquired before the end of the second semester of enrollment in the major. Please see the Academic Advisor for exceptions to this rule.

The student may take appropriate courses in the Division of Language or Classics. Whenever the courses are available, the student should be encouraged to take one of the special one semester foreign language courses designed for graduate students.

When these courses are not available, the student may take two semesters of a beginning foreign language course. These courses may not be taken pass/fail or audit. In order to fulfill the foreign language requirement, the student must receive a letter grade of "B" or better in both courses. Courses taken to fulfill the foreign language requirement will not count toward hours necessary for graduation and the grades in these courses will not be computed in the student’s graduate GPA.

Students may elect to take the GSFLT (Office of Graduate Studies Foreign Language Test). The student must achieve a score of 450 or above on the test in order to fulfill the foreign language requirement.

Students may take a proficiency exam in which they translate, from a foreign language into English, materials relevant to their particular disciplines. The form of these proficiency exams should be devised by the appropriate language professors from either of these two units.
CURRICULUM REQUIREMENTS

Total Minimum Hours - 38

Qualifying Paper Option Course Requirements:
- ARH 6798 (4) Seminar in Art History - Students take eight critical studies seminars in art history - 32
- Electives (determined by individual consultation with Graduate Coordinator) - 8
- ARH 6055 (2) Art History (Writing the Qualifying Paper)

Total Credit Hours - 42

Thesis Option Course Requirements:
- ARH 6798 (4) Seminar in Art History - Students take six critical studies seminars in art history - 24
- Electives (determined by individual consultation with Graduate Coordinator) - 8
- ARH 6971 (6) Thesis (Thesis Writing)

Total Credit Hours - 38

To learn about a range of art-historical methods, graduate students are required to take the critical studies seminars in a variety of historical periods and taught by different faculty. A student should, if possible, have at least one graduate class in these three areas:

1) Ancient/Medieval
2) Early Modern (15th-18th centuries)
3) Modern (19-21st centuries).

Museum experience is encouraged for all students, but course credit for museum internships is limited to those seeking a Certificate in Museum Studies.

Thesis and Qualifying paper options
Students either write a qualifying paper or thesis to complete the requirements of the major. Students should consult with the Graduate Coordinator and the faculty to determine which option is the best for them; the final decision rests with the faculty. For either option, a B+ average or above is required in courses taken to fulfill Major graduate credits, for students to move on to this final phase of their graduate studies.

The M.A. in Art History is a two-year major for students who attend full time, but the thesis option often takes longer to complete.

Qualifying paper option
Requires 8 seminars in art history (32 hours), with 8 additional hours of electives, plus 2 hours for preparing the qualifying paper (in the fourth and final semester).

The qualifying paper should demonstrate the student’s ability to do significant art-historical research, to persuade by effective use of evidence and argument, and to write fluently and clearly. The qualifying paper will usually be a substantially revised seminar paper and should be about 15-20 typed pages in length, excluding endnotes, bibliography, illustrations or other materials. Students choosing this option should form a qualifying paper committee by the end of the second semester of their first year. The Committee is composed of a major professor and a second faculty member. Members of the Committee are faculty in the School of Art and Art History, of which one must be tenured or tenure-earning. The Major Professor will usually be the professor who oversaw the writing of the original seminar paper. Students pursuing this option download the relevant form at http://www.arts.usf.edu/absolutenm/articlefiles/20-GradComApptFrm.pdf. Students are responsible for collecting committee members’ signatures. The M.A. Graduate Coordinator must authorize all committee assignments with his/her signature.

When submitting drafts of the qualifying paper to committee members, students must allow faculty members two weeks to read any given version. Remember that first drafts usually have to be extensively revised, often several times, before the qualifying paper is accepted. Faculty are not normally available during the summer to read qualifying paper drafts.

The qualifying paper committee must approve the qualifying paper before the student can graduate. Qualifying papers must be submitted two weeks before the last day of classes of the semester in which the student wishes to graduate. The major professor, in consultation with the other faculty member, notifies the Academic Advisor of the School of Art and Art
History of approval of the paper before the end of the semester. If a paper is not approved, the student may revise and resubmit it a second time. It is the student’s responsibility to stay abreast of Office of Graduate Studies deadlines and registration requirements in the final semester, which are available online at http://www.grad.usf.edu.

**Thesis option**
 Requires six seminars in art history (24 hours), with 8 additional hours of electives, plus 6 hours of thesis writing (4 hours in the third semester and 2 hours in the fourth and final semester). Students writing the thesis should work with faculty during the second semester to begin developing potential topics. By the end of the first year, students who wish to write the thesis should decide on a thesis topic with a major professor from the art history faculty. The topic is usually related to research done in a seminar. During the following summer students prepare the thesis proposal. The proposal should define a significant research problem and explain how the topic has the potential to contribute to scholarship in the field; it must include a research plan and a critical review of the scholarly literature on the subject area. Thesis proposals will be presented to faculty and fellow graduate students in a public forum at the beginning of the third semester. Each presentation is followed by discussion, which provides an opportunity for students to receive suggestions and recommendations from faculty and peers. If the proposal is declined, the student will be eligible to pursue a Qualifying Paper.

If the art history faculty approves the thesis topic, the student should form a thesis committee by the end of the semester in which they have successfully proposed a thesis topic, and have thereby achieved thesis candidacy.

The Committee is composed of at least two members and the Major Professor. The Major Professor and at least one other committee member must be chosen from tenured or tenure-earning art history faculty, or otherwise as approved by the Graduate Coordinator of the Art History Major. Students forming the thesis committee download the relevant form at http://www.arts.usf.edu/absolutenm/articlefiles/20-GradComApptFrm.pdf. Students are responsible for collecting committee members’ signatures. The M.A. Graduate Coordinator must authorize all committee assignments with his/her signature.

While moderate in length and considerably more limited in scope than a doctoral dissertation, the M.A. thesis must demonstrate the student’s ability to do original, independent research of publishable quality. The thesis should be approximately 35-40 typed pages of text – the usual length of a journal article – excluding notes, bibliography, illustrations or other materials. When submitting drafts of the thesis to committee members, students must allow faculty members two weeks to read any given version. Remember that first drafts will have to be extensively revised several times before the thesis is accepted. Faculty are not normally available during the summer to read thesis drafts. The thesis committee must approve the final thesis before the student may schedule a date for the M.A. thesis defense. The examining committee will consist of the thesis committee and at least two additional questioners who are chosen by the student in consultation with the thesis committee. Students should keep in mind that the questioners must also be allowed two weeks to read the draft of the thesis after it is accepted for the defense by the thesis committee. The oral defense is open to the public. No defenses are scheduled during the summer. Immediately after the orals, the examining committee meets to determine whether the student has passed the oral examination and whether the thesis is acceptable in its current form.

NOTE: It is usually necessary to make some changes in the thesis after the oral defense. Allow at least one week between the oral exam and the Office of Graduate Studies deadline so that you will be able to make the changes.

Ideally, the student will complete the thesis and submit it in the fourth semester. It is the student’s responsibility to stay abreast of Office of Graduate Studies deadlines and registration requirements in the final semester. Check with the USF Office of Graduate Studies for specific deadlines and requirements for the M.A. thesis and graduation. These are available online at http://www.grad.usf.edu/ETD-res-main.php. All theses must be submitted electronically.

**Transfer of Credit**

There is no automatic transfer of non-degree seeking student credit or graduate credit earned at other institutions or from other graduate majors in the University towards M.A. degree requirements. The School of Art and Art History has designated a six hour limit on all credit taken as non-degree seeking student status. Any transfer of credit or non-degree seeking student hours to be used toward M.A. degree requirements are only granted after a faculty review at the time the student has been accepted into the M.A. major.

**COURSES**

See www.ugs.usf.edu/course-inventory
MUSIC EDUCATION

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15
Spring: October 15
Summer: February 1

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 30
Level: Masters
CIP Code: 13.1312
Dept Code: MUS
Major/College Codes: MUE FA
Approved: 1962

CONTACT INFORMATION

College: The Arts
Department: School of Music
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The MA degree at USF is intended for the currently practicing music educator who wishes to increase their understanding of informal learning and learner-centered pedagogies. This major also empowers students to become action researchers and thoughtful consumers of research in music education.


Major Research Areas:
Alternate Methods, Community Collaboration, Contemporary Changes, Early Childhood, General Music, International Perspectives, Multicultural Issues, Technology, Teacher Behaviors, Philosophy, Psychology, Sociology.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

• The Graduate Record Examination (GRE) is not required.

• An official Transcript for a completed undergraduate degree in music (from an accredited program) is required with the application.

• The overall Grade Point Average (GPA) for upper division credit hours must be at least 3.00, and the GPA for all music, music education, and education courses included in the undergraduate degree must be at least 3.00.

• A Résumé

• A minimum of two (2) current Letters of Recommendation from people qualified to speak on behalf of the applicant’s professional capabilities must accompany the application.

• At least two years of K-12 music teaching experience, or the equivalent, are required.
• However, final approval for admission must be granted by the music education faculty.

• **International students** must include copies of graduation **Certificates** and/or **Diplomas** (in addition to official transcripts) with their applications. If English is not their primary language, they must have at least a score of 550 (or 213 for the computer version) on the Test of English as a Foreign Language (**TOEFL**), or they must have completed English Language Institute (**ELI**) Level 4 or Level 5 and have passed the ELI Exit Assessment.

It is important to enroll in the term of admission. If postponement is necessary, you should request that your application be updated for the term when you will register for classes.

**CURRICULUM REQUIREMENTS**

**Total Minimum Hours**

30

**Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Title</th>
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<tr>
<td>MUE 6428</td>
<td>6</td>
<td>Learner-Centered Approaches to Music Education I - (alternative calendar)</td>
</tr>
<tr>
<td>MUE 6785</td>
<td>3</td>
<td>Research Design and Methods in Music Education -</td>
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<td>MUE 6787</td>
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<td>Literature Review in Music Education</td>
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<td>MUE 6789</td>
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<td>Research Report Writing in Music Education</td>
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<td>MUE 6429</td>
<td>3</td>
<td>Learner-Centered Approaches in Music Education II</td>
</tr>
<tr>
<td>MUH 6020</td>
<td>3</td>
<td>History of Blues and Rock</td>
</tr>
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**Electives** - 9 credit hours

Any graduate level music courses or course related to the student’s research interests.

The responsibility for seeing that all graduation requirements are met rests with the student.

**Comprehensive Exam**

The submission of an action research project final report will be the Comprehensive Examination. Final recommendation with signatures presented to Graduate Director of Graduate Studies in Music

**COURSES**

See [www.ugs.usf.edu/course-inventory](http://www.ugs.usf.edu/course-inventory)
MUSIC

Master of Music (M.M.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:

Fall: February 15
Spring: October 15
Summer: February 15

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 30
Level: Masters
CIP Code: 50.0903
Dept Code: MUS
Major/College Codes: MUS FA
Approved: 1984

Concentrations:
- Chamber Music (MCL) (Piano and Strings only)
- Choral Conducting (MCC)
- Composition (MMC)
- Electro-Acoustic Music (MEM)
- Instrumental Conducting (MID)
- Jazz Composition (MJC)
- Jazz Performance (MJP)
- Performance (MMP)
- Piano Pedagogy (MMP)
- Theory (MMT)

CONTACT INFORMATION

College: The Arts
Department: School of Music

Contact Information: www.grad.usf.edu

MAJOR INFORMATION

Music Faculty, Alumni, and Students
Perhaps the most compelling reason to study music at the University of South Florida is the opportunity to work with our superb music faculty. These gifted, dedicated artists/scholars are among the preeminent leaders in their fields and have been carefully chosen for their professional training, excellence in musical performance and research, and pedagogical expertise. They are featured on many professional recordings and appear in prestigious concert venues around the world. Their compositions are premiered globally. Their scholarship is published in the leading research journals, books, and monographs in their disciplines. The School of Music also invites guest composers, conductors, and performing musicians to enhance its performances and to provide master classes, symposia, and clinics for students and the public. Many USF music alumni are currently performers in a variety of concert settings and successful teachers in public schools, colleges, and universities around the country in a variety of concert settings. The School of Music at USF offers the student the opportunity to study with distinguished faculty and to be in the company of other superior music students for an exciting and exacting period of study.
The Master of Music degree provides students with an opportunity to pursue intense, focused study in their music specialty, coupled with a vigorous, balanced curriculum in music theory, music literature, and electives. Students in this major are mentored expertly by senior faculty and exhibit mastery of their specialty at the end of the course of study by way of appropriate capstone experiences, including recitals or theses and comprehensive examinations. The provisions and balance of these experiences comport precisely with the curriculum guidelines required by the National Association of Schools of Music.

Accreditation:
Full member, National Association of Schools of Music (NASM)

Major Research Areas:
Chamber Music, Composition, Conducting, Jazz Studies, Music Performance, Music Theory, Pedagogy, Electronic Music,

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- Successful auditions and/or interviews are required for acceptance into chamber music, conducting, electro-acoustic music, performance, pedagogy, and theory concentrations. Approved portfolios are required for acceptance into composition (jazz or traditional).

- Diagnostic tests in music theory and history must be taken before classes begin in the first semester. Based upon the scores, the music faculty may require remediation in one or both areas of study in order to qualify the student for permission to enroll in certain courses. Graduate review courses are offered each fall semester.

- The Graduate Record Examination (GRE) is not required.

- Students who do not enroll in the semester for which they applied and were admitted must receive permission from the Director of Graduate Studies in music to enroll in courses in the following semester(s). This procedure is to determine the availability of applied and academic courses in music.

- An official undergraduate Transcript for a completed undergraduate degree in music (from an accredited program) is required with the application.

- The overall Grade Point Average (GPA) for upper division credit hours must be at least 3.00 and the GPA for all music courses included in the undergraduate degree must be at least 3.00. International students must include copies of graduation Certificates and/or Diplomas (in addition to official transcripts) with their applications.

- International students must have at least a score of 550 (or 213 for the computer version) on the Test of English as a Foreign Language (TOEFL), or they must have completed English Language Institute (ELI) Level 4 or Level 5 and have passed the ELI Exit Assessment.

- Credit hours earned in Music Graduate Certificate at USF may be applied toward a master's degree.

- M.M. students must successfully complete a Comprehensive Examination at the end of the program of study. Details regarding this examination may be obtained from the Director of Graduate Studies in Music.
CURRICULUM REQUIREMENTS

Total Minimum Hours  30 credit hours

Diagnostic Music Tests taken prior to classes in first term. Students may be required to enroll in a remedial history and/or theory course as a consequence of their scores.

CORE REQUIREMENTS – 8 credit hours minimum
MUS 6973 (3) Techniques of Research in Music and Music Education

In addition, students in all concentrations must choose 2 of the following 7 courses. One must be a 20th/21st century course, as indicated by the asterisks.
MUL 6375* (3) Twentieth Century Music Literature
MUL 6505 (3) Symphonic Literature
MUS 6057* (3) Intercultural Composers
MUT 6545 (3) Analysis of 18th and 19th Century Music
MUT 6575* (3) Analysis of 20th Century Music
MUT 6586 (2) Critical Analysis/History
MUT 6665 (2) Jazz Styles and Analysis

NOTE: Students in the Music Theory Concentration must take both MUT 6545 & 6626. MUT 6665 is required for Jazz Composition and Jazz Performance Concentrations. Students in the Instrumental Conducting Concentration are required to take MUT 6545 and MUT 6575 and then choose one from MUH 6057, MUL 6375 and MUT 6586.

SPECIFIC CONCENTRATION REQUIREMENTS (beyond the requirements above)

CHAMBER MUSIC (MCL) - 18 credit hours
MVK or MVS 6### (8) Applied Studio (for piano and string students, only) {4 credits; taken two terms}
MUS 5905 (6) Chamber Music Ensemble
MUL 6565 (2) Chamber Music Literature
MUS 6976 (2) Recital (Chamber Music, only)
Must Include:
1) Major standard sonata
2) Major standard work for 3 or more instruments
3) Major contemporary chamber work for 2 or more instruments
Scholarship Requirement for Piano: STUDIO ACCOMPANYING
Scholarship Requirement for Strings: USF ORCHESTRA

CHORAL CONDUCTING (MCC) - 21 credit hours
MUG 6205 (8) Advanced Choral Conducting (2 credits; taken four terms; variable content)
MUG 6930 (3) Advanced Choral Techniques
MUL 6655 (3) Choral Literature 1500-1800
MUL 6656 (3) Choral Literature 1800-Present
MUN 6XXX (2) Ensemble (1 credit; taken two terms)
MUS 6976 (2) Recital

ELECTRO-ACOUSTIC MUSIC (MEM) - 15 credit hours
MUC 6444 Electronic Music: Analog/Digital Systems Research I  3
MUC 6445 Electronic Music: Analog/Digital Systems Research II  3
MUS 5905 Computer Music Research  6 (3 credits; taken two terms)
MUS 6976 - Recital  2
(or MUS 6971, Thesis w/oral defense)
INSTRUMENTAL CONDUCTING (MID) - 17 hours
MM Major is 34 hours with this concentration

Conducting – 8 credits:
MUG 6307 (2) Advanced Wind Conducting I
MUG 6308 (2) Advanced Wind Conducting II*
MUG 6309 (2) Advanced Orchestral Conducting I
MUG 6310 (2) Advanced Orchestral Conducting II*
*may be taken twice

Literature – 3 credits
Choose one:
MUL 6555 (3) Band/Wind Ensemble Literature
MUL 6505 (3) Symphonic Literature

Ensembles – 4 credits
Any MUN Ensemble Course

Graduate Recital – 2 credits
MUS 6976 (2) Graduate Recital

JAZZ COMPOSITION (MJC) - 16 credit hours
MUC 6626 (8) Jazz Composition (4 credits; taken two terms)
MUC 6930 (4) Seminar: Jazz Compositional Styles (2 credits; taken two terms)
MUN 6--- (2) Ensemble (1 credit; taken two terms)
MUS 6976 (2) Recital

JAZZ PERFORMANCE (MJP) - 16 credit hours
MVJ 6--- (8) Applied Jazz (4 credits; taken two terms)
MUT 6665 (4) Jazz Styles and Analysis (2 credits; taken two terms)
MUN 6XXX (2) Ensemble (1 credit; taken two terms)
MUS 6976 (2) Recital

MUSIC COMPOSITION (MMC) - 10 credit hours
MUC 6251 (8) Composition (4 credits; taken two terms)
MUS 6976 (2) Recital (or MUS 6971, Thesis w/oral defense)

MUSIC PERFORMANCE (MMP) - 21 credit hours
MUP 6--- (8) Applied Studio (4 credits; taken two terms)
MUN 6--- (2) Ensemble (1 credit; taken two terms)
MUS 6976 (2) Recital
Piano Majors must include:
MUL 6410 Keyboard Repertory I (2 credits; Fall)
MUL 6411 Keyboard Repertory II (2 credits; Spring)

MUSIC THEORY (MMT) - 15 credit hours
MUT 6545 (3*) Analysis of 18th and 19th C. Music
MUT 6586 (2) Critical Analysis: History
MUT 6626 (3*) Analysis of 20th C. Music*
MUT 6627 (3) Schenkerian Analysis
MUT 6751 (3) Teaching of Music Theory
MUT 6760 (3) History of Music Theory
MUS 6971 (4) Thesis (Oral Defense required)
*MUT 6545 and MUT 6626 included in Core Requirements)
PIANO PEDAGOGY (MPP)  
16 credit hours

MVK 5--- (4)  Applied Studio (2 credits; taken two terms)
MUL 6410 (2)  Keyboard Repertory 1 (Fall)
MUL 6411 (2)  Keyboard Repertory 2 (Spring)
MVK 6650 (2)  Graduate Piano Pedagogy 1
MVK 6651 (2)  Graduate Piano Pedagogy 2
MUN 6--- (2)  Ensemble (1 credit; taken two terms)
MUS 6976 (2)  Recital

ELECTIVES
Students complete sufficient electives in addition to the core and concentration requirements to complete the minimum of 30 hours required for the major. Depending on the Concentration, this ranges from 4 to 11 hours of electives, but may be more depending on the student’s course selections.

Courses are subject to change. Summer and online courses may be offered. All inquiries should be directed to the Director of Graduate Studies in Music.

COMPREHENSIVE EXAMINATION
Selection of Committee, including major professor (committee chair) and two other professors from varying concentrations in music with whom they have studied. One member must be from the academic area. The student and the committee must sign a contract available from the Director of Graduate Studies in Music at the beginning of the final term.

- Written Examination
  1) Collection of examination questions by chair from committee members
  2) Presentation of questions to candidate with deadline of one week for completion (theory majors take a two-hour written examination.)
  3) Candidate submits questions and answers to chair one week before oral examination
- Oral Examination (meeting for candidate and committee members scheduled by chair)
- Final Recommendation with signatures presented to the Director of Graduate Studies in Music

The course outlines below are mandatory for the respective fields of study. Secondary applied music courses may be taken in conjunction with MUS 6976, Graduate Recital, if two semesters of four-credit hour major study have already been completed.

FINAL PROJECT (according to Concentration area)
- Composition(s) as required by composition faculty, or
- Recital (includes recital approval hearing one to two weeks in advance of recital), or
- Thesis (includes Oral Defense)

The responsibility for seeing that all graduation requirements are met rests with the student.

COURSES
See [www.ugs.usf.edu/course-inventory](http://www.arts.usf.edu/)

http://www.arts.usf.edu/
MUSIC

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:

<table>
<thead>
<tr>
<th>Season</th>
<th>Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>February 15</td>
</tr>
<tr>
<td>Spring</td>
<td>October 15</td>
</tr>
<tr>
<td>Summer</td>
<td>February 15</td>
</tr>
</tbody>
</table>

International applicant deadlines:
http://www.grad.usf.edu/majors

Minimum Total Hours: 60
Level: Doctoral
CIP Code: 50.0901
Dept Code: MUS
Major/College Codes: DMS FA
Approved: 2003

Concentrations:
Music Education (MDE)

Doctoral applicants are encouraged to contact Dr. C. Victor Fung, Coordinator of the Doctoral Major, as early as possible at fung@usf.edu

CONTACT INFORMATION

College: The Arts
Department: School of Music
Contact Information: www.grad.usf.edu

Financial Aid Deadlines: Fall Admissions Only

<table>
<thead>
<tr>
<th>Type of Aid</th>
<th>Deadline</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate Assistantships</td>
<td>Feb 15</td>
<td>No Application - By Faculty Recommendation only</td>
</tr>
<tr>
<td>Fellowships</td>
<td>Feb 1</td>
<td>No application. By faculty recommendation only</td>
</tr>
</tbody>
</table>

MAJOR INFORMATION

Music Faculty, Alumni, and Students
Perhaps the most compelling reason to study music at the University of South Florida is the opportunity to work with our superb music faculty. These gifted, dedicated artists/scholars are among the preeminent leaders in their fields and have been carefully chosen for their professional training, excellence in musical performance and research, and pedagogical expertise. They are featured on many professional recordings and appear in prestigious concert venues around the world. Their compositions are premiered globally. Their scholarship is published in the leading research journals, books, and monographs in their disciplines. The School of Music also invites guest composers, conductors, and performing musicians to enhance its performances and to provide master classes, symposia, and clinics for students and the public. Many USF music alumni are currently performers in a variety of concert settings and successful teachers in public schools, colleges, and universities around the country in a variety of concert settings. The School of Music at USF offers the student the opportunity to study with distinguished faculty and to be in the company of other superior music students for an exciting and exacting period of study.

Ph.D. in Music Education
The Doctor of Philosophy in Music Education is the highest degree in the field. At the University of South Florida, this major is designed to develop leaders in music education research, teaching, and administration. The curriculum prepares the student to engage in original research in music education and related fields (arts education, music technology, aesthetics, philosophy, cognitive development, creativity, social psychology, neuropsychology, engineering, gerontology, speech and communication sciences, special and gifted education, etc.). In coordination with faculty mentors, the student has great flexibility in designing a program of study that fits his/her interests and strengths. Admission requirements include an interview with the music education faculty and the submission of writing samples and GRE scores. A limited number of fellowships and assistantships are available for qualified students.

Accreditation:
National Association of Schools of Music (N.A.S.M.); National Council for Accreditation of Teacher Education (N.C.A.T.E.);
Major Research Areas:
Alternative Methods, Community Collaboration, Contemporary Changes, Creativity, Early Childhood, General Music, International Perspectives, Multicultural Issues, Philosophy, Psychology, Sociology, Teacher Behaviors, Technology, and Lifelong Learning in Music

Music Education Concentration in the Ph.D. in Music
The Ph.D. major varies, depending on individual interests and needs. All applicants are expected to have two or more years of teaching experience in a public or private school (or its equivalent). A dissertation and dissertation defense are required. The Ph.D. degree empowers students to become scholarly producers of research in music education.

ADMISSION INFORMATION
Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- Official Application to the USF Office of Graduate Studies for the Ph.D. in Music (code DMS) with a concentration in Music Education (code MDE) in Music (code MUS) in COTA (code FA).

- Master’s degree from an accredited institution. Official undergraduate and graduate transcripts must be received at the same time as the application for admission. Credits to be considered for transfer to this major, which are reflected on other transcripts besides the degree-bearing transcripts, must also be sent for consideration by the faculty.

- Minimum GPA of 3.00 for upper division of undergraduate degree (all credits beyond the first 60), and minimum GPA of 3.50 for master’s degree.

- The GRE General Test (after October 1, 2002) must be taken and results must be delivered to Graduate Studies in the School of Music as part of the admission application process.

- Minimum of two years of teaching experience in elementary and/or secondary school(s), or the equivalent.

- Successful interview with the music education faculty, either in person or by other arrangement. Prior to the interview, the following must be reviewed by the music education faculty:
  - At least three letters of recommendation from people qualified to speak on behalf of the applicant’s academic and professional capabilities.
  - Sample of the applicant’s best academic writing.
  - Curriculum vita.
  - 15-20 minute video recording of the applicant teaching music.
  - Personal goal statement.

- International students must include copies of graduation Certificates and Diplomas (in addition to official transcripts) with their applications. If English is not their primary language, they must have at least a score of 550 (or 213 for the computer version) on the Test of English as a Foreign Language (TOEFL), or they must have completed English Language Institute (ELI) Level 4 or Level 5 and have passed the ELI Exit Assessment.

CURRICULUM REQUIREMENTS

COMPLETION OF COURSES
- Appointment of Doctoral Committee
- Comprehensive Qualifying Examination
- Admission to Candidacy

SUBMISSION OF DISSERTATION
APPLICATION FOR GRADUATION (due by beginning of final semester)

DISSERTATION PROPOSAL

DISSERTATION DEFENSE
Final Oral Examination
Final recommendation with signatures presented to Director of Graduate Studies in Music

Total Minimum Hours - 60

CORE REQUIREMENTS - 21-23 hours*
MUE 7746 (3) Measurement and Evaluation in Music
MUE 7786 (3) Qualitative Methods in Music Education
MUE 7815 (3) Psychology of Music
MUE 7816 (3) Music Cognition
MUE 7835 (3) Philosophical and Historical Issues in Music Education
MUE 7939 (4-6*) Center for Music Education Research Seminar (four semesters 1+1+1+1+1*+1* hrs)
MUE 7935 (2) Seminar on Music in Higher Education

Specialization: Alternative Course:
MUE 7937 (3**) Special Topics in Music Education

Cognate - 9 hours
Choice of graduate courses in music from the following:
Jazz Studies, Music Composition, Music Conducting, Music History, Music Literature, Music Performance, Music Theory (Or an education-related field)

Statistics and Measurement - 12 hours
EDF 6407 (4) Statistical Analysis for Educational Research I
EDF 7408 (4) Statistical Analysis for Educational Research II
EDF 7410 (4) Design of Systematic Studies in Education

Dissertation - 16-18 hours*
Prerequisite: Comprehensive Qualifying Examination
MUE 7980 (16-18*) Dissertation

Total Beyond the Master's Degree: 60 hours

The responsibility for seeing that all graduation requirements are met rests with the student.
*6 hours of MUE 7939 – 16 hours of MUE 7980; 4 hours of MUE 7939 – 18 hours of MUE 7980
**MUE 7937 may replace one of the specialization courses except MUE 7786, MUE 7939, and MUE 7935

COURSES
http://www.ugs.usf.edu/course-inventory/
URBAN AND COMMUNITY DESIGN

Master of Urban and Community Design (M.U.C.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:

- Fall: February 15
- Spring: October 15
- Summer: February 1

International applicant deadlines: http://www.grad.usf.edu/majors

Minimum Total Hours: 45
Level: Masters
CIP Code: 04.0401
Dept Code: ARC
Major/College Codes: UCD FA
Approved: 2009

CONTACT INFORMATION

College: The Arts
Department: School of Architecture and Community Design
Contact Information: www.grad.usf.edu

MAJOR INFORMATION

The Urban and Community Design major at USF is a rigorous “design-based” course of study (i.e. post professional degree for design students) leading to the Master of Urban and Community Design (M.U.C.D.) degree. The major focuses on the myriad physical, functional, visual, social and sustainable circumstances in contemporary urban contexts and stresses the amassing of knowledge, and the acquisition of design, research, analytical and other practical skills. The instructional scope of the MUCD major is both broad and diverse. The major builds on previous studies in architecture or landscape architecture as the foundation for involving students in crafting design interventions across the varied spectrum of scales of urbanism – from the urban street and block, up to the metropolitan region. Support courses in the program’s curriculum infuse an understanding of the fundamentals of urban and community design, the historical and theoretical foundations of the discipline, the methods of research and analysis used in urban and community design, the major determinants of urban form, the evolution of urban contexts, and the different modes of contemporary urban design practice. The major invites applications from prospective students who are interested in expanding their understanding of the physical dimensions of urbanism and the morphology of urban places, and amassing the skills necessary in crafting compelling design interventions that address the human experience and physical conditions of cities, towns and communities.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements for admission to the major, listed below.

- Completed USF Office of Graduate Studies application
- Professional undergraduate or graduate design degree (i.e. B.Arch., M.Arch., B.L.A., M.L.A.).
- Transcripts from all previous colleges (minimum GPA of 3.00 from most recent degree program).
- Portfolio of design and creative work (While work completed in a professional capacity is welcomed, academic work is preferred as the primary portfolio content).
- Graduate Record Exam (GRE preferred minimum score of 500 on verbal and 500 on quantitative sections. The GRE will only be waived for applicants who have already earned a Master’s degree).
- Letter of intent
- Three letters of recommendation (At least one letter must be from a former instructor or faculty member).
CURRICULUM REQUIREMENTS

The curriculum for the M.U.C.D. major is intended to be completed in one full calendar year – Fall, Spring and Summer semesters. Each semester includes a design studio and up to three lecture courses, totaling 15 credit hours (The length of time to complete all degree requirements depends on individual course load during each semester of enrollment).

Total Minimum Hours - 45

Core – 33 hours
Electives – 12 hours

CORE REQUIREMENTS - 33 hours minimum

Design
ARC 6373 (6) Community Design Studio
ARC 5366 (6) Urban Design Studio A & B/Advanced Design C
ARC 6930 (6) Master’s Studio

History/Theory
ARC 6398 (3) Introduction to Urban and Community Design
ARC 6930 (3) The City

Practice
ARC 6414 (3) The Real Estate Development Process
ARC 6930 (3) Site/Context Analysis

Globalization
ARC 6930 (3) Global Urbanism NOW!

ELECTIVES – 12 cr. hrs. (any 4)

ARC 6930 (3) Reading and Representing the City
ARC 6930 (3) Urban Resiliency
ARC 6930 (3) Urban Design Seminar
ARC 6930 (3) Design Research
ARC 6930 (3) Urban Design Tools and Strategies
ARC 6930 (3) Art of Placemaking
ARC 6372 (3) Streets and Blocks
ARC 6930 (3) Sustainable Neighborhood/Community Design
ARC 6930 (3) Landscape Urbanism
ARC 6930 (3) Urban Form Continuum
ARC 5931 (3) Independent Study

COURSES –
See www.ugs.usf.edu/course-inventory

- Test of English as a Foreign Language (TOEFL - for International students only, minimum score of 213 on computer-based test; 550 on paper-based test; or 79 on Internet test)
INNOVATIVE EDUCATION
University of South Florida
Innovative Education
4202 E. Fowler Ave, SVC 1072
Tampa, FL 33620

Web address: http://www.usf.edu/innovative-education/

Phone:
Toll-free: 1-888-873-4968
Locally: 813-974-4926

Associate Vice President: Cynthia DeLuca

USF Innovative Education expands the reach of USF to meet the goals of learners anytime, anywhere through distance learning, continuing education, degree completion, certificate, workforce development, lifelong learning, and pre-college programs.

Degrees, Majors, Concentrations
The following majors are offered either fully or partially online. Please note that some majors include required internships, practica or clinical experiences that are not completed online. For curriculum requirements see the respective College section of the Catalog. For more information, contact Innovative Education or the Graduate Director.

Due to restrictive state regulations, USF is not permitted to provide online courses or instruction to students in some states. More information is available http://www.usf.edu/innovative-education/programs/online-programs/state-authorization.aspx

Interdisciplinary (College of Graduate Studies)
M.S. in Cybersecurity

Arts
M.A. in Music Education (MUE)

Behavioral and Community Sciences
M.A. in Applied Behavior Analysis
M.S. in Child and Adolescent Behavioral Health

Education
M.A. in Adult Education
M.A. in Autism Spectrum Disorder and Severe Intellectual Disabilities
M.A. in Career & Technical Education
M.A. in Gifted Education
M.A. in Physical Education
M.A. in Reading K-12
M.A. in Special Education
M.Ed. in Curriculum and Instruction with a concentration in Instructional Technology
M.Ed. in Curriculum and Instruction with a concentration in Secondary Education w/ Emphasis in TESOL
Ed.S. in Curriculum and Instruction with a concentration Instructional Technology
Ph.D. in Curriculum and Instruction with a concentration in Career & Workforce Education

Engineering
M.S. in Engineering Management
M.S. in Information Technology

Global Sustainability
M.A. in Global Sustainability
Medicine
M.S. in Health Informatics
M.S. in Medical Sciences – Concentration in Athletic Training
M.S. in Medical Sciences – Concentration in Health Sciences

Pharmacy
M.S. in Pharmaceutical Nanotechnology (MSPN)

Public Health
M.P.H. in Public Health with concentrations in
  Epidemiology
  Executive MPH in Public Health Practice
  Global Disaster Management and Humanitarian Relief
  Health, Safety & Environment
  Infection Control
  Public Health Administration
  Public Health Practice

Curriculum Requirements
For information on the curriculum requirements for the majors listed above, refer to the individual major listings in the Graduate Catalog.

USF is registered with the Minnesota Office of Higher Education pursuant to sections 136A.61 to 136A.71. Registration is not an endorsement of the institution. Credits earned at the institution may not transfer to all other institutions.
Section 26

Graduate Course Information and Course Descriptions

To view the Course Listing with Course Descriptions, see next section

USF Graduate Course Information

Reference: USF Course Inventory:  http://www.ups.usf.edu/course-inventory/

Courses offered for credit by the University of South Florida are part of the State Course Numbering System (see below). They are listed with the Program or College that offers them. Courses are numbered based on content, rather than by department or program. This means that a single program may have courses in several different disciplines and may consist of courses having several different prefixes.

The University reserves the right to substitute, not offer, and add courses and programs that are listed in this catalog.

Course Levels -

- 0 PSAV, college prep, vocational prep
- 1-2 Lower-level undergraduate
- 3-4 Upper-level undergraduate
- 5-9 Graduate and Professional

USF Graduate Course Level Variance Definitions

It is expected that the 5000-6000-7000 courses will have distinct syllabi demonstrating different depth and breadth of the subject matter as reflected in the course requirements. The courses presuppose different audiences, and the intention is to offer them at distinct levels.

- 5000-5999 Typically Introductory Graduate Level Courses
- 6000-6999 Typically Master's level Courses
- 7000-7999 Typically Doctoral level Courses

Abbreviations used in course descriptions:

- G Graduate
- PR Prerequisite
- CI With the consent of the instructor
- CC With the consent of the chairperson of the department or program
- CR Co-requisite
- DPR Departmental Permit Required
- Lec Lecture
- Lab Laboratory
- Dem Demonstration
- Pro Problem
- Dis Discussion
- ML Master’s Level
- GS Graduate Standing
- Rpt May be repeated
- UL Upper level
- S/U No grade, Satisfactory/Unsatisfactory Only
Florida’s Statewide Course Numbering System

Courses in this catalog are identified by prefixes and numbers that were assigned by Florida’s Statewide Course Numbering System (SCNS). This numbering system is used by all public postsecondary institutions in Florida and by participating nonpublic institutions. The major purpose of this system is to facilitate the transfer of courses between participating institutions. Students and administrators can use the online SCNS to obtain course descriptions and specific information about course transfer between participating Florida institutions. This information is at the SCNS website at http://scns.fldoe.org.

Each participating institution controls the title, credit, and content of its own courses and recommends the first digit of the course number to indicate the level at which students normally take the course. Course prefixes and the last three digits of the course numbers are assigned by members of faculty discipline committees appointed for that purpose by the Florida Department of Education in Tallahassee. Individuals nominated to serve on these committees are selected to maintain a representative balance as to type of institution and discipline field or specialization.

The course prefix and each digit in the course number have a meaning in the SCNS. The listing of prefixes and associated courses is referred to as the “SCNS taxonomy.” Descriptions of the content of courses are referred to as “statewide course profiles.”

Example of Course Identifier

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Level Code</th>
<th>Century Digit</th>
<th>Decade Digit</th>
<th>Unit Digit</th>
<th>Lab Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENC</td>
<td>(first digit)</td>
<td>(second digit)</td>
<td>(third digit)</td>
<td>(fourth digit)</td>
<td></td>
</tr>
<tr>
<td>English</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>No laboratory component in this course</td>
</tr>
<tr>
<td>Composition</td>
<td>Lower (Freshman)</td>
<td>Freshman Composition</td>
<td>Freshman Composition Skills</td>
<td>Freshman Composition Skills I</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Level at this institution</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

General Rule for Course Equivalencies

Equivalent courses at different institutions are identified by the same prefixes and same last three digits of the course number and are guaranteed to be transferable between participating institutions that offer the course, with a few exceptions, as listed below in Exceptions to the General Rule for Equivalency.

For example, a freshman composition skills course is offered by 84 different public and nonpublic postsecondary institutions. Each institution uses “ENC_101” to identify its freshman composition skills course. The level code is the first digit and represents the year in which students normally take the course at a specific institution. In the SCNS taxonomy, “ENC” means “English Composition,” the century digit “1” represents “Freshman Composition,” the decade digit “0” represents “Freshman Composition Skills,” and the unit digit “1” represents “Freshman Composition Skills I.”

In the sciences and certain other areas, a “C” or “L” after the course number is known as a lab indicator. The “C” represents a combined lecture and laboratory course that meets in the same place at the same time. The “L” represents a laboratory course or the laboratory part of a course that has the same prefix and course number but meets at a different time or place.

Transfer of any successfully completed course from one participating institution to another is guaranteed in cases where the course to be transferred is equivalent to one offered by the receiving institution. Equivalencies are established by the same prefix and last three digits and comparable faculty credentials at both institutions. For example, ENC 1101 is offered at a community college. The same course is offered at a state university as ENC 2101. A student who has successfully completed ENC 1101 at a Florida College System institution is guaranteed to receive transfer credit for ENC 2101 at the state university if the student transfers. The student cannot be required to take ENC 2101 again since ENC 1101 is equivalent to ENC 2101. Transfer credit must be awarded for successfully completed equivalent courses and used by the receiving institution to determine satisfaction of requirements by transfer students on the same basis as credit awarded to
the native students. It is the prerogative of the receiving institution, however, to offer transfer credit for courses successfully completed that have not been designated as equivalent.

**NOTE:** Credit generated at institutions on the quarter-term system may not transfer the equivalent number of credits to institutions on the semester-term system. For example, 4.0 quarter hours often transfers as 2.67 semester hours.

**The Course Prefix**

The course prefix is a three-letter designator for a major division of an academic discipline, subject matter area, or subcategory of knowledge. The prefix is not intended to identify the department in which a course is offered. Rather, the content of a course determines the assigned prefix to identify the course.

**Authority for Acceptance of Equivalent Courses**

Section 1007.24(7), Florida Statutes, states:

Any student who transfers among postsecondary institutions that are fully accredited by a regional or national accrediting agency recognized by the United States Department of Education and that participate in the statewide course numbering system shall be awarded credit by the receiving institution for courses satisfactorily completed by the student at the previous institutions. Credit shall be awarded if the courses are judged by the appropriate statewide course numbering system faculty committees representing school districts, public postsecondary educational institutions, and participating nonpublic postsecondary educational institutions to be academically equivalent to courses offered at the receiving institution, including equivalency of faculty credentials, regardless of the public or nonpublic control of the previous institution. The Department of Education shall ensure that credits to be accepted by a receiving institution are generated in courses for which the faculty possess credentials that are comparable to those required by the accrediting association of the receiving institution. The award of credit may be limited to courses that are entered in the statewide course numbering system. Credits awarded pursuant to this subsection shall satisfy institutional requirements on the same basis as credits awarded to native students.

**Exceptions to the General Rule for Equivalency**

Since the initial implementation of the SCNS, specific disciplines or types of courses have been excepted from the guarantee of transfer for equivalent courses. These include courses that must be evaluated individually or courses in which the student must be evaluated for mastery of skill and technique. The following courses are exceptions to the general rule for course equivalencies and may not transfer. Transferability is at the discretion of the receiving institution.

A. Courses not offered by the receiving institution.
B. For courses at non-regionally accredited institutions, courses offered prior to the established transfer date of the course in question.
C. Courses in the _900-999_ series are not automatically transferable, and must be evaluated individually. These include such courses as Special Topics, Internships, Apprenticeships, Practica, Study Abroad, Theses, and Dissertations.
D. Applied academics for adult education courses.
E. Graduate courses.
F. Internships, apprenticeships, practica, clinical experiences, and study abroad courses with numbers other than those ranging from 900-999.
G. Applied courses in the performing arts (Art, Dance, Interior Design, Music, and Theatre) and skills courses in Criminal Justice (academic certificate courses) are not guaranteed as transferable. These courses need evidence of achievement (e.g., portfolio, audition, interview, etc.).

**Courses at Non-regionally Accredited Institutions**

The SCNS makes available on its home page (http://scns.fldoe.org) a report entitled “Courses at Non-regionally Accredited Institutions” that contains a comprehensive listing of all nonpublic institution courses in the SCNS inventory, as well as each course’s transfer level and transfer effective date. This report is updated monthly.
Questions about the SCNS and appeals regarding course credit transfer decisions should be directed to Cynthia Brown Hernandez, the USF System SCNS contact, located in the USF Student Services Building (SVC), Room 2002, phone: 4-4051 or via email at cynthia@usf.edu or to the Florida Department of Education, Office of Articulation, 1401 Turlington Building, Tallahassee, Florida 32399-0400. Special reports and technical information may be requested by calling the SCNS office at (850) 245-0427 or at http://scns.fldoe.org.
## Graduate Course Descriptions

<table>
<thead>
<tr>
<th>SUB</th>
<th>NUM</th>
<th>TITLE</th>
<th>HRS</th>
<th>PREREQUISITES</th>
<th>DESCRIPTION</th>
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</thead>
<tbody>
<tr>
<td>ACG</td>
<td>5007</td>
<td>MBA Essentials: Accounting</td>
<td>0</td>
<td></td>
<td>A survey course related to both financial accounting and managerial accounting. An examination of accounting concepts for presentation of financial information to interested users as well as information generated for internal management.</td>
</tr>
<tr>
<td>ACG</td>
<td>5205</td>
<td>Advanced Financial Accounting</td>
<td>3</td>
<td>PR: ACG 3113</td>
<td>Accounting for business combinations, preparation of consolidated financial statements, home office/branch relationships, foreign operations and transactions, partnerships.</td>
</tr>
<tr>
<td>ACG</td>
<td>5505</td>
<td>Governmental/Not-For-Profit Accounting</td>
<td>3</td>
<td>CR: ACG 4632; PR: ACG 3113</td>
<td>Application of financial and managerial accounting, and auditing, principles and theory to both governmental and not-for-profit entities.</td>
</tr>
<tr>
<td>ACG</td>
<td>5675</td>
<td>Internal and Operational Auditing</td>
<td>3</td>
<td>CR: ACG 4632; PR: ACG 3113 and ACG 3401</td>
<td>The objective of Internal and Operational Auditing is to provide students with an opportunity to learn about the theory and practice of internal and operational auditing and to apply relevant audit principles and techniques to selected audit problems.</td>
</tr>
<tr>
<td>ACG</td>
<td>6025</td>
<td>Financial Accounting for Managers</td>
<td>2</td>
<td></td>
<td>Study of (1) accounting concepts and standards applicable to presentation of financial information to interested users, (2) structure and interpretation of financial statements, especially issues of income determination and assessment measurement.</td>
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<tr>
<td>SUB</td>
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<tr>
<td>ACG</td>
<td>6026</td>
<td>Accounting Concepts for Managers</td>
<td>3</td>
<td></td>
<td>A graduate level introduction to the role of accounting information in the decisions of internal and external users of financial information and statements; requires admission to the Certificate in Business Foundations.</td>
</tr>
<tr>
<td>ACG</td>
<td>6028</td>
<td>Measuring Organizational Effectiveness</td>
<td>3</td>
<td></td>
<td>This course provides a graduate level introduction to financial and non-financial performance measures. The course considers how stakeholders of private and public sector organizations use financial and non-financial measures to access how well, and at what cost, these organizations are able to achieve strategic/operating goals and objectives.</td>
</tr>
<tr>
<td>ACG</td>
<td>6075</td>
<td>Management Accounting and Control</td>
<td>2</td>
<td>PR: ACG 6025</td>
<td>Deals with management accounting systems for different types of entities, cost behavior patterns, cost-volume-profit analysis, relevant information for decision making, and budgets and standard costs for planning and control.</td>
</tr>
<tr>
<td>ACG</td>
<td>6346</td>
<td>Contemporary Issues in Managerial Accounting</td>
<td>3</td>
<td>PR: ACG 3341 or equivalent</td>
<td>The evolution of cost accounting systems, and the impact of new managerial accounting philosophies in the modern international manufacturing environment, including a discussion of current issues and controversies involving managerial accounting.</td>
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<tr>
<td>SUB</td>
<td>NUM</td>
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<tr>
<td>ACG</td>
<td>6405</td>
<td>Advanced Accounting Information Systems</td>
<td>3</td>
<td>PR: ACG 6453</td>
<td>This course focuses on business process modeling techniques for creating advanced enterprise-wide accounting systems. The course also focuses on information systems risks, controls and auditing, and enterprise resource planning systems.</td>
</tr>
<tr>
<td>ACG</td>
<td>6457</td>
<td>Accounting Systems Audit, Control, and Security</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>PR: ACG 3401 or equivalent, or BUL 5842</td>
<td>An in-depth study of contemporary systems control security from an audit perspective. Course topics will include: IS audit standards, contemporary AIS technologies, and the development and maintenance of AIS integrity.</td>
</tr>
<tr>
<td>ACG</td>
<td>6476</td>
<td>Contemporary Issues in Accounting Information Systems</td>
<td>3</td>
<td></td>
<td>An in-depth study of current accounting information systems issue confronting the accounting profession. Graduate students research and study contemporary and emerging topics in the field.</td>
</tr>
<tr>
<td>ACG</td>
<td>6636</td>
<td>Contemporary Issues In Auditing</td>
<td>3</td>
<td>PR: ACG 4632</td>
<td>This course explores contemporary auditing issues and advanced topics concerning the changing role of the audit assurance function and changing audit processes. Topics include audit reporting, auditing in advanced computerized environments, audit judgment, quality control, and regulation of the profession.</td>
</tr>
<tr>
<td>ACG</td>
<td>6835</td>
<td>Accounting Skills, Values, and Information Technology</td>
<td>3</td>
<td></td>
<td>This course is designed to introduce Master of Accountancy students to the basic skills, competencies, and technologies of accounting.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>ACG</td>
<td>6875</td>
<td>Financial Reporting and Professional Issues</td>
<td>3</td>
<td>CR: ACG 6453</td>
<td>A study and evaluation of the evolution of current financial accounting theory. An examination of financial accounting objectives, measurement models, and controversial issues, from both a financial reporting and professional (auditing) perspective.</td>
</tr>
<tr>
<td>ACG</td>
<td>6905</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
<td>Independent Study. Student must have a contract with an instructor.</td>
</tr>
<tr>
<td>ACG</td>
<td>6915</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
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</tr>
<tr>
<td>ACG</td>
<td>6932</td>
<td>Integrative Accounting Seminar</td>
<td>3</td>
<td></td>
<td>Use of case studies to explore the interaction of accounting and business topics that have been previously emphasized in separate courses.</td>
</tr>
<tr>
<td>ACG</td>
<td>6936</td>
<td>Selected Topics in Accounting</td>
<td>1-4</td>
<td></td>
<td>The course content will depend on student demand and instructor's interest.</td>
</tr>
<tr>
<td>ACG</td>
<td>7156</td>
<td>Seminar in Financial Accounting</td>
<td>3</td>
<td>PR: ACG 6875</td>
<td>This course investigates advanced research and methodological issues in financial accounting. It focuses primarily on research which uses financial information in contexts external to the firm.</td>
</tr>
<tr>
<td>ACG</td>
<td>7356</td>
<td>Seminar in Management Accounting</td>
<td>3</td>
<td>PR: ACG 6346</td>
<td>Review and critical analysis of management accounting foundation with emphasis on the current research methods in organizational behavior aspects and multiple criteria decision methods.</td>
</tr>
<tr>
<td>ACG</td>
<td>7415</td>
<td>Seminar In Accounting Information Systems</td>
<td>3</td>
<td>PR: ACG 6405</td>
<td>Review and critical analysis of major topics and research methods in accounting information systems.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>ACG</td>
<td>7646</td>
<td>Seminar in Auditing</td>
<td>3</td>
<td>PR: ACG 6636 or equiv</td>
<td>This course involves a study of state-of-the-art research techniques as applied to major auditing issues and a critical analysis of the reported research findings.</td>
</tr>
<tr>
<td>ACG</td>
<td>7936</td>
<td>Seminar On Special Topics In Accounting</td>
<td>1-4</td>
<td></td>
<td>Coverage of particular topics of interest to doctoral faculty and students during any given semester.</td>
</tr>
<tr>
<td>ACG</td>
<td>7939</td>
<td>Executive Issues in Accounting</td>
<td>2-4</td>
<td></td>
<td>A research seminar for executives that explores contemporary issues in accounting. The specific theme of the seminar will be determined through consultations between the instructor and the students prior to the first class meeting.</td>
</tr>
<tr>
<td>ACG</td>
<td>7980</td>
<td>Dissertation in Accounting</td>
<td>2-21</td>
<td></td>
<td>Research and writing of a dissertation on an accounting topic.</td>
</tr>
<tr>
<td>ADE</td>
<td>6070</td>
<td>International Adult Education</td>
<td>3</td>
<td></td>
<td>Provides a survey of the field of international adult education. Current practices and historical efforts internationally will be explored.</td>
</tr>
<tr>
<td>ADE</td>
<td>6080</td>
<td>Adult Education in the United States</td>
<td>4</td>
<td></td>
<td>A study of the adult education movement in the United States from its beginnings to the present lifelong learning enterprise it has become. Economic and cultural factors of the past are examined with a view toward implications for the future.</td>
</tr>
<tr>
<td>ADE</td>
<td>6160</td>
<td>Program Management in Adult Education</td>
<td>3</td>
<td></td>
<td>An examination of the methods for establishing a productive adult education program, and the principles and procedures involved in designing, organizing, operating, and evaluating comprehensive adult education programs.</td>
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<tr>
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<tr>
<td>ADE</td>
<td>6161</td>
<td>Curriculum Construction in Adult Education</td>
<td>4</td>
<td></td>
<td>Curriculum scope, the process of planning and organizing instructional programs with emphasis on task analysis and process evaluation. Concentrates on basic principles affecting the planning of Adult Education activities, including an overview of the human forces that both impinge on and motivate human behavior in an adult learning environment.</td>
</tr>
<tr>
<td>ADE</td>
<td>6197</td>
<td>Adult Basic Education</td>
<td>4</td>
<td></td>
<td>An overview of adult basic education with an emphasis on current issues and problems of curriculum and instruction in program development and on culturally different adults.</td>
</tr>
<tr>
<td>ADE</td>
<td>6198</td>
<td>Effective Continuing Education for Professionals</td>
<td>3</td>
<td>PR: ADE 6385 and ADE 6080</td>
<td>This course will provide a description, explanation and critique of the goals, processes, outcomes, and issues related to the continuing education of professionals. The design, development and administration of these programs will be explored.</td>
</tr>
<tr>
<td>ADE</td>
<td>6287</td>
<td>Supervision of Local Adult Education Programs</td>
<td>4</td>
<td></td>
<td>A study of the factors involved in the supervision of instruction including plans for teacher education, improvement of instruction, coordination of activities, and personnel relations.</td>
</tr>
<tr>
<td>ADE</td>
<td>6360</td>
<td>Methods of Teaching Adult Education</td>
<td>3</td>
<td></td>
<td>An exploration of different methods, techniques, and materials available to help adults learn. Concentration on the process of designing effective learning experiences for adults and developing the competencies of self-directed learning.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>ADE</td>
<td>6370</td>
<td>Human Resource Development</td>
<td>3</td>
<td></td>
<td>A study of learning, training, and education as it is practiced in the public, private and the non-profit sectors. Course covers HRD history, key competencies, and relevant theory.</td>
</tr>
<tr>
<td>ADE</td>
<td>6385</td>
<td>The Adult Learner</td>
<td>3</td>
<td></td>
<td>An investigation of the physiological and psychological changes in the adult life span and the implications these have for adult learning capabilities. Concentration on the identification of principles of adult learning, differences between adults and youth as learners, and a review of research on adult learning.</td>
</tr>
<tr>
<td>ADE</td>
<td>6389</td>
<td>Adult Learning and Cognitive Styles</td>
<td>3</td>
<td></td>
<td>The course focuses on a foundational knowledge of brain-based learning and its impact on adult learners, including critique and assessment of learning styles.</td>
</tr>
<tr>
<td>ADE</td>
<td>6906</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
<td>Independent Study in which students must have a contract with an instructor.</td>
</tr>
<tr>
<td>ADE</td>
<td>6931</td>
<td>Selected Topics in ADE and HRD</td>
<td>1-5</td>
<td></td>
<td>Each topic is a course under the supervision of a faculty member. The title and content will vary according to the topic.</td>
</tr>
<tr>
<td>ADE</td>
<td>6946</td>
<td>Practicum in Adult Education</td>
<td>2-6</td>
<td></td>
<td>A problem-centered field study in the local community, school, government, office, social agency, business, or industry setting.</td>
</tr>
<tr>
<td>SUB</td>
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<td>PREREQUISITES</td>
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<tr>
<td>ADE</td>
<td>6966</td>
<td>Final Master's Seminar</td>
<td>4</td>
<td></td>
<td>This course is designed to provide in-depth review of various areas of adult education. It is designed to prepare individuals for the comprehensive exams. Emphasis also will be on developing familiarity with formal research literature.</td>
</tr>
<tr>
<td>ADE</td>
<td>6971</td>
<td>Thesis: Masters/Education Specialist</td>
<td>2-19</td>
<td></td>
<td>Thesis/Specialist project hours.</td>
</tr>
<tr>
<td>ADE</td>
<td>7076</td>
<td>Continuing Education in Higher Education</td>
<td>3</td>
<td>PR: ADE 6385 and ADE 6080</td>
<td>This course will explore the history, relevant research and the current practices in community college and higher education continuing education program and administrative units.</td>
</tr>
<tr>
<td>ADE</td>
<td>7169</td>
<td>Instructional Development Using Adult Education</td>
<td>3</td>
<td></td>
<td>This course is designed to develop competencies in a systematic approach to instructional improvement including the knowledge and application of developing curriculum models applied to ACE and HRD.</td>
</tr>
<tr>
<td>ADE</td>
<td>7268</td>
<td>Leadership in Adult Continuing Education and HRD</td>
<td>3</td>
<td></td>
<td>This course is a study of leadership theory, public policy analysis, best practices and related leadership research in adult continuing education and human resource development.</td>
</tr>
<tr>
<td>ADE</td>
<td>7269</td>
<td>Organization and Administration of ACE and HRD</td>
<td>3</td>
<td></td>
<td>This course provides knowledge and examples of the organization of ACE and HRD and also examines management principles and practices applied to ACE and HRD units including the tasks, responsibilities and guidelines used to manage these units effectively.</td>
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<td>PREREQUISITES</td>
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<tr>
<td>ADE</td>
<td>7388</td>
<td>Adult Development and Learning</td>
<td>3</td>
<td>PR: ADE 6385 or</td>
<td>This is an advanced, in-depth study of the distinctive characteristics of</td>
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<td>equiv</td>
<td>adult life and learning.</td>
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<tr>
<td>ADE</td>
<td>7676</td>
<td>Human Resource Development Policy Seminar</td>
<td>3</td>
<td>PR: ADE 6370</td>
<td>This course emphasizes complex skills, concepts and strategies related to</td>
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<td>the adult teaching/learning component and policy formation of human resource</td>
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<td>development in business, industry, government, education, and voluntary</td>
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<td></td>
<td>organizations.</td>
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<tr>
<td>ADE</td>
<td>7677</td>
<td>Emerging Trends in Adult Education:</td>
<td>3</td>
<td></td>
<td>Seminar for doctoral students(master's students by permission of the</td>
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<tr>
<td></td>
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<td>Critical Race Theory</td>
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<td>professor) where we critically examine and explore critical race theory</td>
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<td>regarding the degree of its theoretical relevance and contribution to</td>
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<td>educational practice.</td>
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<tr>
<td>ADE</td>
<td>7910</td>
<td>Directed Research In Adult Education</td>
<td>1-4</td>
<td></td>
<td>Directed research on topics related to adult education.</td>
</tr>
<tr>
<td>ADE</td>
<td>7930</td>
<td>Seminar in Adult Education</td>
<td>4</td>
<td>PR: ADE 6385 and</td>
<td>This is an intensive induction into doctoral studies in adult education</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>ADE 6080</td>
<td>stressing scholarly inquiry, professionalism, collegiality, and the</td>
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<td>doctoral degree process.</td>
</tr>
<tr>
<td>ADE</td>
<td>7937</td>
<td>Seminar In Adult Education</td>
<td>1-4</td>
<td></td>
<td>Seminar in advanced topics in Adult Education.</td>
</tr>
<tr>
<td>ADE</td>
<td>7947</td>
<td>Advanced Internship: Adult Education</td>
<td>2-4</td>
<td></td>
<td>Practical application in a clinical setting of knowledge aquired in the</td>
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<td></td>
<td>classroom. Hours may vary. May vary within an institution.</td>
</tr>
<tr>
<td>ADE</td>
<td>7980</td>
<td>Dissertation</td>
<td>2-30</td>
<td></td>
<td>Dissertation hours.</td>
</tr>
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<td>SUB</td>
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<tr>
<td>ADV</td>
<td>5005</td>
<td>Advertising Planning</td>
<td>3</td>
<td></td>
<td>Introduction to the process of developing advertising strategy, emphasizing theory and research methods. Applied research course to bridge research methods with execution of creative messaging strategies that drive business success.</td>
</tr>
<tr>
<td>ADV</td>
<td>6602</td>
<td>Advanced Advertising Management</td>
<td>3</td>
<td></td>
<td>Focuses on application of management principles and practice to effective development of advertising plans. The course includes case studies and discussion of current problems in research, planning, operations, administration, and evaluation.</td>
</tr>
<tr>
<td>AFA</td>
<td>6108</td>
<td>Social Construction of Race and Racism</td>
<td>3</td>
<td></td>
<td>Examinations of the social construction of race, racism, racial identities and cross-racial relationships in the US from the colonial period to present.</td>
</tr>
<tr>
<td>AFA</td>
<td>6120</td>
<td>Social Theory and Social Thought</td>
<td>3</td>
<td></td>
<td>Course examines the nature of social theory as an analytical tool and its relevance for understanding social thought and the historical and contemporary experiences of peoples of African descent in Africa and the Diaspora.</td>
</tr>
<tr>
<td>AFA</td>
<td>6207</td>
<td>African American Historiography</td>
<td>3</td>
<td></td>
<td>This course introduces graduate students to some of the major topics and texts in African American history. Readings will include both classic studies and recent innovative works in the field. The course is open to majors and non-majors.</td>
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<tr>
<td>AFA</td>
<td>6355</td>
<td>African American Community Research: Ethnography</td>
<td>3</td>
<td></td>
<td>This course is designed to assist students in understanding the dynamics of African American communities and community research in urban settings.</td>
</tr>
<tr>
<td>AFA</td>
<td>6387</td>
<td>Seminar on Genocide and Human Rights</td>
<td>3</td>
<td></td>
<td>Examines “genocide” and “human rights” as concepts and crimes; the debates that have developed around them and the circumstances in which perpetrators of these crimes deprive particular groups of people of their “right to life.”</td>
</tr>
<tr>
<td>AFA</td>
<td>6805</td>
<td>African Historiography</td>
<td>3</td>
<td></td>
<td>The course deals with the history of the writing of African history. It pays attention to the sources and methods that Africanists use to study Africa and major themes in the continent’s history, and the debates and interpretations they have generated.</td>
</tr>
<tr>
<td>AFA</td>
<td>6905</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
<td>Course consists of advanced graduate research on Africana studies topics selected by student and professor. The topics vary. The course allows students to develop research skills and independent work disciplines.</td>
</tr>
<tr>
<td>AFA</td>
<td>6910</td>
<td>Directed Research</td>
<td>1-12</td>
<td></td>
<td>Course consists of directed research on Africana studies topics selected by student and professor. The topics vary. The course allows students to develop research skills and independent work disciplines.</td>
</tr>
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<tr>
<td>AFA</td>
<td>6932</td>
<td>Topics in Africana Studies</td>
<td>3</td>
<td></td>
<td>Variable topics course focusing on the history, culture, and lived experiences of African, African-American, and/or other peoples of African descent worldwide. Rpt. Up to 12 hours as topics may vary.</td>
</tr>
<tr>
<td>AFA</td>
<td>6945</td>
<td>Internship</td>
<td>1-3</td>
<td></td>
<td>This course involves working with a local agency (gov’t., NGO, private, etc.) on topic related to the theme of the MA degree, researching and documenting the process and preparing the data for writing the masters thesis.</td>
</tr>
<tr>
<td>AML</td>
<td>6017</td>
<td>Studies in American Literature to 1860</td>
<td>3</td>
<td></td>
<td>Selected focused studies in American literature before 1860: the Puritans, Franklin, Cooper, Irving, Poe, Emerson, Hawthorne, Melville, and others.</td>
</tr>
<tr>
<td>AML</td>
<td>6018</td>
<td>Studies in American Literature 1860 to 1920</td>
<td>3</td>
<td></td>
<td>Selected focused studies in American literature: Dickinson, Whitman, Twain, Howells, James, Jewett, Chopin, Crane, Dreiser, and others.</td>
</tr>
<tr>
<td>AML</td>
<td>6027</td>
<td>Studies in Modern American Literature</td>
<td>3</td>
<td></td>
<td>Modern American drama, poetry, fiction, and literary criticism; authors include Faulkner, Hemingway, Fitzgerald, O’Neill, Miller, Anderson, Wolfe, Cummings, Frost, Pound, and Eliot.</td>
</tr>
<tr>
<td>AML</td>
<td>6608</td>
<td>Studies in African American Literature</td>
<td>3</td>
<td></td>
<td>Focuses on varied topics in African American literature such as African American Fiction and the Harlem Renaissance. Topics will supply greatly needed coverage of increasingly important areas of American and African American literature, history, and culture.</td>
</tr>
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<tr>
<td>AML</td>
<td>6637</td>
<td>Studies in US Latina/Latino Literatures</td>
<td>3</td>
<td></td>
<td>Students will explore the major strands of US Latina/o Literatures including immigration narratives, auto ethnography, and historical fiction from or about the perspective of US Latinas/os.</td>
</tr>
<tr>
<td>AMS</td>
<td>6002</td>
<td>American Lives</td>
<td>3</td>
<td></td>
<td>Open to non-majors. An interdisciplinary approach to the study of autobiography. Examines the relationship between identity and community in classic American autobiographies. Utilizes autobiography as a resource of social and cultural history which provides insights regarding the complex interaction between a life, a mind, and a text.</td>
</tr>
<tr>
<td>AMS</td>
<td>6156</td>
<td>Theories and Methods of Cultural Studies</td>
<td>3</td>
<td></td>
<td>This course examines the relationship between the arts and society by introducing various approaches to the study of literature, art, and culture that are of contemporary relevance to graduate students in the liberal arts and American Studies.</td>
</tr>
<tr>
<td>AMS</td>
<td>6254</td>
<td>Cultural Era</td>
<td>3</td>
<td></td>
<td>Open to non-majors. Interdisciplinary analysis of American life during a specific cultural era.</td>
</tr>
<tr>
<td>AMS</td>
<td>6805</td>
<td>Enduring Questions in American Culture</td>
<td>3</td>
<td></td>
<td>Open to non-majors. Explores the historical changes and continuities of an enduring theme, issue, pattern, or practice in American culture across multiple cultural eras. E.g., democracy, wilderness, jazz, domesticity, regionalism, ethnicity.</td>
</tr>
<tr>
<td>AMS</td>
<td>6901</td>
<td>Directed Readings in American Studies</td>
<td>1-3</td>
<td></td>
<td>Open to non-majors. A supervised program of intensive reading.</td>
</tr>
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<tr>
<td>AMS</td>
<td>6915</td>
<td>Directed Research</td>
<td>1-12</td>
<td></td>
<td>Directed research course.</td>
</tr>
<tr>
<td>AMS</td>
<td>6934</td>
<td>Selected Topics</td>
<td>1-3</td>
<td></td>
<td>Open to non-majors. Variable topics such as American Autobiography, Film in American Culture, and Photography in American Culture.</td>
</tr>
<tr>
<td>AMS</td>
<td>6938</td>
<td>Research Seminar</td>
<td>3</td>
<td></td>
<td>A course emphasizing the practical aspects of research in American Studies including analyzing primary sources, assembling a bibliography, synthesizing secondary sources, and defining an argument. Topic varies.</td>
</tr>
<tr>
<td>AMS</td>
<td>6940</td>
<td>Internship in American Studies</td>
<td>1-3</td>
<td></td>
<td>A structured, out-of-class learning experience providing first hand, practical training in American Studies-related professional careers.</td>
</tr>
<tr>
<td>AMS</td>
<td>6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td></td>
<td>A Master's thesis course.</td>
</tr>
<tr>
<td>ANG</td>
<td>5395</td>
<td>Visual Anthropology</td>
<td>3</td>
<td></td>
<td>This class will examine the major dimensions of visual anthropology with an emphasis on the visual means of presenting anthropology to the discipline and general public. The course will focus on visual documentation and study of visual images.</td>
</tr>
<tr>
<td>ANG</td>
<td>5486</td>
<td>Quantitative Methods in Anthropology</td>
<td>3</td>
<td></td>
<td>This course is an introduction to quantitative methods for the anthropologist covering both classical statistical approaches and exploratory data analysis, using computers with statistical software.</td>
</tr>
<tr>
<td>ANG</td>
<td>5901</td>
<td>Directed Reading</td>
<td>1-4</td>
<td></td>
<td>Individual guidance in concentrated reading on a selected topic in Anthropology. Contract required prior to registration.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>ANG</td>
<td>5910</td>
<td>Individual Research</td>
<td>2-4</td>
<td></td>
<td>Individual guidance in selected research project.</td>
</tr>
<tr>
<td>ANG</td>
<td>5937</td>
<td>Seminar In Anthropology</td>
<td>2-4</td>
<td></td>
<td>Topics to be chosen by students and instructor.</td>
</tr>
<tr>
<td>ANG</td>
<td>6081</td>
<td>Museum Methods</td>
<td>4</td>
<td></td>
<td>The class introduces students to contemporary issues in exhibit practice in anthropology museums, and offers practical, hands-on experience in the design and fabrication of a museum exhibit based on anthropological concepts.</td>
</tr>
<tr>
<td>ANG</td>
<td>6084</td>
<td>Anthropological Theory Today</td>
<td>3</td>
<td></td>
<td>This course provides an overview of contemporary theorizing in social and cultural anthropology for graduate students.</td>
</tr>
<tr>
<td>ANG</td>
<td>6100</td>
<td>Topics in Archaeological Science</td>
<td>3</td>
<td></td>
<td>This course focuses on the application of scientific methods of analysis to archaeological materials, including bone, stone, pottery, and metal. Repeatable for up to 6 hours.</td>
</tr>
<tr>
<td>ANG</td>
<td>6110</td>
<td>Archaeology Theory and Current Issues</td>
<td>3</td>
<td></td>
<td>Methodology and theory in archaeology, analysis, interpretation of data.</td>
</tr>
<tr>
<td>ANG</td>
<td>6115</td>
<td>Seminar In Archaeology</td>
<td>3</td>
<td></td>
<td>An advanced critical survey of archaeology emphasizing contributions to applied anthropology.</td>
</tr>
<tr>
<td>ANG</td>
<td>6153</td>
<td>Topics in North American Archaeology</td>
<td>3</td>
<td></td>
<td>Comprehensive understanding of the prehistoric development of American Indian cultures in the main geographical regions, with emphasis on current issues in cultural resource management. Repeatable for up to 6 hours.</td>
</tr>
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<tr>
<td>ANG</td>
<td>6155</td>
<td>Southeastern U.S. Archaeology</td>
<td>3</td>
<td>PR: ANT 3101</td>
<td>The course examines the culture history and processes of change or continuity throughout the region of the Southeast, as well as the often differing record for various local areas, from prehistoric through historic times.</td>
</tr>
<tr>
<td>ANG</td>
<td>6163</td>
<td>Topics in Mesoamerican Archaeology</td>
<td>3</td>
<td></td>
<td>This course explores the distinctive features of the evolving cultural traditions of Mesoamerica. This course identifies the major issues and methodological approaches of Mesoamerican archaeology. Repeatable for up to 6 hours.</td>
</tr>
<tr>
<td>ANG</td>
<td>6165</td>
<td>Topics in South American Archaeology</td>
<td>3</td>
<td></td>
<td>This course introduces the prehistoric and early historic cultural chronology of the South American continent, with an emphasis on current research and controversies and perspectives from cultural ecology. Repeatable for up to 6 hours.</td>
</tr>
<tr>
<td>ANG</td>
<td>6175</td>
<td>Topics in Mediterranean Archaeology</td>
<td>3</td>
<td></td>
<td>A graduate seminar in Mediterranean archaeology, spanning prehistory and the early historical period, and will examine subsistence adaptations, island settlement, trade, technology, religion, rise of complex societies and early states. Repeatable to 6 hr.</td>
</tr>
<tr>
<td>ANG</td>
<td>6189</td>
<td>Ancient Diets</td>
<td>3</td>
<td></td>
<td>This course focuses on archaeological remains and studies about ancient diet, a fundamental practice by all world cultures.</td>
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<tr>
<td>ANG</td>
<td>6195</td>
<td>Ancient Trade</td>
<td>3</td>
<td></td>
<td>This course focuses on long-distance trade and contact in ancient times, based on archaeological evidence and scientific studies, and how this informs us about sociopolitical systems and economic relations and how they vary over time and space.</td>
</tr>
<tr>
<td>ANG</td>
<td>6197</td>
<td>Public Archaeology</td>
<td>3</td>
<td></td>
<td>This graduate-level course surveys archaeological practice as part of applied anthropology, in the public and private sector, from local to international.</td>
</tr>
<tr>
<td>ANG</td>
<td>6198</td>
<td>Regional Problems in Methods of Public Archaeology</td>
<td>3</td>
<td></td>
<td>Contemporary problems in Public Archaeology in the context of a specific region. Open to non-majors.</td>
</tr>
<tr>
<td>ANG</td>
<td>6270</td>
<td>Chiefdoms</td>
<td>3</td>
<td></td>
<td>This course examines theory and data on the emergence of chiefly forms of social organization using case studies from both ethnography and prehistory, and focusing on classic works of cultural evolution and recent critiques of the chiefdom concept.</td>
</tr>
<tr>
<td>ANG</td>
<td>6302</td>
<td>Gender in Cross-Cultural Perspective</td>
<td>3</td>
<td></td>
<td>Examines roles of women, men, other genders and social, economic, and political aspects of sex and gender, from a biocultural, 4-field anthropological perspective, emphasizing non-Western societies and cross-cultural comparison in past and present.</td>
</tr>
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<tr>
<td>ANG</td>
<td>6392</td>
<td>Engaging Ethnography</td>
<td>3</td>
<td></td>
<td>What does engaged research and writing look like, and to what effect? Explore ethnographic monographs to discover how various forms of engagement can transform research epistemologies, questions, methodologies, and products, and define own approach.</td>
</tr>
<tr>
<td>ANG</td>
<td>6393</td>
<td>Anthropology, Contemporary Culture and the Media</td>
<td>3</td>
<td></td>
<td>Course entails the anthropological study of the roll of media in contemporary culture. Selected issues include the cultural impact of images and gender/ethnic stereotypes. Special attention will be paid to ethnographic studies of media audiences, and a central theme will be the role of media in a global, multi-cultural context.</td>
</tr>
<tr>
<td>ANG</td>
<td>6404</td>
<td>Health and Medical Systems</td>
<td>3</td>
<td></td>
<td>An explicitly medical anthropological approach to systems-level issues in health and medicine.</td>
</tr>
<tr>
<td>ANG</td>
<td>6436</td>
<td>Issues in Heritage Tourism</td>
<td>3</td>
<td></td>
<td>The purpose of this course is to introduce students to the theoretical and practical issues in heritage tourism and the business of heritage resource management from an anthropological perspective.</td>
</tr>
<tr>
<td>ANG</td>
<td>6447</td>
<td>Selected Topics in Urban Anthropology</td>
<td>3</td>
<td></td>
<td>Current topical issues in Urban Anthropology. Open to non-majors.</td>
</tr>
<tr>
<td>ANG</td>
<td>6448</td>
<td>Regional Problems in Urban Anthropology</td>
<td>3</td>
<td></td>
<td>Contemporary problems in Urban Anthropology in the context of a specific region. Open to non-majors.</td>
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<tr>
<td>ANG</td>
<td>6463</td>
<td>Social Epidemiology Applied Anthropology</td>
<td>3</td>
<td>Applied Anthropology</td>
<td>An advanced medical anthropology course on the application of methods and concepts from social epidemiology as relevant to cultural analysis.</td>
</tr>
<tr>
<td>ANG</td>
<td>6465</td>
<td>Regional Problems in Medical Anthropology</td>
<td>3</td>
<td></td>
<td>Contemporary problems in Medical Anthropology in the context of a specific region. Open to non-majors.</td>
</tr>
<tr>
<td>ANG</td>
<td>6469</td>
<td>Selected Topics in Medical Anthropology</td>
<td>3</td>
<td></td>
<td>Current topical issues in Medical Anthropology. Open to non-majors.</td>
</tr>
<tr>
<td>ANG</td>
<td>6490</td>
<td>Seminar in Cultural Anthropology</td>
<td>3</td>
<td></td>
<td>A critical advanced survey of Cultural Anthropology emphasizing contributions to Applied Anthropology, required of all MA students.</td>
</tr>
<tr>
<td>ANG</td>
<td>6495</td>
<td>Oral History and Life History: Approaches to Qualitative Research</td>
<td>3</td>
<td></td>
<td>A in-depth survey of the methods, concepts, and practical applications of narrative-based qualitative research, featuring critical readings in case studies, and individual and group projects.</td>
</tr>
<tr>
<td>ANG</td>
<td>6497</td>
<td>Qualitative Research Methods in Anthropology</td>
<td>3</td>
<td></td>
<td>This course is designed to acquaint students with the philosophical foundations of qualitative research, and to provide the opportunity for students to develop skills in the variety of data collection methods and analysis typical of qualitative research.</td>
</tr>
<tr>
<td>ANG</td>
<td>6511</td>
<td>Seminar in Physical Anthropology</td>
<td>3</td>
<td></td>
<td>A critical advanced survey of Physical Anthropology emphasizing contributions to Applied Anthropology.</td>
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<tr>
<td>ANG</td>
<td>6533</td>
<td>Anthropology of Human Growth and Development</td>
<td>3</td>
<td></td>
<td>Overview of human growth and development from a perspective that combines biological and cultural approaches in anthropology.</td>
</tr>
<tr>
<td>ANG</td>
<td>6536</td>
<td>Bioarchaeology</td>
<td>3</td>
<td></td>
<td>Overview of methods and theories used to study the relationship between behavioral, cultural, and environmental factors and human biology, as reflected in human skeletal remains.</td>
</tr>
<tr>
<td>ANG</td>
<td>6570</td>
<td>Nutritional Assessment</td>
<td>3</td>
<td></td>
<td>Overview of basic nutritional assessment methods used in anthropology, nutritional sciences, and public health.</td>
</tr>
<tr>
<td>ANG</td>
<td>6585</td>
<td>Theories in Applied Bioanthropology</td>
<td>3</td>
<td></td>
<td>A survey of the major theoretical frameworks and quantitative and qualitative methodologies commonly used in biological anthropology research.</td>
</tr>
<tr>
<td>ANG</td>
<td>6701</td>
<td>Contemporary Applied Anthropology</td>
<td>3</td>
<td></td>
<td>A critical survey of Applied Anthropology as practiced today in the major branches of Anthropology, focusing on Applied, Medical, and Urban Anthropology. Open to non-majors.</td>
</tr>
<tr>
<td>ANG</td>
<td>6705</td>
<td>Foundations of Applied Anthropology I</td>
<td>3</td>
<td></td>
<td>MA Foundations of Applied Anthropology I provides graduate students with an introduction to the philosophical basis of contemporary anthropology.</td>
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<tr>
<td>ANG</td>
<td>6706</td>
<td>Foundations of Applied Anthropology II</td>
<td>3</td>
<td>PR: ANG 6705</td>
<td>This course is the second part of a two-course sequence required of all MA students in the anthropology department. This course provides students with foundational understandings of the epistemologies underlying contemporary applied anthropology.</td>
</tr>
<tr>
<td>ANG</td>
<td>6730</td>
<td>Socio Cultural Aspects of HIV/AIDS</td>
<td>3</td>
<td></td>
<td>This course is designed to provide an overview of the different social, economic, cultural, political, and ethical issues surrounding the spread of HIV/AIDS around the world.</td>
</tr>
<tr>
<td>ANG</td>
<td>6731</td>
<td>Health and Disasters</td>
<td>3</td>
<td></td>
<td>Disasters like Katrina and complex emergencies like Bosnia exacerbate social divisions and impact the health status of individuals, communities, and nations. This course considers mitigation policies and humanitarian responses.</td>
</tr>
<tr>
<td>ANG</td>
<td>6732</td>
<td>Global Health from an Anthropological Perspective</td>
<td>3</td>
<td></td>
<td>The aim of the course is to situate the debate about what is “global health” clearly in an anthropological perspective.</td>
</tr>
<tr>
<td>ANG</td>
<td>6733</td>
<td>Issues in Migrant Health</td>
<td>3</td>
<td></td>
<td>This course provides an overview of health issues associated with transnational migration from an anthropological point of view.</td>
</tr>
<tr>
<td>ANG</td>
<td>6735</td>
<td>Reproductive Health</td>
<td>3</td>
<td></td>
<td>An in-depth examination of major issues related to sexual and reproductive health in both domestic and international settings, with emphasis on perspectives from medical anthropology, public health, and women studies.</td>
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<tr>
<td>ANG</td>
<td>6739</td>
<td>Applied Anthropology and International Health</td>
<td>3</td>
<td></td>
<td>An advanced international anthropology course on the health issues, organization, people, policies and limitations of the arena of international health.</td>
</tr>
<tr>
<td>ANG</td>
<td>6741</td>
<td>Introduction to Forensic Sciences</td>
<td>3</td>
<td></td>
<td>Provides a general introduction to the methods and techniques used in the interdisciplinary field of forensic sciences.</td>
</tr>
<tr>
<td>ANG</td>
<td>6745</td>
<td>Forensic Anthropology</td>
<td>3</td>
<td></td>
<td>Provides a general introduction to the methods, theories, and techniques of Biological Anthropology as applied to medico-legal death investigations.</td>
</tr>
<tr>
<td>ANG</td>
<td>6746</td>
<td>Investigation of Violent Crimes Against Children</td>
<td>3</td>
<td></td>
<td>Advanced instruction for students to help them to understand the definitions of various forms and aspects of neglect, abuse, exploitation, abduction, and murder involving child victims.</td>
</tr>
<tr>
<td>ANG</td>
<td>6766</td>
<td>Research Methods in Applied Anthropology</td>
<td>3</td>
<td></td>
<td>Research design, data collection, and data analysis for Applied Anthropologists with urban and medical interests. Emphasis will be on non-quantitative research methods. Open to non-majors.</td>
</tr>
<tr>
<td>ANG</td>
<td>6770</td>
<td>Crime Scene Reconstruction</td>
<td>3</td>
<td></td>
<td>Surveys theories and methods of crime scene management and administration for violent crimes. Specifically it is designed to explore the ways in which evidence is recognized, preserved, documented, and collected in cases of violent crimes.</td>
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<tr>
<td>ANG</td>
<td>6771</td>
<td>The Science of Missing and Unidentified Persons</td>
<td>3</td>
<td></td>
<td>Surveys scientific methods for the investigation of missing, endangered, and unidentified persons. Topics include forensic anthropology, archaeology, odontology, forensic pathology, crime scene, victimology, homicide, and facial approximations.</td>
</tr>
<tr>
<td>ANG</td>
<td>6772</td>
<td>Homicide Investigations</td>
<td>3</td>
<td></td>
<td>Provide an introduction to the theoretical and practical issues in the field of criminal homicide investigations, and to teach the methods and tools necessary to collect, preserve, interpret and analyze evidence from violent crime scenes.</td>
</tr>
<tr>
<td>ANG</td>
<td>6905</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
<td>Independent study in which students must have a contract with an instructor.</td>
</tr>
<tr>
<td>ANG</td>
<td>6915</td>
<td>Directed Research Internship</td>
<td>1-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANG</td>
<td>6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td></td>
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</tr>
<tr>
<td>ANG</td>
<td>7487</td>
<td>Advanced Quantitative Research Methods Applied Anthro</td>
<td>3</td>
<td></td>
<td>Critical review of quantitative approaches to the development, management, and analysis of sociocultural data. Open to non-majors.</td>
</tr>
<tr>
<td>ANG</td>
<td>7703</td>
<td>History and Theory of Applied Anthropology</td>
<td>3</td>
<td></td>
<td>The history and theoretical development of Applied Anthropology, including cultural resources management are discussed in the context of the overall development of Anthropology as a discipline and profession.</td>
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<tr>
<td>ANG</td>
<td>7704</td>
<td>Legal and Ethical Aspects of Applied Anthropology</td>
<td>3</td>
<td></td>
<td>Development and nature of professional ethics in Applied Anthropology, including legal and quasi-legal regulations pertaining to human subjects research, cultural resources management, historic preservation, privacy, and freedom of information. Open to non-majors.</td>
</tr>
<tr>
<td>ANG</td>
<td>7708</td>
<td>Selected Topics in Applied Anthropology</td>
<td>3</td>
<td></td>
<td>An overview of Applied Anthropology in its relation to a major mode of public/private activity, e.g., planning, clinical practice, policy process, or advocacy. Open to non-majors.</td>
</tr>
<tr>
<td>ANG</td>
<td>7709</td>
<td>Applied Anthropology and Human Problems</td>
<td>3</td>
<td></td>
<td>Examination of specific problem areas of social significance and policy relevance. Typical offerings include: substance abuse, disease, mental health, international development, urban design, and education. Open to non-majors.</td>
</tr>
<tr>
<td>ANG</td>
<td>7905</td>
<td>Directed Individual Study</td>
<td>1-15</td>
<td></td>
<td>An advanced reading program of selected topics in Applied Anthropology under the supervision of an anthropology faculty member. A written contract describing requirements must be signed by the student and faculty member prior to registration.</td>
</tr>
<tr>
<td>ANG</td>
<td>7910</td>
<td>Directed Research</td>
<td>1-15</td>
<td></td>
<td>An advanced directed research program in a selected topic of Applied Anthropology under the supervision of an anthropology faculty member.</td>
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<tr>
<td>ANG</td>
<td>7938</td>
<td>Doctoral Proseminar in Applied Anthropology</td>
<td>3</td>
<td></td>
<td>Emphasizing the process of doing four-field anthropology (biological, archeological, linguistic, and cultural), conceptualizing research questions, identifying, gathering and analyzing data. How application and theory are integrated and how this integration is vital to the conduct of good anthropology with a variety of anthropological ideas.</td>
</tr>
<tr>
<td>ANG</td>
<td>7940</td>
<td>Doctoral Internship in Applied Anthropology</td>
<td>1-15</td>
<td></td>
<td>Supervised training in practicing Anthropology in a non-academic setting, focusing on the applications of Anthropology. A written contract describing requirements must be signed by the student, the faculty advisor, and the agency supervisor prior to registration.</td>
</tr>
<tr>
<td>ANG</td>
<td>7980</td>
<td>Dissertation: Doctoral</td>
<td>2-15</td>
<td></td>
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<tr>
<td>APK</td>
<td>6104</td>
<td>Developmental Exercise Physiology</td>
<td>3</td>
<td>PR: APK 3120 (or equivalent)</td>
<td>The course covers normal growth and physiological development in children and adolescents with an emphasis on the changes in physiological adaptations with exercise as a result of maturation.</td>
</tr>
<tr>
<td>APK</td>
<td>6109</td>
<td>Cardiorespiratory Aspects of Exercise Physiology</td>
<td>3</td>
<td></td>
<td>Covers selected topics regarding cardiorespiratory aspects of exercise physiology. Some of the topics to be covered include: gas exchange and transport during exercise; aerobic metabolism, and acute &amp; chronic adaptations to exercise training.</td>
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<tr>
<td>APK</td>
<td>6111</td>
<td>Advanced Exercise Physiology</td>
<td>3</td>
<td>PR: APK 3120 (or equivalent)</td>
<td>The course will address advanced principles of basic and applied exercise physiology. Cardiovascular and respiratory physiology and physiological responses of these systems to acute and chronic exercise will be discussed, as well as thermal stress.</td>
</tr>
<tr>
<td>APK</td>
<td>6116</td>
<td>Neuromuscular Aspects of Exercise Physiology</td>
<td>3</td>
<td></td>
<td>Covers selected topics regarding neuromuscular aspects of exercise physiology. Some of the topics to be covered include: neuromuscular anatomy and physiology, theory of skeletal muscle contraction, protein synthesis and degradation.</td>
</tr>
<tr>
<td>APK</td>
<td>6406</td>
<td>Psychology of Exercise</td>
<td>3</td>
<td></td>
<td>Covers selected topics regarding the psychological aspects of exercise. Topics to be covered include: stress, anxiety, depression, mood, pain, exertion, and body image. Research methodology will be an important consideration throughout.</td>
</tr>
<tr>
<td>ARC</td>
<td>5175</td>
<td>Computer Technology</td>
<td>3</td>
<td></td>
<td>Introduction to the application of computer technology in current architectural practice. The exploration of available software, programs, and computer services for word processing, information handling, specification writing, feasibility analysis, cost estimating, economic performance and life cycle cost analysis, project management (network programming and analysis), computer graphics, computer aided design and drafting.</td>
</tr>
<tr>
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<tr>
<td>ARC</td>
<td>5216</td>
<td>The Building Arts</td>
<td>3</td>
<td></td>
<td>Introduction to the man-made environment. The study and profession of architecture. The various facets of the process of shaping the built environment as it manifests itself in the different roles and specialization of the experts involved the process, and in the various academic courses that prepare the architect for practice.</td>
</tr>
<tr>
<td>ARC</td>
<td>5256</td>
<td>Design Theory</td>
<td>3</td>
<td></td>
<td>Survey of major schools of thought in design theory, methods of design and problem-solving, and design research. The nature of the design activity and its recurring difficulties. The nature and different types of problems. Traditional approaches to problem-solving and design in architecture; recent systematic as well as intuitive approaches to problem-solving based on developments in other fields. Scientific method; the systems approach and design.</td>
</tr>
<tr>
<td>ARC</td>
<td>5361</td>
<td>Core Design I</td>
<td>9</td>
<td></td>
<td>First of two semester Design Fundamentals/Design Graphics sequence focusing on design abstractions and analysis of the factors influencing conceptual design. Emphasis is placed on ordering principles, pattern recognition and utilization, and figure-ground relationships. Development of craftsmanship, drawing as a means to design, and perceptual acuity are stressed.</td>
</tr>
<tr>
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<tr>
<td>ARC</td>
<td>5362</td>
<td>Core Design II</td>
<td>9</td>
<td>PR: ARC 5361</td>
<td>Second of a two semester Design Fundamentals/Design Graphics sequence focusing on synthesis of design concepts and application of ordering principles in architectural design. Emphasis is placed on developing an understanding and awareness of architectural elements and compositions. Students examine the work of significant architects and use it as a basis for design exploration. Graphic documentation, diagramming, and model studies are stressed.</td>
</tr>
<tr>
<td>ARC</td>
<td>5363</td>
<td>Core Design III</td>
<td>6</td>
<td>CR: ARC 5689; PR: ARC 5362, ARC 5467, ARC 5587, ARC 5731</td>
<td>Study of the various phases of the building delivery and design process, and of different approaches to ordering that process in a systematic fashion. The student will use one such systematic approach in the investigation and development of design solutions for a project of moderate scale and complexity. Studies of built form ordering principles, mass/void relationships, scale and proportion, color, texture, contextual relationships, meaning/imagery, and building technology (awareness of structural organization, services networks, construction processes and materials). Aspects of human behavior as design determinants.</td>
</tr>
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<tr>
<td>ARC</td>
<td>5364</td>
<td>Advanced Design A</td>
<td>6</td>
<td>CPR: ARC 5588, ARC 5467; PR: ARC 5363.</td>
<td>Application of orderly design processes to building projects of moderate complexity and scale. Continued investigation of the relationship between human behavior and the environment. Analysis and integration of site relationships into the development of design solutions. Legal aspects of zoning, building codes, and regulations regarding access for accessibility, fire escape, etc.</td>
</tr>
<tr>
<td>ARC</td>
<td>5365</td>
<td>Advanced Design B</td>
<td>6</td>
<td>CPR: ARC 5588, ARC 5467.; PR: ARC 5363.</td>
<td>Investigation of the interaction between user requirements, environmental determinants, site and urban context conditions, technological factors, and design intentions in the development of design solutions for projects of medium scale and complexity. The analysis, design, and coordination of the various resulting systems, including structural, circulation, service networks, space zoning and use, environmental control systems at the interface between interior and exterior of a building. Representation of these relationships and systems in diagrams and models, and their manifestation in design and construction details.</td>
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<tr>
<td>ARC</td>
<td>5366</td>
<td>Advanced Design C</td>
<td>6</td>
<td>CPR: ARC 5588, ARC 5467.; PR: ARC 5363</td>
<td>Design of multi-purpose buildings of medium to large scale and complexity. Issues of community and neighborhood design as they relate to the design of buildings. Restoration and adaptive re-use of existing historic buildings. Focus on thinking through as well as documenting the complete building system and process.</td>
</tr>
<tr>
<td>ARC</td>
<td>5467</td>
<td>Materials and Methods of Construction</td>
<td>3</td>
<td>PR: ARC 5470</td>
<td>Overview of properties of primary construction materials and systems that make up building structures and enclosures. Emphasis on elements and assemblies relative to various climates, technologies, costs, building codes, and craftsmanship.</td>
</tr>
<tr>
<td>ARC</td>
<td>5470</td>
<td>Introduction to Technology</td>
<td>3</td>
<td></td>
<td>Introduction to architectural technology, including structures, materials and methods of construction, and environmental controls. Overview of building systems and components and their integration into architectural design projects.</td>
</tr>
<tr>
<td>ARC</td>
<td>5587</td>
<td>Structures I</td>
<td>3</td>
<td>PR: Calculus, Physics, and ARC 5470</td>
<td>Review of static and mechanical principles of materials. Analysis and evaluation for appropriate selection of structural systems and elements. Analysis and design of timber and steel structures, based on moment, shear, and deflection. Fundamentals of wind and seismic design as they apply to wood and steel construction. Truss analysis, beam and column behavior.</td>
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<tr>
<td>ARC</td>
<td>5689</td>
<td>Environmental Technology</td>
<td>3</td>
<td>PR: ARC 5467 and ARC 5470</td>
<td>Comprehensive overview of mechanical systems for buildings including: water and waste: fire protection and suppression; heating, cooling and controls; electric power distribution and illumination; communications; transportation systems, and acoustics.</td>
</tr>
<tr>
<td>ARC</td>
<td>5731</td>
<td>Architectural History I</td>
<td>3</td>
<td></td>
<td>Overview of the built environment from prehistory through the Middle Ages. Buildings and cities in their geographical, topographical, political, aesthetic, social, technological and economic context. Varieties of methodological approaches to the analysis of historical architecture. The focus will be on the built environment of Europe and the Mediterranean basin.</td>
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<tr>
<td>ARC</td>
<td>5732</td>
<td>Architectural History II</td>
<td>3</td>
<td></td>
<td>Overview of the built environment from the Renaissance to the present. Buildings and cities in their geographical, topographical, political, aesthetic, social, technological, and economic context. Study of various methodological approaches to the analysis of historic architecture, and development of student's own approach. Emphasis will be on the built environment of Europe and America.</td>
</tr>
<tr>
<td>ARC</td>
<td>5789</td>
<td>Modern Architecture History</td>
<td>3</td>
<td></td>
<td>Exploration of the philosophic, economic, aesthetic, social, historical and moral imperatives used by modern architects and historians in their attempt to design the appropriate physical environment for a new social order. The course will investigate the writings and works of the proponents of the modern style of architecture and study the new era using modern construction materials and techniques. &quot;</td>
</tr>
<tr>
<td>ARC</td>
<td>5793</td>
<td>History Abroad</td>
<td>3</td>
<td></td>
<td>Summer study abroad. Location and description varies from year to year.</td>
</tr>
<tr>
<td>ARC</td>
<td>5794</td>
<td>Florida Architectural History</td>
<td>3</td>
<td></td>
<td>An examination of the environmental, sociological, technological, political, economic, cultural, and other factors that influenced the discovery, growth, and urbanization of Florida as manifested by its architecture.</td>
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<tr>
<td>ARC</td>
<td>5920</td>
<td>Architectural Design Studio Abroad</td>
<td>5</td>
<td></td>
<td>Summer study abroad. Location and description varies from year to year.</td>
</tr>
<tr>
<td>ARC</td>
<td>5931</td>
<td>Special Studies in Architecture</td>
<td>1-5</td>
<td></td>
<td>Variable titles offered on topics of special interest.</td>
</tr>
<tr>
<td>ARC</td>
<td>6176</td>
<td>Advanced Computer Technology</td>
<td>3</td>
<td>PR: ARC 5175</td>
<td>Elective course dealing with further development of CAD skills, focusing on three-dimensional modeling. A wide range of software programs is included which explores painting and shading, surface textures, 3D detail studies, perspectives, and oblique representations.</td>
</tr>
<tr>
<td>ARC</td>
<td>6287</td>
<td>Professional Practice I</td>
<td>3</td>
<td>PR: ARC 5216, ARC 5364</td>
<td>Introduction and overview of professional practice, emphasizing business, organization, management, and marketing. Legal, economic, and ethical aspects of project procurement, design services, and delivery. Contracts, owner-contractor-architect roles and responsibilities.</td>
</tr>
<tr>
<td>ARC</td>
<td>6288</td>
<td>Professional Practice II</td>
<td>3</td>
<td>PR: ARC 6287</td>
<td>Continued overview of professional practice, emphasizing legal, economic, and ethical aspects of practice. Project planning, funding, administration, risk management, and performance. Topics include: estimating, financing, life-cycle cost analysis, information resources and management.</td>
</tr>
<tr>
<td>ARC</td>
<td>6367</td>
<td>Advanced Design D</td>
<td>5</td>
<td>PR: ARC 5366, ARC 6481</td>
<td>Comprehensive studio problems emphasizing the integration of disciplinary and professional skills through the formulation of architectural propositions grounded in critical, speculative, and creative research.</td>
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<tr>
<td>ARC</td>
<td>6372</td>
<td>The Neighborhood</td>
<td>3</td>
<td></td>
<td>Introduces students to the range of urban and suburban neighborhood typologies. We will discuss the purpose of the neighborhood as a physical and social construct, the history of neighborhoods, and the meaning of the neighborhood in present.</td>
</tr>
<tr>
<td>ARC</td>
<td>6373</td>
<td>Community Design Studio</td>
<td>6</td>
<td>CR: ARC 6398</td>
<td>(Varies depending on topic) The Community Design Studio is a six credit hour physical design lab course. Its focus is on design at the scale of urbanism – the metropolitan region, the city, the district, the block, the street, and the building complex.</td>
</tr>
<tr>
<td>ARC</td>
<td>6397</td>
<td>Introduction to Urban Design Theory, Methods &amp; Processes</td>
<td>3</td>
<td></td>
<td>Introduction to the concepts, methods, and manifestations of urban design and city-building. Focus on both traditional city and modern city conditions. Student will gain a basic understanding of the design structure, order, function and character of cities and towns and assess various qualitative aspects of these conditions. Relationships between processes of architecture, landscape architecture, site planning, preservation and other relevant acts of city-building will be considered as referential points-of view in assessing certain complexities of urban morphology.</td>
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<td>SUB</td>
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<tr>
<td>ARC</td>
<td>6398</td>
<td>Introduction to Community and Urban Design</td>
<td>3</td>
<td></td>
<td>Introduce community and urban design as an academic discipline and professional practice that incorporates architecture, planning, landscape architecture, real estate development, and engineering. Major topics include urban form, function, and perception.</td>
</tr>
<tr>
<td>ARC</td>
<td>6471</td>
<td>Advanced Topics in Materials and Methods</td>
<td>3</td>
<td>PR: ARC 5175, ARC 5587, and ARC 5588</td>
<td>Analysis and design of advanced construction assemblies. Specific focus on application and integration of multiple systems and components. Research in new materials and methods. Documentation and model and analysis.</td>
</tr>
<tr>
<td>ARC</td>
<td>6481</td>
<td>Design Development</td>
<td>3</td>
<td>PR: ARC 5689 and ARC 5364.</td>
<td>The summary course of the building technology sequence in which construction, structural and environmental technologies are integrated within an architectural design project. Emphasis is placed on poetic and technical aspects of building systems.</td>
</tr>
<tr>
<td>ARC</td>
<td>6692</td>
<td>Advanced Topics In Environmental Technology</td>
<td>3</td>
<td>PR: ARC 5175, ARC 5689</td>
<td>Analysis and preliminary design of advanced environmental control systems; specific focus on architectural applications; integration with structural and construction systems. Research of special aspects of ET systems, computer simulation and analysis techniques.</td>
</tr>
<tr>
<td>ARC</td>
<td>6930</td>
<td>Special Topics in Urban and Community Design</td>
<td>1-6</td>
<td></td>
<td>Special topics related to urban and community design and planning issues.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>ARC</td>
<td>6936</td>
<td>Research Methods in Architecture</td>
<td>2</td>
<td>PR: ARC 6311, ARC 5365, and ARC 6481</td>
<td>A seminar course with the primary purpose of providing tools to conduct the independent research necessary for the two-semester, independent Master's Thesis requirement.</td>
</tr>
<tr>
<td>ARC</td>
<td>6971</td>
<td>Master's Thesis</td>
<td>5</td>
<td>PR: ARC 5364, ARC 5365, ARC 5366, ARC 6481, and ARC 6936</td>
<td>This represents the most significant project and provides for a demonstration of the ability to synthesize learned skills into a convincing independent work of professional quality. 10 credit hours of ARC 6971 is required. See also the USF Graduate Catalog.</td>
</tr>
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<tr>
<td>ARC</td>
<td>6974</td>
<td>Master's Project Planning</td>
<td>3</td>
<td>PR: Two of ARC 5364, 5365, 5366</td>
<td>The Master's Project (ARC 6971) will call for the student's independent selection, organization, programming and design of a complex project. This course aims at preparing students for these tasks by exploring potential topics for master's projects and theses, introducing the concepts of architectural facility programming, methods of gathering, organization, analysis and evaluation of information needed for the project, and by studying the process of writing proposals for the master's project that clearly communicate the problem or task, goals and objectives, the proposed approach and procedure, the expected outcome, as well as the work plan and schedule for such a project and the time and resources required. At the end of the course, students will have prepared an acceptable master's project proposal which will allow them to proceed with the master's project during the following term.</td>
</tr>
<tr>
<td>ARC</td>
<td>6976</td>
<td>Terminal Master's Project</td>
<td>5</td>
<td>PR: ARC 6936</td>
<td>Students will independently investigate an architectural topic of personal interest. The requirements include the submission of a research and design document and the preparation of juried presentation of the work.</td>
</tr>
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<tr>
<td>ARH</td>
<td>5813</td>
<td>Methods of Art History</td>
<td>4</td>
<td></td>
<td>This course introduces students to various methods which art historians have used to analyze the form and content of individual works of art, and to various modes of historical explanation.</td>
</tr>
<tr>
<td>ARH</td>
<td>5836</td>
<td>Collection and Exhibition Management</td>
<td>3</td>
<td></td>
<td>This class will introduce students to the basic principles of collections care and management and to the intellectual and practical tasks of preparing an exhibition. Sessions will include art handling, registration and condition reporting, preparing works of art for transit, environmental standards for collections storage and exhibition, and the professional responsibilities of the curator.</td>
</tr>
<tr>
<td>ARH</td>
<td>6055</td>
<td>Art History</td>
<td>1-4</td>
<td></td>
<td>A contract for research in any elective area of Art History.</td>
</tr>
<tr>
<td>ARH</td>
<td>6798</td>
<td>Seminar In Art History</td>
<td>4</td>
<td></td>
<td>Var. Specialized topics in art history.</td>
</tr>
<tr>
<td>ARH</td>
<td>6891</td>
<td>Paris Art History</td>
<td>4</td>
<td>PR: At least 8 hours art history at the undergraduate level</td>
<td>This course will explore issues central to the history and criticism of art through the rich and visual culture that Paris offers. The goal of this course is to provide students with an experience of the cultural life of the city through an exploration of its major art collections, monuments, art collections and historical sites. Thematically-organized topic will include: art and national identity, patronage, orientalism, the birth of the avant-garde and the role of the museum in the evolution of modernism and modern art.</td>
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<tr>
<td>ART</td>
<td>5448C</td>
<td>Intaglio</td>
<td>4</td>
<td></td>
<td>Investigations into more complex intaglio processes including photoengraving and color printing procedures. Emphasis on personal conceptual development in graphic media.</td>
</tr>
<tr>
<td>ART</td>
<td>5580C</td>
<td>Painting</td>
<td>4</td>
<td></td>
<td>Research in painting</td>
</tr>
<tr>
<td>ART</td>
<td>5740C</td>
<td>Sculpture</td>
<td>4</td>
<td>PR: ART 2701C</td>
<td>Advanced problems in the various techniques of sculpture. Emphasis on individual creative expression. Repeatable.</td>
</tr>
<tr>
<td>ART</td>
<td>5790C</td>
<td>Ceramics</td>
<td>4</td>
<td>PR: ART 2750C</td>
<td>Advanced problems in the various ceramic techniques, including throwing and glaze calculation. Repeatable.</td>
</tr>
<tr>
<td>ART</td>
<td>5910</td>
<td>Research</td>
<td>1-4</td>
<td></td>
<td>Advanced graduate research in various techniques. Repeatable.</td>
</tr>
<tr>
<td>ART</td>
<td>6391C</td>
<td>Drawing</td>
<td>4</td>
<td></td>
<td>Advanced graduate research in drawing.</td>
</tr>
<tr>
<td>ART</td>
<td>6449C</td>
<td>Intaglio</td>
<td>4</td>
<td></td>
<td>Advanced graduate research in intaglio process.</td>
</tr>
<tr>
<td>ART</td>
<td>6581C</td>
<td>Painting</td>
<td>4</td>
<td></td>
<td>Advanced graduate research in painting.</td>
</tr>
<tr>
<td>ART</td>
<td>6688</td>
<td>Electronic Media</td>
<td>4</td>
<td></td>
<td>Advanced projects in the exploration of the issues and practices involved in the creation of experimental computer art at the graduate level. Emphasis on individual creative expression. May be repeated.</td>
</tr>
<tr>
<td>ART</td>
<td>6791C</td>
<td>Ceramics</td>
<td>4</td>
<td></td>
<td>Advanced graduate research in ceramics.</td>
</tr>
<tr>
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<tr>
<td>ART</td>
<td>6792C</td>
<td>Sculpture</td>
<td>4</td>
<td></td>
<td>Advanced problems in the various techniques of sculpture. Emphasis on individual creative expression. Repeatable.</td>
</tr>
<tr>
<td>ART</td>
<td>6811</td>
<td>Paris Art Studio</td>
<td>3</td>
<td></td>
<td>This course will explore the experience of modern life in the city as a source for art making. Projects will encourage students to encounter the dense and varied space and time of Paris toward a better understanding of the part that this city has played in the shaping of modern and post modern sensibilities. We will draw upon a range of avant-garde strategies that have imagined and conceptualized Paris by movement through city spaces and close observation of the ordinary and extraordinary aspects of everyday life.</td>
</tr>
<tr>
<td>ART</td>
<td>6816</td>
<td>MFA Professional Practices</td>
<td>3</td>
<td></td>
<td>MFA students will analyze their experiences and explore options available to visual artists after completion of their degree. Restricted to majors; not repeatable for credit.</td>
</tr>
<tr>
<td>ART</td>
<td>6895</td>
<td>Graduate Seminar I</td>
<td>3</td>
<td></td>
<td>This seminar will expand students understanding of the complexities of contemporary art. Students will develop an awareness of current critical theories through readings, writings and discussions. Restricted to majors and is non-repeatable.</td>
</tr>
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<tr>
<td>ART</td>
<td>6896</td>
<td>Graduate Seminar II</td>
<td>3</td>
<td>PR: Graduate Seminar I.</td>
<td>This course facilitates a critical awareness of the self-reflexive nature of artistic vision within a larger cultural context including the relevance of one's work in relationship to contemporary art theory. Restricted to majors and is non-repeatable.</td>
</tr>
<tr>
<td>ART</td>
<td>6897</td>
<td>Critical Writing Seminar</td>
<td>3</td>
<td></td>
<td>Significant texts of the 20th Century and contemporary criticism introduce multiple lenses through which art is encountered, inviting self identification within a broad range of engaged positions. This forms the core of the MFA Research Project Proposal.</td>
</tr>
<tr>
<td>ART</td>
<td>6907</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
<td>Independent study in which student must have a contract with an instructor.</td>
</tr>
<tr>
<td>ART</td>
<td>6911</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td>Directed Research in which student must have a contract with an instructor.</td>
</tr>
<tr>
<td>ART</td>
<td>6937</td>
<td>Graduate Instruction Methods</td>
<td>1-4</td>
<td></td>
<td>Special course to be used primarily for the training of graduate teaching assistants.</td>
</tr>
<tr>
<td>ART</td>
<td>6940</td>
<td>Selected Topics In Art</td>
<td>1-4</td>
<td></td>
<td>Variable credit depending upon the scope and magnitude of the work agreed to by the student and the responsible member of the faculty.</td>
</tr>
<tr>
<td>ART</td>
<td>6956</td>
<td>MFA Research Project</td>
<td>2-19</td>
<td></td>
<td>Development/Finalization of MFA Research Project, including the planning and realization of an exhibition and a written document articulating ideas, processes, and sources related to the project. Usually taken during last year.</td>
</tr>
<tr>
<td>ART</td>
<td>6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td></td>
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<tr>
<td>ATR</td>
<td>5105C</td>
<td>Athletic Training Techniques</td>
<td>3</td>
<td></td>
<td>Overview course including basic components of the athletic training profession including the prevention, recognition and evaluation and immediate care of athletic injuries.</td>
</tr>
<tr>
<td>ATR</td>
<td>5125</td>
<td>Anatomical Basis of Clinical Practice in Sports Medicine</td>
<td>3</td>
<td></td>
<td>By way of laboratory prosection of cadavers, this class will provide an opportunity for students to gain an in-depth understanding of human anatomy. This course examines anatomy of the extremities, back, thorax, abdomen, pelvis and perineum.</td>
</tr>
<tr>
<td>ATR</td>
<td>5217C</td>
<td>Physical Examination I</td>
<td>4</td>
<td></td>
<td>The study and practice of skills and techniques essential for the evaluation of orthopaedic injuries. Students will learn to formulate an impression of the injury/condition in order to provide the basis for an initial treatment plan and medical referral.</td>
</tr>
<tr>
<td>ATR</td>
<td>5218C</td>
<td>Physical Examination II</td>
<td>4</td>
<td></td>
<td>The study and practice of skills and techniques essential for the evaluation of orthopaedic injuries. Students will learn to formulate an impression of the injury/condition in order to provide the basis for an initial treatment plan and medical referral.</td>
</tr>
<tr>
<td>ATR</td>
<td>5306C</td>
<td>Therapeutic Interventions I</td>
<td>4</td>
<td></td>
<td>Theoretical and clinical bases for the use of therapeutic modalities, pharmacology in the rehabilitation setting, including basic physics, physiological effects, indications, contraindications, and applications of therapeutic modalities in rehab.</td>
</tr>
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<td>SUB</td>
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<tr>
<td>ATR</td>
<td>5307C</td>
<td>Therapeutic Interventions II</td>
<td>4</td>
<td></td>
<td>Theory and application methods of comprehensive therapeutic treatment and rehabilitation programs for injuries commonly sustained by the physically active.</td>
</tr>
<tr>
<td>ATR</td>
<td>5308C</td>
<td>Therapeutic Interventions III</td>
<td>1</td>
<td></td>
<td>This course will provide an overview of manual therapy techniques, including myofacial release, joint mobilization, and traction as they are incorporated into a therapeutic rehabilitation program.</td>
</tr>
<tr>
<td>ATR</td>
<td>5319</td>
<td>Rehabilitation Considerations for Children</td>
<td>3</td>
<td></td>
<td>Addresses the principles of rehabilitation for children. This course will entail advanced anatomical, physiological and psychological aspects of sports injury in the youth population.</td>
</tr>
<tr>
<td>ATR</td>
<td>5346C</td>
<td>Health and Wellness Promotion Across the Lifespan I</td>
<td>3</td>
<td></td>
<td>Integrates physiological, psychological, and social understanding of humans in relationship to physical activity as a lifelong pursuit. Includes physical fitness, nutrition, stress reduction, socialization, and individual differences in human behavior.</td>
</tr>
<tr>
<td>ATR</td>
<td>5347C</td>
<td>Health and Wellness Promotion Across the Lifespan II</td>
<td>1</td>
<td></td>
<td>Techniques in conducting health fitness tests and exercise prescription including cardiorespiratory fitness, flexibility, weight control and nutrition as it relates to a healthy lifestyle.</td>
</tr>
<tr>
<td>ATR</td>
<td>5348C</td>
<td>Health and Wellness Promotion Across the Lifespan III</td>
<td>1</td>
<td></td>
<td>This course will introduce concepts of neuromuscular system training, specifically addressing sport specific strength training, exercise selection, and physiological needs analysis.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>ATR</td>
<td>5435</td>
<td>Medical Conditions</td>
<td>3</td>
<td></td>
<td>Pathology, physical examination, referral and treatment related to non-orthopedic conditions in the active population. Specific diagnostic tests and physical examination procedures will also be addressed.</td>
</tr>
<tr>
<td>ATR</td>
<td>5508</td>
<td>Contemporary Issues in Athletic Training</td>
<td>3</td>
<td></td>
<td>Takes a unique look at the current issues facing the profession of athletic training. Historical perspectives, current implications, and futuristic opportunities and threats are discussed.</td>
</tr>
<tr>
<td>ATR</td>
<td>5515</td>
<td>Administration of Injury Prevention Programs</td>
<td>3</td>
<td></td>
<td>Discusses the development and implementation of injury prevention programs for youth sports. Issues such as research, budgeting, marketing, and measuring effectiveness are identified.</td>
</tr>
<tr>
<td>ATR</td>
<td>5534</td>
<td>Documentation in Athletic Training</td>
<td>1</td>
<td>CR: ATR 3202</td>
<td>Documentation in Athletic Training is designed to prepare athletic training students with an introduction to the foundation of appropriate terminology, documentation, and communication methods as they relate athletic training and sports medicine.</td>
</tr>
<tr>
<td>ATR</td>
<td>5605</td>
<td>Youth Injury Epidemiology</td>
<td>3</td>
<td></td>
<td>Key issues in epidemiology, injury etiology, risk factors related to both internal and external variables, and the efficacy and effectiveness of preventive measures in regard to youth sport injury will be analyzed and discussed.</td>
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<tr>
<td>ATR</td>
<td>5612</td>
<td>Evidence Based Medicine in Athletic Training</td>
<td>2</td>
<td></td>
<td>This class will introduce the concept of evidence-based medicine and provide the student with information on how evidence-based medicine can affect the clinical practice of athletic training and enhance the care given to patients.</td>
</tr>
<tr>
<td>ATR</td>
<td>5815</td>
<td>Clinical Experience in Athletic Training - I</td>
<td>3</td>
<td></td>
<td>Performance of basic athletic training skills under the supervision of a clinical instructor at various sites. Students develop competence in introductory athletic training skills. Focus on equipment intensive sports. A weekly seminar also required.</td>
</tr>
<tr>
<td>ATR</td>
<td>5825</td>
<td>Clinical Experience in Athletic Training - II</td>
<td>3</td>
<td></td>
<td>Performance of basic athletic training skills under the supervision of a clinical instructor at various sites. Students develop competence in introductory and mid-level athletic training skills. Weekly seminar is also required.</td>
</tr>
<tr>
<td>ATR</td>
<td>6114</td>
<td>Preventing Sudden Death in Sport I</td>
<td>2</td>
<td></td>
<td>The purpose of the course is to provide athletic training students an overview of the general concepts and principles related to the causes of sudden death in sport. This course will deal with specific and potentially life-threatening conditions.</td>
</tr>
<tr>
<td>ATR</td>
<td>6115</td>
<td>Preventing Sudden Death in Sport II</td>
<td>2</td>
<td></td>
<td>Provide an overview of the general concepts and principles related to the causes of sudden death in sport. This course will deal with specific and potentially life-threatening conditions.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
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<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>ATR</td>
<td>6116</td>
<td>Preventing Sudden Death in Youth Sports Settings</td>
<td>3</td>
<td>PR: ATR 6236</td>
<td>Preventing Sudden Death in Youth Sports Settings will familiarize students with the common causes of fatalities in young athletes. This course is limited to those in the post-professional athletic training program (M.S. in MS, Athletic Training concentration).</td>
</tr>
<tr>
<td>ATR</td>
<td>6226</td>
<td>Advanced Athletic Training</td>
<td>3</td>
<td></td>
<td>This course designed to expose the Senior Athletic Training Students to current concepts and techniques in the evaluation and treatment of musculoskeletal conditions. Didactic sessions will be supplemented with physical exam assessment skills.</td>
</tr>
<tr>
<td>ATR</td>
<td>6235</td>
<td>Motor Development and Skill Acquisition</td>
<td>3</td>
<td>CR: ATR 6236</td>
<td>Motor Development and Skill Acquisition will familiarize students with the theories and approaches of skill acquisition in young athletes. This course is limited to post-professional athletic training program (M.S. in MS, Athletic Training concentration).</td>
</tr>
<tr>
<td>ATR</td>
<td>6236</td>
<td>Pediatric Sports Medicine</td>
<td>3</td>
<td></td>
<td>Addresses the unique orthopaedic conditions commonly seen in adolescents. Musculoskeletal issues, such as disease process, genetic abnormalities, infectious disease, mechanism of injury, overuse, protective equipment, immature skeletal disruption, etc.</td>
</tr>
<tr>
<td>ATR</td>
<td>6446</td>
<td>Medical Conditions of Adolescents</td>
<td>3</td>
<td></td>
<td>Focuses on non-orthopedic conditions in children such as review of pharmacology, guidelines for pre-participation examinations, diabetes, exercise induced bronchospasm, sudden cardiac death, concussions, and infectious diseases in the adolescent athlete.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>ATR</td>
<td>6516</td>
<td>Ethical &amp; Legal Issues in Healthcare</td>
<td>1</td>
<td></td>
<td>Designed to develop awareness of ethical &amp; legal issues required for athletic trainers to deliver healthcare. Develops a broad understanding of the ethical &amp; legal issues related to healthcare delivery, emphasizing legal terminology and applicability.</td>
</tr>
<tr>
<td>ATR</td>
<td>6517</td>
<td>Professional Practice</td>
<td>4</td>
<td></td>
<td>The advanced study, writing and discussion of specialized topics and contemporary issues related to professional practice. Emphasis will be on historical perspectives, professional preparation, credentialing, governance, ethics, and scope of practice.</td>
</tr>
<tr>
<td>ATR</td>
<td>6615</td>
<td>Evidence Based Research and Writing</td>
<td>3</td>
<td></td>
<td>A thorough look at the process of utilizing evidence-based medicine to advance healthcare. The importance of applying medical outcomes to clinical practice; recent research; &amp; components of conducting &amp; publishing research in the field of sport medicine.</td>
</tr>
<tr>
<td>ATR</td>
<td>6616</td>
<td>Research in Athletic Training</td>
<td>3</td>
<td></td>
<td>The capstone project is the final cumulative work that exemplifies a body of knowledge that significantly contributes a worthy product to the profession of athletic training and one's own professional endeavors.</td>
</tr>
<tr>
<td>ATR</td>
<td>6617</td>
<td>Capstone Project 1</td>
<td>3</td>
<td>PR: ATR 5508, ATR 5515, ATR 6615</td>
<td>The capstone project is a cumulative work that exemplifies a scientific body of knowledge that contributes to the field of AT. CP-1 focuses on identifying a problem, reviewing literature, &amp; developing a plan to enhance the healthcare of young athletes.</td>
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<tr>
<td>ATR</td>
<td>6618</td>
<td>Capstone Project 2</td>
<td>3</td>
<td>PR: ATR 6617</td>
<td>Focus on completing a SWOT analysis of the plan &amp; a formal written document. The final project will be used for immediate implementation, submission for publication/presentation &amp; will ultimately result in improvement of healthcare for young athletes.</td>
</tr>
<tr>
<td>ATR</td>
<td>6835</td>
<td>Clinical Experience in Athletic Training - III</td>
<td>3</td>
<td></td>
<td>Performance of mid-level athletic training skills under the supervision of a clinical instructor at various sites. Experience will also include general medical experience and surgery observation. Weekly seminar also required.</td>
</tr>
<tr>
<td>ATR</td>
<td>6845</td>
<td>Clinical Experience in Athletic Training - IV</td>
<td>3</td>
<td></td>
<td>A Capstone experience under the supervision of a preceptor at various sites. Students develop competence in mid and advanced athletic training skills and prepare for the BOC examination.</td>
</tr>
<tr>
<td>ATR</td>
<td>6920</td>
<td>Athletic Training Professional Colloquium</td>
<td>3</td>
<td></td>
<td>The Athletic Training Professional Colloquium course is a week-long in-residence course led by leaders in the profession of athletic training. A variety of topics are covered, including national trends, association issues, and professional challenges.</td>
</tr>
<tr>
<td>BCC</td>
<td>7114</td>
<td>Emergent and Urgent Care Clerkship</td>
<td>var</td>
<td></td>
<td>Students participate in patients with emergent and urgent medical presentations and assist in the development of a differential diagnosis and preliminary diagnostic and therapeutic plans.</td>
</tr>
<tr>
<td>BCC</td>
<td>7134</td>
<td>Maternal and Newborn Health</td>
<td>var</td>
<td></td>
<td>Students participate in maternal care and newborn care.</td>
</tr>
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<tr>
<td>BCC</td>
<td>7144</td>
<td>Integrated Internal Medicine - Pediatrics</td>
<td>var</td>
<td></td>
<td>This clerkship introduces students to basic principles and practices of hospital-based internal medicine and pediatrics. When possible, it integrates interdisciplinary principles of internal medicine and pediatric disease management.</td>
</tr>
<tr>
<td>BCC</td>
<td>7154</td>
<td>Neuropsychiatry Clerkship</td>
<td>var</td>
<td></td>
<td>The Neuropsychiatry Clerkship is 4 weeks consultation liaison service, 4 weeks inpatient psychiatry, and 2 weeks outpatient neurology.</td>
</tr>
<tr>
<td>BCC</td>
<td>7164</td>
<td>Surgical Care Clerkship</td>
<td>var</td>
<td></td>
<td>The Surgical Care clerkship focuses on the development of the fundamental principles in the surgical care of patients.</td>
</tr>
<tr>
<td>BCC</td>
<td>7184</td>
<td>Primary Care and Special Care Populations Clerkship</td>
<td>var</td>
<td></td>
<td>The Primary Care and Special Care Populations Clerkship introduces students to the principles of primary care medicine (Internal Medicine, Family Medicine, and Pediatrics) in the ambulatory setting.</td>
</tr>
<tr>
<td>BCC</td>
<td>8116</td>
<td>Skin and Bones Medicine Clerkship</td>
<td>var</td>
<td></td>
<td>The Skin and Bones Medicine clerkship is 4 weeks in duration dealing with the content areas of musculoskeletal and dermatology.</td>
</tr>
<tr>
<td>BCC</td>
<td>8117</td>
<td>Interdisciplinary Oncology</td>
<td>var</td>
<td></td>
<td>This is a four-week block in which all students will be expected to learn the fundamental principles of oncology and the multidisciplinary approach to the prevention, diagnosis, treatment, and rehabilitation of cancer patients.</td>
</tr>
<tr>
<td>BCH</td>
<td>5045</td>
<td>Biochemistry Core Course</td>
<td>3</td>
<td>PR: Either CHM 2211, CHM 2211L, and CHM 3400 or CHM 4410</td>
<td>A one-semester survey course in biochemistry for graduate students in chemistry, biology, and other appropriate fields and for particularly well-qualified undergraduates.</td>
</tr>
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<tr>
<td>BCH</td>
<td>5105</td>
<td>Biochemistry Laboratory Rotations</td>
<td>1-3</td>
<td></td>
<td>A course in which first year graduate students rotate through selected professor’s laboratories to learn techniques, become familiar with ongoing research in the Department and facilitate the selection of a mentor.</td>
</tr>
<tr>
<td>BCH</td>
<td>6135C</td>
<td>Methods in Molecular Biology</td>
<td>4</td>
<td></td>
<td>An introduction to modern molecular biological techniques and instrumentation. Lec. Lab.</td>
</tr>
<tr>
<td>BCH</td>
<td>6411</td>
<td>Biomedical Genomics and Genetics</td>
<td>4</td>
<td>PR: GMS 6001 or GMS 6200C</td>
<td>An overview of Biomedical Genomics &amp; Genetics and current and potential applications in biology &amp; medicine, including identification of gene defects and the use of genetic tools for diagnosis and treatment of disease.</td>
</tr>
<tr>
<td>BCH</td>
<td>6627</td>
<td>Molecular Basis of Disease</td>
<td>4</td>
<td>PR: GMS 6200C</td>
<td>The course will deal with the genetic, molecular, and biochemical basis of human diseases.</td>
</tr>
<tr>
<td>BCH</td>
<td>6746</td>
<td>Structural Biology</td>
<td>3</td>
<td>PR: GMS 6001</td>
<td>The theory and application of modern physical biochemical techniques.</td>
</tr>
<tr>
<td>BCH</td>
<td>6886</td>
<td>Fundamentals of Structural Bioinformatics</td>
<td>4</td>
<td></td>
<td>This lecture-based, nonrestrictive course covers basics of molecular bioscience data management/analysis. This course comprises a mixed delivery mode consisting of traditional didactic lectures coupled with student assignments and presentations.</td>
</tr>
<tr>
<td>BCH</td>
<td>6888</td>
<td>Bioinformatics</td>
<td>3</td>
<td></td>
<td>An introduction to computer software applications for research in Biochemistry and Molecular Biology. Emphasis on database searching and submission, data analysis and graphical presentation, DNA and protein sequence analysis and molecular modeling. Lec./Pro.</td>
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<tr>
<td>BCH</td>
<td>6889</td>
<td>Bioinformatics II</td>
<td>3</td>
<td>PR: BCH 6888</td>
<td>Bioinformatics II focuses on four aspects: genome analysis; software suites; homology modeling and DNA micro arrays; all of which have become essential tools in modern day analyses of both genome organization and protein structure-function relationships.</td>
</tr>
<tr>
<td>BCH</td>
<td>6935</td>
<td>Grant Writing &amp; Scientific Communication</td>
<td>2</td>
<td>PR: GMS 6001</td>
<td>Development of skills related to scientific communication, including the preparation of effective scientific manuscripts and related communications, and the preparation of fundable grant proposals.</td>
</tr>
<tr>
<td>BCH</td>
<td>6942</td>
<td>Bioinformatics Internship I</td>
<td>4-6</td>
<td>PR: BCH 6888</td>
<td>This course focuses on applications of bioinformatics and computational biology principles in a practical environment necessary for an in-depth understanding of how the methodologies of bioinformatics can be applied to solve bioscience problems.</td>
</tr>
<tr>
<td>BCH</td>
<td>6943</td>
<td>Bioinformatics Internship II</td>
<td>2</td>
<td>PR: BCH 6888</td>
<td>This course focuses on applications of bioinformatics and computational biology principles in a practical environment necessary for an in-depth understanding of how the methodologies of bioinformatics can be applied to solve bioscience problems.</td>
</tr>
<tr>
<td>BME</td>
<td>5040</td>
<td>Pharmaceutical Engineering</td>
<td>2</td>
<td></td>
<td>Introduction to pharmaceutical engineering, including dosage forms (tablets, capsules, powders, liquids, topical forms, and aerosols), excipients, regulatory issues, clinical studies, and good manufacturing practices.</td>
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<tr>
<td>BME</td>
<td>5320</td>
<td>Theory and Design of Bioprocesses</td>
<td>3</td>
<td></td>
<td>Introduction to biotechnology, including applied microbiology, enzyme technology, biomass production, bioreactor design, and transport processes in biosystems.</td>
</tr>
<tr>
<td>BME</td>
<td>5910</td>
<td>Directed Research in Bioengineering</td>
<td>1-3</td>
<td></td>
<td>Directed research in an area of biomedical engineering or engineering biotechnology.</td>
</tr>
<tr>
<td>BME</td>
<td>5937</td>
<td>Selected Topics in Biomedical Ecology</td>
<td>1-3</td>
<td></td>
<td>Selected topics in biomedical engineering, including biomedical engineering, biomedical materials, biodynamics of circulation, separation processes in biomedical systems, and artificial organ systems. May be taken by non-engineering students with CI. Repeatable as subjects vary.</td>
</tr>
<tr>
<td>BME</td>
<td>6000</td>
<td>Biomedical Engineering</td>
<td>3</td>
<td></td>
<td>Biomedical engineering analysis, including biomedical thermodynamics, biomechanics, biomaterials, medical imaging, biomedical instrumentation, tissue/cellular engineering, clinical engineering, prosthetic/medical devices, and regulatory issues.</td>
</tr>
<tr>
<td>BME</td>
<td>6001</td>
<td>Biomedical Engineering II</td>
<td>3</td>
<td></td>
<td>This course will address a wide range of fundamental topics in biomedical engineering, focusing on the application of engineering fundamentals to the analysis of the human biomedical system.</td>
</tr>
<tr>
<td>BME</td>
<td>6055</td>
<td>Modern Biomedical Technologies</td>
<td>3</td>
<td></td>
<td>In this class students will learn about new possibilities brought by development of interfaces between human body and computers, creation of artificial body parts, deciphering of brain signals and design of new generation biomedical instruments.</td>
</tr>
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<tr>
<td>BME</td>
<td>6107</td>
<td>Biomaterials I: Material Properties</td>
<td>3</td>
<td></td>
<td>Properties and characterization of biomaterials, including ceramics, glasses, metals, natural materials, polymers, and composites. Applications include dental, orthopedic, soft tissue, and tissue scaffolds. Design and sterilization issues.</td>
</tr>
<tr>
<td>BME</td>
<td>6108</td>
<td>Biomaterials II Biocompatibility</td>
<td>3</td>
<td></td>
<td>Biocompatibility issues of biomaterials, including inflammation, wound healing, foreign body response, toxicity, blood coagulation, tumorigenesis, infection, and related issues including testing. Degradation of materials in the biological environment.</td>
</tr>
<tr>
<td>BME</td>
<td>6235</td>
<td>Tissue Biomechanics</td>
<td>3</td>
<td></td>
<td>Biomechanical properties of hard and soft tissues, including measurement procedures, influences on properties (gender, aging, physical conditioning, disease processes), tissue repair, and implant devices. Open to non-majors with CI.</td>
</tr>
<tr>
<td>BME</td>
<td>6410</td>
<td>Engineering Physiology</td>
<td>3</td>
<td>PR: ECH 4846, EGN 3433, PHY 2048, PHY 2049, or CI</td>
<td>General physiology of nerve, muscle, heart, and lung tissue, along with quantitative models of physiological processes at cell, tissue, and/or system level.</td>
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<tr>
<td>BME</td>
<td>6420</td>
<td>Human Sensory Processes</td>
<td>3</td>
<td></td>
<td>Biological and engineering aspects of the human sensory system (vision, hearing, taste, smell, touch, pain, etc.), including normal and impaired performance, engineering models, and prosthetic device design considerations.</td>
</tr>
<tr>
<td>BME</td>
<td>6430</td>
<td>Cardiovascular Systems for Engineers</td>
<td>3</td>
<td></td>
<td>Cardiovascular basic and medical science from an engineering viewpoint. Topics explored: cardiovascular anatomy and physiology, physical and mathematical aspects of current therapies and diagnostics, imaging, hemodynamics, and cardiovascular disease.</td>
</tr>
<tr>
<td>BME</td>
<td>6573</td>
<td>Nano-medicine</td>
<td>3</td>
<td></td>
<td>This course will provide a basic knowledge of the principles, technology and applications of nanotechnology in medicine with special emphasis on recombinant DNA technology, protein engineering, drug delivery, biomaterials, MEMs &amp; tissue engineering.</td>
</tr>
<tr>
<td>BME</td>
<td>6634</td>
<td>Biotransport Phenomena</td>
<td>3</td>
<td></td>
<td>Analysis and applications of biofluids, including non-newtonian and particulate systems, bioheat transfer, including energy balances, and biomass transport, including mass balances and membrane processes. Open to non-majors with CI.</td>
</tr>
<tr>
<td>BME</td>
<td>6905</td>
<td>Directed Independent Study</td>
<td>1-6</td>
<td></td>
<td>Directed independent study in biomedical engineering.</td>
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<tr>
<td>BME</td>
<td>6911</td>
<td>Research Methods in Biomechanics</td>
<td>1-3</td>
<td></td>
<td>Research methods in biomechanics, including materials testing, gait analysis, modeling techniques, and related issues. Open to majors and non-majors. May be repeated for credit as the subject varies up to six total credits.</td>
</tr>
<tr>
<td>BME</td>
<td>6920</td>
<td>Seminar in Biomedical Engineering</td>
<td>1</td>
<td></td>
<td>Seminar in biomedical engineering. Speakers will address current research topics in biomedical engineering, including biomechanics, cardiovascular engineering, sensors, tissue engineering, and drug delivery. Can be repeated up to 3 total credits.</td>
</tr>
<tr>
<td>BME</td>
<td>6931</td>
<td>Selected Topics in Biomedical Engineering</td>
<td>1-3</td>
<td></td>
<td>Selected topics in biomedical engineering, including focused topics in biomechanics, biomedical imaging, biomaterials, biomedical instrumentation and sensors, tissue and cellular engineering, and clinical engineering &amp; health systems.</td>
</tr>
<tr>
<td>BME</td>
<td>6944</td>
<td>Biomedical Engineering Industrial Internship</td>
<td>1-6</td>
<td></td>
<td>Individual study as practical engineering work at an industrial facility or laboratory under the supervision of a faculty member interacting with the sponsoring industrial facility or laboratory.</td>
</tr>
<tr>
<td>BME</td>
<td>6971</td>
<td>Research for Master's Thesis</td>
<td>2-6</td>
<td></td>
<td>Research for the Master's Thesis in Biomedical Engineering. Students may count up to six hours total maximum towards the M.S. degree. Students must have an approved Master's committee for registration.</td>
</tr>
<tr>
<td>BME</td>
<td>7915</td>
<td>Directed Research in Biomedical Engineering</td>
<td>1-6</td>
<td></td>
<td>Directed research in an advanced topic in biomedical engineering.</td>
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<tr>
<td>BME</td>
<td>7980</td>
<td>Ph.D. Dissertation</td>
<td>2-19</td>
<td></td>
<td>Dissertation research for the Ph.D. in Biomedical Engineering.</td>
</tr>
<tr>
<td>BMS</td>
<td>5005</td>
<td>Professions of Medicine: Foundations of Doctoring</td>
<td>1-19</td>
<td></td>
<td>This three-week course placed at the beginning of the medical school curriculum will introduce the students to principles that will be used through the entire medical school education and beyond. Basic scientists and clinicians present information in an integrated approach. Topical areas include: use of information resources (library/computer), the medical article, intro to evidence based medicine, effective study techniques, intro to the physical exam, cultural diversity, ethics and professionalism, and state of the art presentation. The course will use both large and small group learning techniques and students will demonstrate achievement of knowledge.</td>
</tr>
<tr>
<td>BMS</td>
<td>5015</td>
<td>Clinical Diagnosis and Reasoning</td>
<td>var.</td>
<td></td>
<td>This course aims to provide the student with the opportunity to &quot;think like a physician.&quot; It will provide the venue to integrate clinical diagnosis/reasoning strategies with complementary aspects of clinical problem solving/phys diagnosis/evidence based medicine.&quot;</td>
</tr>
<tr>
<td>BMS</td>
<td>6100C</td>
<td>Gross Anatomy</td>
<td>5-10</td>
<td></td>
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<tr>
<td>BMS</td>
<td>6206</td>
<td>Molecular Medicine</td>
<td>var.</td>
<td></td>
<td>Emphasis of biochemistry, cell biology, and genetic that have immediate relevance for clinical medicine while also providing a fundamental foundation of understanding that will permit lifelong learning. The pathogenesis of disease will be understood based on a practical understanding gained from the students address in this course.</td>
</tr>
<tr>
<td>BMS</td>
<td>6300</td>
<td>Principles of Immunology and Infectious Diseases</td>
<td>var.</td>
<td></td>
<td>This course consists of lectures, laboratory, and small-group conferences. Principles of infectious disease are presented with emphasis on both the characteristics of the causative agent and the host response to colonization activities.</td>
</tr>
<tr>
<td>BMS</td>
<td>6633</td>
<td>Cardiovascular &amp; Pulmonary Systems</td>
<td>var.</td>
<td></td>
<td>A comprehensive description of the cardiovascular and pulmonary systems including anatomy, physiology and nervous control.</td>
</tr>
<tr>
<td>BMS</td>
<td>6639</td>
<td>Excretory and Reproductive Systems</td>
<td>var.</td>
<td></td>
<td>A comprehensive description of the Gastrointestinal, Reproductive and Renal Systems and some of the Disorders of Behavior that affect human homeostasis.</td>
</tr>
<tr>
<td>BMS</td>
<td>6640</td>
<td>Core Principles of Med Science/Musculoskeletal Sys</td>
<td>var.</td>
<td></td>
<td>A comprehensive/integrated discussion of the basic principles of Anatomy/Biochemistry/Cell Biology/Genetics/Molecular/Biology/Neuroscience/Physiology &amp; Human Behavior plus a discussion of the anatomy/biochemistry/physiology of the musculo-skeletal system.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>BMS</td>
<td>6641</td>
<td>Communications: Neuroscience &amp; Endocrinology</td>
<td>var.</td>
<td></td>
<td>A comprehensive description of the major communication systems found in the human body.</td>
</tr>
<tr>
<td>BMS</td>
<td>6825</td>
<td>Doctoring I</td>
<td>var.</td>
<td></td>
<td>This course will instruct students in clinical skills essential to medical practice: effective history taking, patient-centered communication, professionalism, ethics, cultural competence, basic physical diagnosis, humanities related to medical practice.</td>
</tr>
<tr>
<td>BMS</td>
<td>6836</td>
<td>Evidence Based Clinical Reasoning</td>
<td>var.</td>
<td></td>
<td>This course will instruct students in informatics, acquisition of data from the medical literature, and application of research by application to selected clinical cases using problem-based learning.</td>
</tr>
<tr>
<td>BMS</td>
<td>6991</td>
<td>Scholarly Concentration I</td>
<td>var.</td>
<td></td>
<td>Provides opportunities for scholarly endeavors in areas of special interest. Year 1 students will take a core curriculum, participate in journal clubs, and start a scholarly legacy project.</td>
</tr>
<tr>
<td>BMS</td>
<td>6992</td>
<td>Scholarly Concentration II</td>
<td>var.</td>
<td></td>
<td>Each topic includes elements of course work, practical application, and scholarly presentation. Year 2 students will take a leadership role in journal clubs, continue working on their scholarly legacy projects, make use of on-line portfolios.</td>
</tr>
<tr>
<td>BMS</td>
<td>6993</td>
<td>Scholarly Concentration III</td>
<td>var.</td>
<td></td>
<td>Provides opportunities for scholarly endeavors in areas of interest. Year 3 students will participate in journal clubs, continue work on their scholarly legacy projects, and make use of on-line portfolios.</td>
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<tr>
<td>BMS</td>
<td>6994</td>
<td>Scholarly Concentration IV</td>
<td>var</td>
<td></td>
<td>This Year 4 elective provides opportunities for scholarly endeavors in areas of special interest. Includes active participation in journal clubs, use of online portfolios including opportunities for reflection, &amp; generation of a scholarly legacy project.</td>
</tr>
<tr>
<td>BMS</td>
<td>7303</td>
<td>Clinical Microbiology and Immunology</td>
<td>var</td>
<td></td>
<td>This course will focus on an experiential approach to issues in clinical microbiology and immunology of relevance to the practicing physician.</td>
</tr>
<tr>
<td>BMS</td>
<td>7304</td>
<td>Review of Immune and Infectious Diseases</td>
<td>var</td>
<td></td>
<td>This course will focus on a review of the major immune and infectious diseases that may be encountered by the general physician.</td>
</tr>
<tr>
<td>BOT</td>
<td>4184C</td>
<td>Biology of Coastal Plants</td>
<td>4</td>
<td>PR: BOT 3373C and PCB 3043</td>
<td>A field course in coastal plants with emphasis on ecology and functional morphology. Fieldwork will stress the ecological aspects of plants in the coastal environment of Florida. Fieldwork required. Lecture and Lab.</td>
</tr>
<tr>
<td>BSC</td>
<td>4052</td>
<td>Conservation Biology</td>
<td>3</td>
<td>PR: PCB 3043, BSC 2010, BSC 2010L, BSC 2011, BSC 2011L, CHM 2045, CHM 2046 and Calculus (MAC 2241/2281/2311).</td>
<td>This course provides an extensive introduction to current models and empirical study in conservation biology, including substantial hands-on experience with programming methods for study of data and models.</td>
</tr>
<tr>
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<tr>
<td>BSC</td>
<td>4444</td>
<td>Genomics</td>
<td>3</td>
<td>PR: PCB 3063</td>
<td>We will be using genomic data available from multiple bioinformatics databases to answer an open-ended question fundamental to organismal evolution. The emphasis is to hone scientific inquiry skills in fledgling researchers.</td>
</tr>
<tr>
<td>BSC</td>
<td>5425</td>
<td>Genetic Engineering and Recombinant DNA Technology</td>
<td>3</td>
<td>PR: PCB3023, PCB3063, either PCB3023L or PCB3063L</td>
<td>This lecture-based course will use a problem solving approach, provide fundamental knowledge of scientific concepts and principles that form the basis of experimental methodologies in genetic engineering and recombinant DNA technology. For majors/nonmajors.</td>
</tr>
<tr>
<td>BSC</td>
<td>5931</td>
<td>Selected Topics in Biology</td>
<td>1-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BSC</td>
<td>6436</td>
<td>Introduction to Biotechnology</td>
<td>3</td>
<td></td>
<td>The course focuses on biotechnology, the integration of biology and technology and its applications in genomics, forensics, agriculture, engineering and medicine that have resulted in new products and services and solved biological/biomedical problems.</td>
</tr>
<tr>
<td>BSC</td>
<td>6437</td>
<td>Biotechnology and Bioethics</td>
<td>3</td>
<td></td>
<td>Provides students a basic understanding of what biotechnology is and how it is employed throughout the world. Students are to learn the ethical and legal issues facing this technology, and how biotechnology is regulated. Course is not repeatable.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>BSC</td>
<td>6457</td>
<td>Modern Basic Tools of Research</td>
<td>2</td>
<td></td>
<td>An introduction to modern core research facilities and methodologies used in cancer research. Lec., Lab., Dem. Department Approval Required.</td>
</tr>
<tr>
<td>BSC</td>
<td>6905</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
<td>Independent study in which student must have a contract with an instructor.</td>
</tr>
<tr>
<td>BSC</td>
<td>6910</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BSC</td>
<td>6930</td>
<td>Lectures in Contemporary Biology</td>
<td>1</td>
<td></td>
<td>This Biology lecture series includes a diversity of contemporary topics including: molecular regulatory mechanics, evolutionary genetics, organismal physiology and community ecology.</td>
</tr>
<tr>
<td>BSC</td>
<td>6932</td>
<td>Selected Topics in Biology</td>
<td>1-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BSC</td>
<td>6935</td>
<td>Graduate Seminar in Biology</td>
<td>1</td>
<td></td>
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</tr>
<tr>
<td>BSC</td>
<td>6936</td>
<td>Scientific Grant Writing</td>
<td>3</td>
<td></td>
<td>Course provides instruction on becoming a successful grant writer as well as understanding the grant proposal writing and review process. Responsibilities of the principle investigator for compliance, fiscal matters, and scientific management of the funded grant will also be covered with guest lecturers from the Division of Sponsored Research.</td>
</tr>
<tr>
<td>BSC</td>
<td>6939</td>
<td>Selected Topics in Cancer Biology</td>
<td>1-4</td>
<td></td>
<td>Provides in-depth study of a single aspect of cancer biology. Topics offered vary by semester.</td>
</tr>
<tr>
<td>BSC</td>
<td>6945</td>
<td>Graduate Instruction Methods</td>
<td>1-3</td>
<td></td>
<td>Special course to be used primarily for the training of teaching assistants.</td>
</tr>
<tr>
<td>BSC</td>
<td>6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td></td>
<td>Thesis: Master's</td>
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<tr>
<td>BSC</td>
<td>7910</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
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<tr>
<td>BSC</td>
<td>7911</td>
<td>Directed Research in Cancer Biology</td>
<td>1-12</td>
<td></td>
<td>Student research will be performed under the guidance of Ph.D. prior to formation of dissertation committee.</td>
</tr>
<tr>
<td>BSC</td>
<td>7936</td>
<td>Doctoral Seminar</td>
<td>1</td>
<td></td>
<td>Graduating Ph.D. students will present a formal seminar based upon their dissertation to the Department of Biology and the public. Restricted to majors.</td>
</tr>
<tr>
<td>BSC</td>
<td>7980</td>
<td>Dissertation: Doctoral</td>
<td>2-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUL</td>
<td>5332</td>
<td>Law and the Accountant</td>
<td>3</td>
<td>PR: BUL 3320</td>
<td>A comprehensive study of commercial law as it affects the practice of accounting.</td>
</tr>
<tr>
<td>BUL</td>
<td>5842</td>
<td>Risk Management and Legal Compliance</td>
<td>3</td>
<td></td>
<td>This course is designed for non-accounting students who need to understand, monitor and control risks. The content of this course spans corporate governance, risk strategy and legal/regulatory compliance including analysis of significant laws/regulations.</td>
</tr>
<tr>
<td>CAP</td>
<td>5400</td>
<td>Digital Image Processing</td>
<td>3</td>
<td>PR: COP 4530.</td>
<td>Image formation, sources of image degradation, image enhancement techniques, edge detection operators and threshold selection, low-level processing algorithms for vision, image data compression.</td>
</tr>
<tr>
<td>CAP</td>
<td>5625</td>
<td>Introduction to Artificial Intelligence</td>
<td>3</td>
<td>PR: COP 4530.</td>
<td>Basic concepts, tools, and techniques used to produce and study intelligent behavior. Organizing knowledge, exploiting constraints, searching spaces, understanding natural languages, and problem solving strategies.</td>
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<tr>
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<tr>
<td>CAP</td>
<td>5771</td>
<td>Data Mining</td>
<td>3</td>
<td>PR: Undergraduate Statistics.</td>
<td>An introductory course to mining information from data. Scalable supervised and unsupervised machine learning methods are discussed. Methods to visualize and extract heuristic rules from large databases with minimal supervision is discussed.</td>
</tr>
<tr>
<td>CAP</td>
<td>6011</td>
<td>Multimedia and E-Commerce for IT</td>
<td>3</td>
<td>PR: CGS 3823</td>
<td>Introduces the design principles of multimedia authoring and communication systems. It covers the interface and characteristics and video processing, multimedia, media encoding/compressions, multimedia editors, current communication standards.</td>
</tr>
<tr>
<td>CAP</td>
<td>6100</td>
<td>Human Computer Interface</td>
<td>3</td>
<td></td>
<td>Introduction to the design and evaluation of the interface between a computer based application and a human user.</td>
</tr>
<tr>
<td>CAP</td>
<td>6415</td>
<td>Computer Vision</td>
<td>3</td>
<td>PR: CAP 5400.</td>
<td>Techniques for description and recognition of objects, use of stereo, texture, and motion information for scene segmentation and description, consistent labeling and matching, use of knowledge and planning in computer vision.</td>
</tr>
<tr>
<td>CAP</td>
<td>6455</td>
<td>Advanced Robotic Systems</td>
<td>3</td>
<td>PR: Control Systems, Intro to Robotics, MatLab</td>
<td>Unmanned ground, aerial and underwater robots. Modeling, kinematics dynamics and control; navigation and collision avoidance; sensor fusion; vision-based navigation; sensor fault detection and isolation; system architectures and robot swarms.</td>
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<tr>
<td>CAP</td>
<td>6615</td>
<td>Neural Networks</td>
<td>3</td>
<td>PR: CAP 5600.</td>
<td>Defines models of artificial neural networks, compares these models, and investigates the relationship of neural network learning to other symbolic learning methods.</td>
</tr>
<tr>
<td>CAP</td>
<td>6638</td>
<td>Geometric/Statistical Pattern Recognition Techniques</td>
<td>3</td>
<td></td>
<td>Principles and applications of statistical pattern recognition methods, Bayes decision theory, parametric and nonparametric techniques, discriminant functions, unsupervised classification and clustering.</td>
</tr>
<tr>
<td>CAP</td>
<td>6663</td>
<td>IT Robotics Application</td>
<td>3</td>
<td></td>
<td>Introduction to Robotics and its different applications. Robotics technology is being used in a wide variety of applications that involve ground, aerial and marine systems. Robotics technology and applications will be explored and discussed.</td>
</tr>
<tr>
<td>CAP</td>
<td>6671</td>
<td>IT Intelligent Agents</td>
<td>3</td>
<td></td>
<td>Introduction to Intelligent Agents and its different applications. Intelligent agent technology relates to important areas that include artificial intelligence, neural networks, and expert systems. These areas will be discussed during the class.</td>
</tr>
<tr>
<td>CAP</td>
<td>6672</td>
<td>Robot Intelligence and Computer Vision</td>
<td>3</td>
<td>PR: COP 2400 or equiv.</td>
<td>An introduction to robotic systems with emphasis on the computational aspects of robot control. Topics for discussion: overview of the robotics field, analysis of robot arm kinematics and coordinate transformation, real-time computer control of robot arms, and computer vision. Practical experience in programming robotic systems will be included.</td>
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<tr>
<td>CAP</td>
<td>6736</td>
<td>Geometric Modeling</td>
<td>3</td>
<td>PR: Data Structures,</td>
<td>The course deals with the representation, design, analysis, processing and visualization of</td>
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<td></td>
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<td></td>
<td>Programming in a higher level language.</td>
<td>shape information used in a variety of fields of science and engineering.</td>
</tr>
<tr>
<td>CAP</td>
<td>6940</td>
<td>IT Graduate Practicum</td>
<td>3-6</td>
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<td>An information technology project-based course that requires the student to investigate, design</td>
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<td></td>
<td>and implement a real-world application over two semesters or, with approval, one semester.</td>
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<tr>
<td>CCE</td>
<td>5035</td>
<td>Construction Management &amp; Planning</td>
<td>3</td>
<td>PR: EGN 3613C.</td>
<td>Fundamentals of construction management. Topics include: general definitions, organizational</td>
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<td>roles, types of contracts, analysis of labor and equipment, cost estimating, contractor cash flow</td>
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<td>analysis, planning and scheduling, project control, construction administration, quality and</td>
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<td></td>
<td>safety management, and use of computer software in construction management.</td>
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<tr>
<td>CCJ</td>
<td>6118</td>
<td>Introduction to Criminology Theory</td>
<td>4</td>
<td></td>
<td>An introduction to, and comparison of, major historical and contemporary theories that seek to</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>explain criminal behavior or the existence of crime in society.</td>
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<tr>
<td>CCJ</td>
<td>6406</td>
<td>Theory, Practice, and Research in Law Enforcement</td>
<td>3</td>
<td></td>
<td>This issue-oriented course explores the relationships among theory, practice, and research as</td>
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<td>these are reflected in the problems and challenges that confront law enforcement.</td>
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<tr>
<td>CCJ</td>
<td>6485</td>
<td>Criminal Justice and Public Policy</td>
<td>3</td>
<td></td>
<td>In this course, students will learn about the structure, function, theory and key issues of the criminal justice system. Students will also acquire the skills necessary to analyze public policy in criminal justice.</td>
</tr>
<tr>
<td>CCJ</td>
<td>6624</td>
<td>Seminar in Violence</td>
<td>3</td>
<td></td>
<td>This course utilizes psychological, sociological, and biological perspectives to help students to understand different types of violent offenders and various intervention strategies.</td>
</tr>
<tr>
<td>CCJ</td>
<td>6638</td>
<td>Seminar in Nature and Causes of Crime</td>
<td>3</td>
<td></td>
<td>Examination of some of the issues green criminologists study and investigate why it is important to study these issues from a criminological perspective. Topics include crime against animals, forests, and water.</td>
</tr>
<tr>
<td>CCJ</td>
<td>6654</td>
<td>Seminar in Drugs and Crime</td>
<td>3</td>
<td></td>
<td>The objective of this course is to provide the student a comprehensive understanding of the dynamics of drug use in American society.</td>
</tr>
<tr>
<td>CCJ</td>
<td>6669</td>
<td>Seminar in Social Inequality and Crime</td>
<td>3</td>
<td></td>
<td>In this course, students will examine one of the most persistent and divisive issues in criminal justice—racial, and to a lesser extent ethnic, disproportionality in the U.S. criminal justice system (CJS).</td>
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<td>SUB</td>
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<tr>
<td>CCJ</td>
<td>6705</td>
<td>Research Methods in Criminology</td>
<td>3-4</td>
<td></td>
<td>Introduction to the basic methods of criminological research; overviews philosophy of science, research ethics, research design issues such as sampling and measurement, and methods of data collection, including survey, experimental, and evaluation research.</td>
</tr>
<tr>
<td>CCJ</td>
<td>6706</td>
<td>Quantitative Analysis in Criminology I</td>
<td>4</td>
<td>PR: CCJ 6705</td>
<td>Introduction to data management utilizing computer statistical packages and elementary statistical techniques used in criminological research: descriptive and inferential statistics, group comparisons, measures of association, linear regression.</td>
</tr>
<tr>
<td>CCJ</td>
<td>6707</td>
<td>Quantitative Analysis in Criminology II</td>
<td>3</td>
<td>PR: CCJ 6706</td>
<td>Intermediate-level data analysis and statistical techniques applied to problems in criminology. Emphasis on multivariate techniques, including multiple regression, path analysis, and nonlinear models.</td>
</tr>
<tr>
<td>CCJ</td>
<td>6708</td>
<td>Quantitative Analysis in Criminology III</td>
<td>3</td>
<td>PR: CCJ 6707 or equivalent.</td>
<td>This course familiarizes students with advanced multivariate linear and nonlinear statistical procedures appropriate for analyzing criminological data.</td>
</tr>
<tr>
<td>CCJ</td>
<td>6905</td>
<td>Directed Independent Study</td>
<td>1-12</td>
<td></td>
<td>Independent study in which student must have contract with instructor.</td>
</tr>
<tr>
<td>CCJ</td>
<td>6910</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
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<tr>
<td>CCJ</td>
<td>6930</td>
<td>Current Issues in Corrections</td>
<td>3</td>
<td></td>
<td>This course is designed to review and analyze the major issues and dilemmas that confront corrections today, including overcrowding, inmate rights, privatization, control of gangs, control of inmates, and the availability or programs and services. Attention will also focus on the strategies and/or controversies associated with these issues.</td>
</tr>
<tr>
<td>CCJ</td>
<td>6931</td>
<td>Seminar in Criminological Theory</td>
<td>3</td>
<td>PR: CCJ 6605</td>
<td>This course is designed to provide an in-depth analysis of specific theoretical issues in criminology.</td>
</tr>
<tr>
<td>CCJ</td>
<td>6935</td>
<td>Topics in Criminology and Criminal Justice</td>
<td>3</td>
<td></td>
<td>Analysis and discussion of topics of major concern in criminology and criminal justice that are not covered in regular courses.</td>
</tr>
<tr>
<td>CCJ</td>
<td>6936</td>
<td>Current Issues in Law Enforcement</td>
<td>3</td>
<td></td>
<td>This course will focus on some of the most significant issues facing law enforcement agencies today. Some topics included will be: police use of deadly force; review of police conduct; police unionization; police corruption; media relations; civil liability; and community/problem-oriented policing.</td>
</tr>
<tr>
<td>CCJ</td>
<td>6937</td>
<td>Pro Seminar in Criminology</td>
<td>1</td>
<td></td>
<td>Provides a forum for presentation and discussion of research ideas by faculty, students, and guests, with a view toward the development of thesis topics.</td>
</tr>
<tr>
<td>CCJ</td>
<td>6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td></td>
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<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
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<tr>
<td>CCJ</td>
<td>7065</td>
<td>Professional Development in Criminology</td>
<td>2</td>
<td></td>
<td>Engage in a range of professional activities that form the core of a successful career in the field of criminology. Topics will include: writing a dissertation, teaching, presenting at professional conferences.</td>
</tr>
<tr>
<td>CCJ</td>
<td>7605</td>
<td>Theories of Criminal Behavior I</td>
<td>3</td>
<td></td>
<td>The course is part 1 of a two semesters designed to expose students to the foundations of social scientific theory and the major paradigms within sociology, social psychology, and criminology on which most criminological theories are based.</td>
</tr>
<tr>
<td>CCJ</td>
<td>7606</td>
<td>Theories of Criminal Behavior II</td>
<td>3</td>
<td>PR: CCJ 7605</td>
<td>An advanced course that builds upon the knowledge base of criminological theory attained in prior coursework.</td>
</tr>
<tr>
<td>CCJ</td>
<td>7910</td>
<td>Advanced Research</td>
<td>1-12</td>
<td></td>
<td>Course is designed to give students an opportunity to conduct independent research under the supervision of a faculty member. May be repeated.</td>
</tr>
<tr>
<td>CCJ</td>
<td>7940</td>
<td>Teaching Practicum in Criminology</td>
<td>1</td>
<td></td>
<td>In this course, a student will receive supervision and mentoring from an experienced teacher in the context of a single undergraduate (not on-line) course, the primary instructor of which is the experienced faculty member.</td>
</tr>
<tr>
<td>CCJ</td>
<td>7980</td>
<td>Doctoral Dissertation</td>
<td>2-12</td>
<td></td>
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<td>SUB</td>
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<tr>
<td>CDA</td>
<td>5416</td>
<td>Computer System Verification</td>
<td>3</td>
<td>PR: CDA 3201, COT 3100, COT 4400, COP 4530.</td>
<td>This course introduces basic concepts of formal verification. Topics include formal specification, algorithms, and methodologies for scalable verification. It is only for CSE majors or non-majors with permission from the instructor, not repeatable.</td>
</tr>
<tr>
<td>CEG</td>
<td>5115</td>
<td>Foundation Engineering</td>
<td>3</td>
<td>PR: CEG 4011</td>
<td>Design of shallow foundations, cantilevered and anchored retaining walls, piling, drilled piers and special foundations. Computer applications to geotechnical engineering are covered.</td>
</tr>
<tr>
<td>CEG</td>
<td>5205</td>
<td>Laboratory Testing for Geotechnical Engineers</td>
<td>3</td>
<td>PR: CEG 4011</td>
<td>Both routine and advanced forms of soil testing are covered. Emphasis is placed on procedures and application of results to design.</td>
</tr>
<tr>
<td>CEG</td>
<td>6015</td>
<td>Advanced Geotechnical Topics</td>
<td>3</td>
<td>PR: CEG 4011, CEG 4011L, CEG 5205.</td>
<td>Advanced concepts of shear strength and consolidation of soils; slope stability, nonlinear and secondary consolidation, numerical methods.</td>
</tr>
<tr>
<td>CEG</td>
<td>6065</td>
<td>Soil Dynamics</td>
<td>3</td>
<td>PR: CEG 4011, CEG 4011L, CEG 4012.</td>
<td>Fundamentals of vibrations, wave propagation, design of foundations, retaining walls and slopes to resist vibrations, liquefaction of soils.</td>
</tr>
<tr>
<td>CEG</td>
<td>6415</td>
<td>Seepage and Subsurface Drainage</td>
<td>3</td>
<td>CR: CEG 4011</td>
<td>Design of underdrains, wells, soil filters, fabric filters, and dewatering systems with special emphasis on case studies.</td>
</tr>
<tr>
<td>CEN</td>
<td>6084</td>
<td>Advances in Object Oriented Programming for IT</td>
<td>3</td>
<td></td>
<td>This course will explore advanced object oriented principles. Topics will include meta-object protocols, reflexive languages, meta classes and class/object hierarchies™ structures and bootstrapping.</td>
</tr>
<tr>
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<tr>
<td>CES</td>
<td>5105C</td>
<td>Advanced Mechanics of Materials I</td>
<td>3</td>
<td>PR: EGN 3331, MAP 2302</td>
<td>Analytical study of the mechanical behavior of deformable solids. Basic concepts, stress and strain transformations, special topics in beams, theory of elasticity, criteria of failure, beams on elastic foundation.</td>
</tr>
<tr>
<td>CES</td>
<td>5209</td>
<td>Structural Dynamics</td>
<td>3</td>
<td>PR: CES 3102, EGN 3321</td>
<td>Behavior of structural components and systems when subjected to periodic dynamic loads.</td>
</tr>
<tr>
<td>CES</td>
<td>5715C</td>
<td>Prestressed Concrete</td>
<td>3</td>
<td></td>
<td>Fundamental principles of prestressing; calculation of losses; stress analysis and design of simple beams for flexure and shear. Examples of pressures applications.</td>
</tr>
<tr>
<td>CES</td>
<td>6010</td>
<td>Structural Life Prediction</td>
<td>3</td>
<td></td>
<td>Prediction of durability of structures, detection and evaluation of structural corrosion damage in steel/cementitious system, structure corrosion damage prevention, control and rehabilitation techniques.</td>
</tr>
<tr>
<td>CES</td>
<td>6103</td>
<td>Experimental Stress Analysis</td>
<td>3</td>
<td>PR: EGN 3331, EGN 3373</td>
<td>This course will provide the tools of research necessary to design experiments and/or instrumentation schemes for directed studies. It is intended for structural and geotechnical engineering graduates conducting master's or doctoral research.</td>
</tr>
<tr>
<td>CES</td>
<td>6107C</td>
<td>Advanced Mechanics Of Materials II</td>
<td>3</td>
<td>PR: CES 5105C.</td>
<td>Continuation of CES 5105C. Structural stability of beam-columns and frames, calculus of variations and energy methods, introduction to viscoelasticity and plasticity.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
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<td>PREREQUISITES</td>
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<tr>
<td>CES</td>
<td>6118</td>
<td>Applied Finite Elements</td>
<td>3</td>
<td>PR: CES 3102</td>
<td>The course focuses on applying the finite element method to types of problems encountered in various fields of engineering. In the course, underlying theories are presented, enough hand calculations are done to ensure an understanding of the methods, and then students solve problems using the ANSYS finite element program. The course is ideally suited for engineers wanting an understanding of the finite element method as applied to their jobs, graduate students wishing to apply the finite element method to their research problems, and students wanting a preparation for the Department’s computational mechanics course sequence.</td>
</tr>
<tr>
<td>CES</td>
<td>6326</td>
<td>Design of Concrete Bridges</td>
<td>3</td>
<td>PR: CES 4702, CES 5715C.</td>
<td>Bridge Classification, AASHTO loads and load combinations, load distribution, design of typical superstructures and substructures for concrete and prestressed bridges.</td>
</tr>
<tr>
<td>CES</td>
<td>6586</td>
<td>Design of Structures to Resist Natural Hazards</td>
<td>3</td>
<td></td>
<td>Study of natural hazards (wind, earthquakes &amp; ocean waves) and their interaction with structures. Use of exact and approximate methods of analysis, computer modeling, and design provisions for structures to resist the aforementioned loads.</td>
</tr>
<tr>
<td>CES</td>
<td>6609</td>
<td>Advanced Steel Design</td>
<td>3</td>
<td>PR: CES 4605.</td>
<td>Advanced topics in steel design. Topics covered include connection design, torsion of wide range sections, and optimum structural design.</td>
</tr>
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<tr>
<td>CES</td>
<td>6706</td>
<td>Advanced Concrete Design</td>
<td>3</td>
<td>PR: CES 4702</td>
<td>Advanced topics in concrete designs. Topics include torsion two way floor systems, composite construction, slabs on grade, and deep beams.</td>
</tr>
<tr>
<td>CES</td>
<td>6716</td>
<td>Design of Continuous Post-Tensioned Structures</td>
<td>3</td>
<td></td>
<td>Methods of analysis and design of post-tensioned statically indeterminate structures. Emphasis will be on the design of two-way slabs for floor systems using the equivalent frame method and load balancing.</td>
</tr>
<tr>
<td>CES</td>
<td>6835</td>
<td>Design of Masonry Structures</td>
<td>3</td>
<td>PR: CES 4702</td>
<td>This course provides an overview of the design of masonry structures using concrete masonry units. It covers both working stress and strength design of typical elements such as walls and lintels and simple structures.</td>
</tr>
<tr>
<td>CES</td>
<td>6841</td>
<td>Infrastructure I: Repair/Rehab of Structures</td>
<td>3</td>
<td>CR: CES 5715C; PR: CES 4702</td>
<td>This course focuses on the repair of structures using fiber reinforced polymers.</td>
</tr>
<tr>
<td>CGN</td>
<td>5933</td>
<td>Special Topics in Civil Engineering and Mechanics</td>
<td>1-5</td>
<td></td>
<td>New technical topics of interest to civil engineering students.</td>
</tr>
<tr>
<td>CGN</td>
<td>6720</td>
<td>Electrochemical Diagnostic Techniques</td>
<td>3</td>
<td>PR: EGN 3365 or equivalent basic Materials Science course.</td>
<td>Fundamentals and applications of electrochemical diagnostic techniques. Focus on electrochemical impedance spectroscopy to evaluate reaction rates in corrosion and interfacial phenomena of materials. Includes research project.</td>
</tr>
<tr>
<td>CGN</td>
<td>6906</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
<td>Independent study in which students must have a contract with an instructor.</td>
</tr>
<tr>
<td>SUB</td>
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<td>TITLE</td>
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<tr>
<td>CGN</td>
<td>6915</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td>Course consists of directed research on topics selected by student and professor. The topics vary. The course allows students to develop research skills and independent work disciplines.</td>
</tr>
<tr>
<td>CGN</td>
<td>6933</td>
<td>Special Topics in Civil and Environmental Engineering</td>
<td>1-4</td>
<td></td>
<td>Topics to be chosen by students and instructor permitting newly developing subdisciplinary special interests to be explored.</td>
</tr>
<tr>
<td>CGN</td>
<td>6941</td>
<td>Graduate Instruction Methods</td>
<td>1-5</td>
<td></td>
<td>Special course to be used primarily for the training of graduate teaching assistants.</td>
</tr>
<tr>
<td>CGN</td>
<td>6945</td>
<td>Graduate Research Methods in Civil &amp; Environmental Engineering</td>
<td>1</td>
<td></td>
<td>Course covers proposal writing including review of successful proposals and scientific literature, developing research hypotheses and objectives, presenting preliminary results and developing a research program. Required core course for doctoral students.</td>
</tr>
<tr>
<td>CGN</td>
<td>6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td></td>
<td>Thesis/Specialist project hours.</td>
</tr>
<tr>
<td>CGN</td>
<td>7915</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td>Course consists of directed research on topics selected by student and professor. The topics vary. The course allows students to develop research skills and independent work disciplines.</td>
</tr>
<tr>
<td>SUB</td>
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<td>TITLE</td>
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<tr>
<td>CGS</td>
<td>6210</td>
<td>Computer Hardware Systems for Education</td>
<td>3</td>
<td></td>
<td>This course focuses on the development of an understanding of microcomputer hardware that allows individuals to teach as well as make decisions concerning purchase, repair, and appropriate use. Topics include: basic concepts of digital electronics, the operation of a digital computer system, major categories of computer peripherals, historical development of electronic computers, and selection and maintenance of computers in an educational setting.</td>
</tr>
<tr>
<td>CGS</td>
<td>6842</td>
<td>IT and Systems for E-Business</td>
<td>3</td>
<td></td>
<td>This course provides a managerial perspective on how Web Design and Computing are evolving and how they will impact future enterprise e-solution. It will cover both the foundations of Web design/Computing and the important technological advancements.</td>
</tr>
<tr>
<td>CHM</td>
<td>5225</td>
<td>Intermediate Organic Chemistry I</td>
<td>3</td>
<td>PR: CHM 2211, CHM 2211L, or equivalent</td>
<td>This course will extend organic chemistry beyond the undergraduate level and will emphasize concepts of stereochemistry and reaction mechanisms.</td>
</tr>
<tr>
<td>CHM</td>
<td>5226</td>
<td>Intermediate Organic Chemistry II</td>
<td>3</td>
<td>PR: CHM 5225</td>
<td>An introduction to synthetic organic chemistry for graduate students and advanced undergraduates. Semester II.</td>
</tr>
<tr>
<td>CHM</td>
<td>5452</td>
<td>Polymer Chemistry</td>
<td>3</td>
<td>PR: Either CHM 2211, CHM 2211L, and CHM 3400 or CHM 4410</td>
<td>Fundamentals of polymer synthesis, structure, properties, and characterization.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>CHM</td>
<td>5621</td>
<td>Principles of Inorganic Chemistry</td>
<td>3</td>
<td>PR: CHM 4411, CHM 4610</td>
<td>Chemical forces, reactivity, periodicity, and literature in organic chemistry; basic core course.</td>
</tr>
<tr>
<td>CHM</td>
<td>5931</td>
<td>Selected Topics in Chemistry</td>
<td>1-3</td>
<td></td>
<td>The following courses are representative of those that are taught under this title: Natural Products, Stereochemistry, Reactive Intermediates, Photochemistry, Instrumental Electronics, Advanced Lab Techniques, Heterocyclic Chemistry, etc.</td>
</tr>
<tr>
<td>CHM</td>
<td>6036</td>
<td>Chemical Biology</td>
<td>3</td>
<td>PR: BCH 3053 or BCH 4033</td>
<td>Current research directions in chemical biology. Topics include chemical and biosynthesis of peptides, proteins and nucleic acids, genetic and protein engineering, combinatorial chemistry, targeted probes and imaging, bioorthogonal reactions, etc.</td>
</tr>
<tr>
<td>CHM</td>
<td>6150</td>
<td>Advanced Analytical Chemistry</td>
<td>3</td>
<td></td>
<td>A study of complete analytical process, including sample handling, separations, the analysis step, and statistical interpretation of data. Emphasis placed on separations and statistics. Lec.</td>
</tr>
<tr>
<td>CHM</td>
<td>6235</td>
<td>Spectroscopic Analysis of Organic Compounds</td>
<td>3</td>
<td>PR: CHM 2211</td>
<td>This course provides the student with a thorough understanding of the theory and use of spectroscopic techniques (MS, IR, UV-vis, and NMR,) and their use in identification of organic compounds from the spectroscopic data from techniques discussed.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>CHM</td>
<td>6279</td>
<td>Introduction to Drug Discovery</td>
<td>3</td>
<td>PR: BSC 2011, CHM 2211</td>
<td>Explores the entire drug discovery process, from initial target identification and hit generation through lead optimization and clinical trials to FDA approval. Case studies will be used to illustrate the process.</td>
</tr>
<tr>
<td>CHM</td>
<td>6810</td>
<td>Methods of Instruction in Higher Ed Chemistry</td>
<td>3</td>
<td></td>
<td>This course presents pedagogical approaches associated with evidence-based effective instruction for postsecondary chemistry education.</td>
</tr>
<tr>
<td>CHM</td>
<td>6907</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
<td>Independent study in which students must have a contract with an instructor.</td>
</tr>
<tr>
<td>CHM</td>
<td>6935</td>
<td>Graduate Seminars in Chemistry</td>
<td>1</td>
<td></td>
<td>Required every semester (when offered) for all students enrolled in Chemistry graduate program. Requires participation in and attendance at the weekly departmental seminar.</td>
</tr>
<tr>
<td>CHM</td>
<td>6936</td>
<td>Chemistry Colloquium</td>
<td>1</td>
<td></td>
<td>Frequent (usually weekly) small-group analysis of current developments.</td>
</tr>
<tr>
<td>CHM</td>
<td>6938</td>
<td>Selected Topics in Chemistry</td>
<td>1-3</td>
<td></td>
<td>Representative titles taught include: Symmetry and Group Theory, Photochemical Kinetics, Quantum Mechanical Calculations, Advanced Chemical Thermodynamics, Reaction Mechanisms, Advanced Instrumentation, Separations and Characterizations, Spectroscopy, etc.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>CHM</td>
<td>6945</td>
<td>Investigating Chemical Education Research in the United States</td>
<td>3</td>
<td></td>
<td>Introduction to the field of Chemical Education Research including the types and kinds of research conducted, primary publication venues, seminal and recent research contributions.</td>
</tr>
<tr>
<td>CHM</td>
<td>6946</td>
<td>Graduate Instruction Methods</td>
<td>1-4</td>
<td></td>
<td>Special course for the training of teaching assistants.</td>
</tr>
<tr>
<td>CHM</td>
<td>6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHM</td>
<td>6973</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHM</td>
<td>7820</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHM</td>
<td>7980</td>
<td>Dissertation: Doctoral</td>
<td>2-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIS</td>
<td>6377</td>
<td>Information Security Architecture for IT</td>
<td>3</td>
<td></td>
<td>The course outlines a complete road map to a successful adaptation and implementation of a security program based on a code of practice for information security management.</td>
</tr>
<tr>
<td>CIS</td>
<td>6511</td>
<td>IT Risk Management</td>
<td>3</td>
<td></td>
<td>Various aspects of Risk Managements throughout the life of a project. The course will also present various quantitative/qualitative risk assessment models.</td>
</tr>
<tr>
<td>CIS</td>
<td>6900</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
<td>Independent study in which students must have a contract with an instructor. Requires completed contract prior to enrollment.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
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<td>HRS</td>
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<tr>
<td>CIS</td>
<td>6930</td>
<td>Special Topics</td>
<td>1-5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIS</td>
<td>6940</td>
<td>Graduate Instruction Methods</td>
<td>1-4</td>
<td></td>
<td>Special course to train graduate teaching assistants.</td>
</tr>
<tr>
<td>CIS</td>
<td>6946</td>
<td>Internships/Practicums/Clinical Practice</td>
<td>0-3</td>
<td></td>
<td>Practical computer science and/or computer engineering work under industrial supervision with a faculty approved outline and end-of-semester report. One semester for variable credit and S-U only.</td>
</tr>
<tr>
<td>CIS</td>
<td>6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIS</td>
<td>7910</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td>Requires completed contract prior to enrollment.</td>
</tr>
<tr>
<td>CIS</td>
<td>7980</td>
<td>Dissertation: Doctoral</td>
<td>2-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CJC</td>
<td>6020</td>
<td>Theory, Practice, and Research in Corrections</td>
<td>3</td>
<td></td>
<td>Examination of the interrelationships between theory and practice in corrections, as these are affected by empirical research and systematic program evaluation.</td>
</tr>
<tr>
<td>CJE</td>
<td>6025</td>
<td>Policy Organization, Behavior, and Administration</td>
<td>3</td>
<td></td>
<td>Graduate seminar focusing on the topics of police behavior, organization, and administration.</td>
</tr>
<tr>
<td>CJE</td>
<td>6029</td>
<td>Advanced Seminar in Law Enforcement</td>
<td>3</td>
<td></td>
<td>Students integrate theory and empirical data to critically analyze issues in law enforcement practice and policy.</td>
</tr>
<tr>
<td>CJE</td>
<td>6624</td>
<td>Introduction to Digital Evidence</td>
<td>3</td>
<td></td>
<td>This course is designed to facilitate development of the basic knowledge and skills necessary to recognize, identify, collect, and preserve digital evidence in any kind of criminal investigation. Focus is upon a wide array of digital technologies.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>CJE</td>
<td>6625</td>
<td>Network Forensic Criminal Investigations</td>
<td>3</td>
<td></td>
<td>As applied to criminal investigations, this course focuses on forensic security issues involving access to data stored on networked computer systems and the transmission of data between systems.</td>
</tr>
<tr>
<td>CJE</td>
<td>6627</td>
<td>Digital Evidence Recognition and Collection</td>
<td>3</td>
<td></td>
<td>Instructs participants in the basics of recognizing potential sources of electronic evidence, preparing them to respond to an electronic crime scene, and to collect items of evidentiary value to be used in court proceedings.</td>
</tr>
<tr>
<td>CJE</td>
<td>6688</td>
<td>Cybercrime and Criminal Justice</td>
<td>3</td>
<td></td>
<td>Introduction to the topic of criminality in online environments. Topics include hacking, online identity theft, fraud, trade in illicit substances/items, sexual crimes online, and responses to cybercriminality.</td>
</tr>
<tr>
<td>CJE</td>
<td>6716</td>
<td>Criminal Justice Graduate Capstone Seminar</td>
<td>3</td>
<td></td>
<td>In this capstone seminar students will be required to demonstrate an in-depth knowledge of a specific problem within their agency as well as a proposed solution(s).</td>
</tr>
<tr>
<td>CIL</td>
<td>6421</td>
<td>Law, Crime and Justice</td>
<td>4</td>
<td></td>
<td>An exposition of historical and contemporary legal principles, procedures, and issues as reflected in Constitutional provision, statutes, and case law.</td>
</tr>
<tr>
<td>CLP</td>
<td>6166</td>
<td>Psychopathology</td>
<td>3</td>
<td></td>
<td>Exploration of current approaches to the understanding of pathological behavior and implications for theories of personality. A survey of treatment methods is included.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>CLP</td>
<td>6438</td>
<td>Psychological Assessment: Theory and Research</td>
<td>1-4</td>
<td></td>
<td>Courses cover theory, research, and applications of psychological assessment in areas, such as interviewing, intellectual and cognitive functioning, neuropsychodiagnosics, and personality testing.</td>
</tr>
<tr>
<td>CLP</td>
<td>6937</td>
<td>Topics in Clinical Psychology</td>
<td>1-3</td>
<td></td>
<td>Courses on topics, such as humanistic psychology, community psychology, and clinical neuropsychology.</td>
</tr>
<tr>
<td>CLP</td>
<td>7188</td>
<td>Clinical Psychology Interventions</td>
<td>1-4</td>
<td></td>
<td>Study of the theoretical, empirical, and applied foundations of the major systems of therapeutic intervention.</td>
</tr>
<tr>
<td>CLP</td>
<td>7379</td>
<td>Graduate Seminar in Clinical-Community Psychology</td>
<td>1-3</td>
<td></td>
<td>Seminars on topics, such as psychopathology, community psychology, clinical issues, personality, and developmental psychology.</td>
</tr>
<tr>
<td>CNT</td>
<td>6215</td>
<td>Computer Networks</td>
<td>3</td>
<td></td>
<td>Design and analysis of data communication networks with an emphasis on the Internet and its protocols. Key topics include protocol models, HTTP, TCP, IP, local area networks, routing, flow control, multimedia networking, and performance evaluation.</td>
</tr>
<tr>
<td>CNT</td>
<td>6410</td>
<td>Emerging Topics in Network Security</td>
<td>3</td>
<td></td>
<td>Covers basic concepts of network security, network security primitives, authentication techniques, security and privacy issues in modern wireless systems, and vulnerability analysis of electric power grids.</td>
</tr>
<tr>
<td>COM</td>
<td>5930</td>
<td>Topics in Communication Studies</td>
<td>3</td>
<td></td>
<td>Topical issues in communication.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
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<tr>
<td>COM</td>
<td>6001</td>
<td>Theories and Histories of Communication</td>
<td>3</td>
<td></td>
<td>An introduction to the history and theory of communication as a discipline: its relationship to the arts and sciences, and a survey of the historical development of the field, emphasizing current issues in theory, research, and practice.</td>
</tr>
<tr>
<td>COM</td>
<td>6017</td>
<td>Gender in the Workplace</td>
<td>3</td>
<td></td>
<td>This course focuses on the workplace as a site of gendered communication practices. A variety of work settings will be analyzed in terms of how they construct gender identities, reinforce public-private distinctions and maintain traditional career models.</td>
</tr>
<tr>
<td>COM</td>
<td>6025</td>
<td>Health Communication</td>
<td>3</td>
<td></td>
<td>Application of communication theory and research to the health context including provider-patient communication, health information campaigns, and health beliefs and behavior. Special attention to the value issues in health communication.</td>
</tr>
<tr>
<td>COM</td>
<td>6045</td>
<td>Communicating Leadership</td>
<td>3</td>
<td></td>
<td>Effective leadership today focuses less on control and more on the strategic use of communication to build relationships and guide behavior. This course examines the various ways leaders can communicate more effectively in contemporary organizations.</td>
</tr>
<tr>
<td>COM</td>
<td>6121</td>
<td>Organizational Communication</td>
<td>3</td>
<td></td>
<td>A study of communication theory and behavior within organizational settings: role of communication, communication climates, communication networks, leadership.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>COM</td>
<td>6248</td>
<td>Historical Perspectives on Communication</td>
<td>3</td>
<td></td>
<td>Explores prominent figures and theoretical movements in area of Communication (Interpersonal or Organizational Communication, Cultural Studies, Rhetorical Studies, or Performance Studies). [Repeatable for credit as topics vary.]</td>
</tr>
<tr>
<td>COM</td>
<td>6306</td>
<td>Action Research</td>
<td>3</td>
<td></td>
<td>Action research is rooted in engagement, involving collaboration with community or organizational partners who will be affected by the research. Through hands-on projects we learn principles of action research and explore communication and ethical issues.</td>
</tr>
<tr>
<td>COM</td>
<td>6313</td>
<td>Interpreting Communication Research</td>
<td>3</td>
<td></td>
<td>This course is designed to give students tools to help them interpret the mainstream research literature in communication and to judge research on a quality continuum. No assumptions are made about student understanding of quantitative research methods.</td>
</tr>
<tr>
<td>COM</td>
<td>6345</td>
<td>Contemporary Cultural Studies</td>
<td>3</td>
<td></td>
<td>Examines theoretical issues and interpretive approaches for exploring questions of knowledge, identity, experience, meaning and value in modern culture through the study of communication.</td>
</tr>
<tr>
<td>COM</td>
<td>6400</td>
<td>Communication Theory</td>
<td>3</td>
<td>PR: COM 6001</td>
<td>An examination of communication theory through selected reading in the works of major theorists past and present.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>COM</td>
<td>6418</td>
<td>Communication and Systems Practice</td>
<td>3</td>
<td></td>
<td>Systems theories offer possibilities for understanding interconnections and emergence, identities and environments, and stability and change, with communication processes being central. We explore social systems principles by linking theory and praxis.</td>
</tr>
<tr>
<td>COM</td>
<td>6605</td>
<td>Media Studies</td>
<td>3</td>
<td></td>
<td>Study of the impact of mass and mediated forms of communication on individuals, groups, societies, and cultures. Several theoretical and critical perspectives are considered.</td>
</tr>
<tr>
<td>COM</td>
<td>6724</td>
<td>Communication Training in Organizations</td>
<td>3</td>
<td></td>
<td>Provides holistic understanding of how communication training is developed and conducted in organizations. Students learn to assess communication training needs, design/deliver effective communication training programs, and evaluate their effectiveness.</td>
</tr>
<tr>
<td>COM</td>
<td>7325</td>
<td>Seminar in Communication Research Methods</td>
<td>3</td>
<td></td>
<td>Examines the research practices and methodologies of communication as a discipline, including bibliographical resources, research designs, research techniques, and forms of scholarly presentation.</td>
</tr>
<tr>
<td>COM</td>
<td>7933</td>
<td>Seminar in Communication Studies</td>
<td>3</td>
<td></td>
<td>Variable topics course.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>COP</td>
<td>6021</td>
<td>Programming Languages: Design and Analysis</td>
<td>3</td>
<td></td>
<td>In-depth, graduate-level study of the design and analysis of programming languages. Functional programming, deductive systems, operational semantics, type systems, and proofs of type safety.</td>
</tr>
<tr>
<td>COP</td>
<td>6611</td>
<td>Operating Systems</td>
<td>3</td>
<td></td>
<td>Operating systems functions and design, resource management, protection systems, process communication, and deadlocks.</td>
</tr>
<tr>
<td>COP</td>
<td>6621</td>
<td>Programming Languages and Translation</td>
<td>3</td>
<td></td>
<td>Grammars and languages, symbols, strings, syntax, parsing, the design of a compiler, storage organization and symbol tables, translator writing systems.</td>
</tr>
<tr>
<td>COT</td>
<td>6405</td>
<td>Introduction to the Theory of Algorithms</td>
<td>3</td>
<td>PR: COT 3100, COT 4400, or equiv.</td>
<td>Analysis techniques for algorithms. Characterizing algorithms in terms of recurrence relations, solutions of recurrence relations, upper and lower bounds. Graph problems, parallel, algorithms, NP completeness and approximation algorithms, with relationship to practical problems.</td>
</tr>
<tr>
<td>CPO</td>
<td>5934</td>
<td>Selected Topics in Comparative Politics</td>
<td>3</td>
<td></td>
<td>Studies specific substantive areas in Comparative Politics, such as political economy or the politics of specific countries or regions.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
<td>DESCRIPTION</td>
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<tr>
<td>CPO</td>
<td>6077</td>
<td>Social Movements</td>
<td>3</td>
<td></td>
<td>Introduces students to the main theoretical perspectives of social movement scholarship and investigates core social movements in the US and beyond.</td>
</tr>
<tr>
<td>CPO</td>
<td>6091</td>
<td>Seminar in Comparative Politics</td>
<td>3</td>
<td></td>
<td>Extensive examination of the major theories and approaches used in the study of Comparative Politics. Seminar format.</td>
</tr>
<tr>
<td>CRW</td>
<td>6025</td>
<td>Special Topics in Creative Writing</td>
<td>3</td>
<td></td>
<td>This course will offer coverage of current topics in creative writing based on student demand and instructor interest. Topics offered may include memoir, novel writing, screenwriting, and editing and publishing.</td>
</tr>
<tr>
<td>CRW</td>
<td>6130</td>
<td>Fiction Writing</td>
<td>3</td>
<td></td>
<td>A study of the process of fiction writing and the artistic demands associated with its forms, from microfiction to the novel.</td>
</tr>
<tr>
<td>CRW</td>
<td>6164</td>
<td>The Craft of Fiction</td>
<td>3</td>
<td></td>
<td>A study in the forms and technique of fiction writing. Students will examine how novels and stories are constructed, analyze craft (plotting, characterization, point of view) and the relationship of form and craft, and study the variety of approaches to storytelling (realism, magic realism, minimalism, and metafiction).</td>
</tr>
<tr>
<td>CRW</td>
<td>6236</td>
<td>Nonfiction Writing</td>
<td>3</td>
<td></td>
<td>An exploration of the different types of nonfiction writing, such as memoir, travel, nature, commentary, book review, essay, and biography.</td>
</tr>
<tr>
<td>CRW</td>
<td>6331</td>
<td>Poetry Writing</td>
<td>3</td>
<td></td>
<td>A study of the process of poetry writing and the demands associated with its form, both free verse and metrical.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>CRW</td>
<td>6352</td>
<td>The Craft of Poetry</td>
<td>3</td>
<td></td>
<td>An intensive examination of established schools of poetic writing: their themes, imagery, and approach to subject matter. Students also will write and submit original poetry for private and group constructive evaluation.</td>
</tr>
<tr>
<td>CRW</td>
<td>6726</td>
<td>Practicum in Literary Editing and Publishing</td>
<td>3</td>
<td></td>
<td>Introduction to the publishing industry, including book publishing, literary magazines, editing, agents, book design and packaging, book marketing and publicity, interviewing, and book reviewing. Students assist in publication of a literary magazine.</td>
</tr>
<tr>
<td>CST</td>
<td>6920</td>
<td>Non-Credit Graduate Study</td>
<td>0</td>
<td></td>
<td>This course is used for students on educational experiences to maintain continuous enrollment/good standing (i.e., Peace Corps).</td>
</tr>
<tr>
<td>CST</td>
<td>6934</td>
<td>Special Topics in Graduate School: Research Practicum</td>
<td>3</td>
<td></td>
<td>Variable titles offered on topics of special interest pertaining to research practices.</td>
</tr>
<tr>
<td>CST</td>
<td>6935</td>
<td>Special Topics in Graduate School: Professional Development</td>
<td>3</td>
<td></td>
<td>Variable titles offered on topics of special interest pertaining to professional development.</td>
</tr>
<tr>
<td>CTS</td>
<td>6716</td>
<td>Network Programming for IT</td>
<td>3</td>
<td></td>
<td>Network programming using high level languages. Topics covered will include distributed computing using remote method invocation technologies, peer-to-peer protocols, w-level socket-based programming and mobile code.</td>
</tr>
<tr>
<td>CWR</td>
<td>6235</td>
<td>Free Surface Flow</td>
<td>3</td>
<td>PR: CWR 4202</td>
<td>Fundamental and applied aspects of free surface flow, including river hydraulics, canal flow, and open channel design.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>CWR</td>
<td>6239</td>
<td>Waves and Beach Protection</td>
<td>3</td>
<td>PR: CWR 6820</td>
<td>A study of the fundamentals of shoreline dynamics including distribution of wave energy, motion of beach sand, stable configurations and protective measures.</td>
</tr>
<tr>
<td>CWR</td>
<td>6305</td>
<td>Urban Hydrology</td>
<td>3</td>
<td></td>
<td>A study of the quantity and quality problems and solution techniques associated with urban runoff.</td>
</tr>
<tr>
<td>CWR</td>
<td>6533</td>
<td>Water Quality Modeling</td>
<td>3</td>
<td></td>
<td>This course will develop the fundamental principals and concepts of water quality modeling and apply water quality models in a variety of contexts. The mathematical representations of environmental transport and transformation processes will be elucidated. Models of different complexity will be applied to a variety of environmental contexts.</td>
</tr>
<tr>
<td>CWR</td>
<td>6534</td>
<td>Coastal and Estuary Modeling</td>
<td>3</td>
<td></td>
<td>Digital modeling of coastal and estuary systems, currents tide heights, sediment transport, erosion, data collection, temperature distribution, source and sinks. Special emphasis on Florida regions.</td>
</tr>
<tr>
<td>CWR</td>
<td>6535</td>
<td>Hydrologic Models</td>
<td>3</td>
<td></td>
<td>A study of the theoretical principles of hydrologic modeling and an examination of various numerical hydrologic models available. Students will be required to develop and apply computer models.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>CWR</td>
<td>6538</td>
<td>Advanced Hydrologic Models</td>
<td>3</td>
<td>PR: CWR 6535 and GLY 6739.</td>
<td>To present the theoretical and applied concepts of advanced hydrologic modeling and especially integrated surface water/ground water modeling and to examine various numerical hydrologic models used in engineering practice.</td>
</tr>
<tr>
<td>CWR</td>
<td>6820</td>
<td>Coastal Waves And Structures</td>
<td>3</td>
<td></td>
<td>Fundamentals of wave motion and the mutual interaction of waves and structures. A design project is included.</td>
</tr>
<tr>
<td>DEP</td>
<td>6058</td>
<td>Developmental Psychology</td>
<td>3</td>
<td></td>
<td>Basic survey of research and theory in human developmental processes.</td>
</tr>
<tr>
<td>DIE</td>
<td>6127</td>
<td>Principles of Leadership and Management of Food and Nutrition</td>
<td>2</td>
<td></td>
<td>Course equips students with leadership and management skills needed to establish and maintain effective food and nutrition programs. Food service and clinical nutrition management is addressed so students can adapt to a changing healthcare environment.</td>
</tr>
<tr>
<td>DIE</td>
<td>6248</td>
<td>Advanced Clinical Nutrition</td>
<td>3</td>
<td></td>
<td>An integration of pathophysiology, biochemistry, and nutrition concepts that form the basis for medical nutrition therapy in health care.</td>
</tr>
<tr>
<td>EBD</td>
<td>6215</td>
<td>Advanced Theories and Practices in Emotional Handicaps</td>
<td>3</td>
<td>PR: Introductory course in special education.</td>
<td>In-depth study of specific behavioral disorders of children and youth, with an emphasis on educational implications and interventions.</td>
</tr>
<tr>
<td>EBD</td>
<td>6216</td>
<td>Educational Strategies for Students With Behavior Disorders</td>
<td>3</td>
<td></td>
<td>Advanced methods and materials for planning, implementing, and evaluating educational interventions with students with behavior disorders. For certification.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
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<tr>
<td>EBD</td>
<td>6246</td>
<td>Educating Students with Autism</td>
<td>3</td>
<td></td>
<td>This course provides an overview of the characteristics, etiology, and prevalence of autism spectrum disorders, along with the knowledge and skills necessary to support the learning of children with autism spectrum disorders.</td>
</tr>
<tr>
<td>EBD</td>
<td>6943</td>
<td>Supervised Practicum in Behavior Disorders</td>
<td>1-12</td>
<td></td>
<td>Supervised graduate practicum experiences with children who have behavior disorders. For students seeking certification only.</td>
</tr>
<tr>
<td>ECH</td>
<td>5320</td>
<td>Chemical Process Engineering I</td>
<td>4</td>
<td></td>
<td>The course presents the principles of mass balances, classical thermodynamics, phase equilibria, energy balances, and psychrometrics. The student will learn by doing many case studies. Computer software will be used to obtain solutions to many problems.</td>
</tr>
<tr>
<td>ECH</td>
<td>5321</td>
<td>Chemical Process Engineering II</td>
<td>4</td>
<td></td>
<td>Basic concepts of fluid mechanics, including viscous fluids, pipe flow with minor losses, simple fluid machinery, momentum and external flow. Steady state conductive and convective heat transfer. Not available for chemical engineering students.</td>
</tr>
<tr>
<td>ECH</td>
<td>5322</td>
<td>Chemical Process Engineering III</td>
<td>4</td>
<td></td>
<td>Basic concepts of fluid phase equilibrium, chemical equilibrium, separation processes, and chemical reactors. Not available for chemical engineering students.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
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<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>ECH</td>
<td>5324</td>
<td>Automatic Process Control II</td>
<td>3</td>
<td>PR: ECH 4323C</td>
<td>The course covers the root locus and frequency response methods to study stability of control loops. The techniques of ratio, cascade, feed forward, selective, override, and multi-variable control techniques are discussed in detail and shown how to utilize to design control systems, z-transforms and discrete controllers including PID, Dahlin and deadline compensation.</td>
</tr>
<tr>
<td>ECH</td>
<td>5327</td>
<td>Chemical Process Control</td>
<td>4</td>
<td></td>
<td>Basic concepts of feedback control, process dynamics, process controllers (PID) including tuning, control loop stability, cascade, ratio, selective, override, feedforward, and multivariable control. Not available for chemical engineering students.</td>
</tr>
<tr>
<td>ECH</td>
<td>5740</td>
<td>Theory and Design of Bioprocesses</td>
<td>3</td>
<td></td>
<td>Introduction to biotechnology, including applied microbiology, enzyme technology, biomass production, bioreactor design, and transport processes in biosystems.</td>
</tr>
<tr>
<td>ECH</td>
<td>5747C</td>
<td>Selected Topics in Chemical Engineering Biotechnology</td>
<td>1-3</td>
<td></td>
<td>Selected topics in engineering in biotechnology, including cell separation technology, immobilized enzymes and cells, food engineering, biohazardous waste, and bioseparations.</td>
</tr>
<tr>
<td>ECH</td>
<td>5748</td>
<td>Selected Topics in Biomedical Engineering</td>
<td>1-3</td>
<td></td>
<td>Selected topics in biomedical engineering, including biomedical engineering, biomedical materials, biodynamics of circulation, separation processes in biomedical systems, and artificial organ systems.</td>
</tr>
<tr>
<td>SUB</td>
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<td>TITLE</td>
<td>HRS</td>
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<tr>
<td>ECH</td>
<td>5785</td>
<td>Sustaining the Earth: An Engineering Approach</td>
<td>3</td>
<td></td>
<td>An approach of global perspective on ecological principles revealing how all the world’s life is connected and sustained within the biosphere and how engineering provides the tools to design solutions engaging materials science &amp; environmental ethics.</td>
</tr>
<tr>
<td>ECH</td>
<td>5786</td>
<td>Green Engineering</td>
<td>3</td>
<td></td>
<td>Synthesis and design of green chemical, biological and energy conversion processes and products. Environmental impact analysis; green chemistry and materials; life cycle analysis; industrial ecology; systematic methods and real-life examples.</td>
</tr>
<tr>
<td>ECH</td>
<td>5930</td>
<td>Special Topics III</td>
<td>1-4</td>
<td></td>
<td>Individual study as practical engineering work at an industrial facility or laboratory under the supervision of a faculty member interacting with the sponsoring industrial facility or laboratory.</td>
</tr>
<tr>
<td>ECH</td>
<td>5931</td>
<td>Special Topics IV</td>
<td>1-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECH</td>
<td>5945</td>
<td>Chemical Engineering Industrial Internship</td>
<td>1-6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECH</td>
<td>6105</td>
<td>Advanced Thermodynamics I</td>
<td>3</td>
<td></td>
<td>Selected topics in classical and irreversible thermodynamics.</td>
</tr>
<tr>
<td>ECH</td>
<td>6285</td>
<td>Advanced Transport Phenomena</td>
<td>3</td>
<td></td>
<td>Formulation of flux equations for fluid, heat &amp; mass transport. Development &amp; resolution of unsteady state and multidimensional models in various co-ordinate systems. Analytical &amp; numerical techniques to solve the resulting equations will be presented.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>ECH</td>
<td>6412</td>
<td>Processes Analysis and Modeling</td>
<td>3</td>
<td></td>
<td>Computer-controlled data acquisition and analysis aimed at development and evaluation of empirical and physical models of chemical and mechanical engineering processes.</td>
</tr>
<tr>
<td>ECH</td>
<td>6417</td>
<td>Bioseparations</td>
<td>3</td>
<td></td>
<td>Design and analysis of bioseparation processes, including crystallization, membrane separations, chromatography, liquid-liquid extraction, electrophoresis, and emerging technologies. Open to non-majors with CI.</td>
</tr>
<tr>
<td>ECH</td>
<td>6506</td>
<td>Chemical Engineering Kinetics</td>
<td>3</td>
<td></td>
<td>Fundamental aspects of chemical reactions, including collision theory, transition rate theory, unimolecular rate theory, homogeneous gas and liquid phase kinetics, heterogeneous kinetics, and mass-transfer limited kinetics.</td>
</tr>
<tr>
<td>ECH</td>
<td>6515</td>
<td>Reacting Systems</td>
<td>3</td>
<td>PR: ECH 4415C</td>
<td>Economic factors in the design of chemical reactors. Simulation of complex reacting systems.</td>
</tr>
<tr>
<td>ECH</td>
<td>6906</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECH</td>
<td>6907</td>
<td>Independent Study - Variable Title</td>
<td>1-19</td>
<td></td>
<td>Independent study in which students must have a contract with an instructor.</td>
</tr>
<tr>
<td>ECH</td>
<td>6930</td>
<td>Special Problems I</td>
<td>1-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECH</td>
<td>6931</td>
<td>Special Problems II</td>
<td>1-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUB</td>
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<td>TITLE</td>
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<tr>
<td>ECH</td>
<td>6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td></td>
<td>A graduate level introduction to the economic foundations of decision making, this course addresses the fundamental tools of micro and macroeconomic analysis and how they can be applied to firms operating in both domestic and global markets.</td>
</tr>
<tr>
<td>ECH</td>
<td>7915</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECH</td>
<td>7980</td>
<td>Dissertation: Doctoral</td>
<td>2-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECO</td>
<td>6005</td>
<td>Introduction to Economic Concepts for Managers</td>
<td>3</td>
<td>PR: ECO 3101 or ECO 6114, ECO 4401</td>
<td>Microeconomic behavior of consumers, producers, and resource suppliers, price determination in output and factor markets, general market equilibrium.</td>
</tr>
<tr>
<td>ECO</td>
<td>6115</td>
<td>Microeconomics I</td>
<td>3</td>
<td>PR: ECO 3101 or ECO 6114</td>
<td>Conditions for efficient resource allocation in a market economy; how inefficiency arises in markets and government; ways to reestablish efficiency; social welfare and equity. Introduction to benefit-cost analysis.</td>
</tr>
<tr>
<td>ECO</td>
<td>6120</td>
<td>Economic Policy Analysis</td>
<td>3</td>
<td>PR: ECO 3101 or ECO 6114</td>
<td></td>
</tr>
<tr>
<td>ECO</td>
<td>6205</td>
<td>Macroeconomic Theory and Policy</td>
<td>3</td>
<td></td>
<td>Determination of income, employment, wages, prices, and interest rates, contemporary policy issues, long-run economic growth.</td>
</tr>
<tr>
<td>ECO</td>
<td>6206</td>
<td>Macroeconomics I</td>
<td>3</td>
<td>CR: ECO 6115; PR: ECO 6405</td>
<td>Advanced macroeconomic analysis of income, employment, prices, interest rates and economic growth rates.</td>
</tr>
<tr>
<td>ECO</td>
<td>6305</td>
<td>History of Economic Thought</td>
<td>3</td>
<td>PR: ECO 3101 or ECO 6114</td>
<td>Currents of modern economic thought in the last hundred years.</td>
</tr>
<tr>
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<tr>
<td>ECO</td>
<td>6405</td>
<td>Mathematical Economics I</td>
<td>3</td>
<td>PR: ECO 3101, ECO 3203, ECP 6702, ECO 6708</td>
<td>This course provides the basic mathematical background necessary to undertake graduate-level work in economics. Several topics from calculus and linear algebra are covered.</td>
</tr>
<tr>
<td>ECO</td>
<td>6424</td>
<td>Econometrics I</td>
<td>3</td>
<td>PR: ECO 3203 or ECO 6204, QMB 3200, QMB 6305</td>
<td>Theory and use of multiple regression to estimate relations in causal models, use of standard software packages.</td>
</tr>
<tr>
<td>ECO</td>
<td>6425</td>
<td>Econometrics II</td>
<td>3</td>
<td>PR: ECO 6424</td>
<td>Advanced econometric techniques; model building, estimation and forecasting; design and execution of research projects.</td>
</tr>
<tr>
<td>ECO</td>
<td>6505</td>
<td>Public Finance</td>
<td>3</td>
<td>PR: ECO 3101 or ECO 6114</td>
<td>Effects of tax and expenditure policies on resource allocation and income distribution.</td>
</tr>
<tr>
<td>ECO</td>
<td>6525</td>
<td>Public Sector Economics</td>
<td>3</td>
<td>PR: ECO 3101 or ECO 6114</td>
<td>The economic role of government in the allocation of resources in the presence of market failure.</td>
</tr>
<tr>
<td>ECO</td>
<td>6705</td>
<td>International Economic Issues</td>
<td>3</td>
<td>PR: ECO 6114 and ECO 6204 or equivalent</td>
<td>Analysis of international economic relations and institutions. Analysis of the effects of changing economic conditions and policy on the climate for international business and investment.</td>
</tr>
<tr>
<td>ECO</td>
<td>6706</td>
<td>International Trade: Theory and Policy</td>
<td>3</td>
<td>PR: ECO 3101 or ECO 6114</td>
<td>Causes of international trade, international trade policy, economic integration, trade problems of developing countries, role of multinational corporations in world trade.</td>
</tr>
<tr>
<td>ECO</td>
<td>6708</td>
<td>Global Economic Environment of Business</td>
<td>2</td>
<td></td>
<td>Determination of prices, employment, and output in domestic and international settings.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>ECO</td>
<td>6716</td>
<td>International Monetary Economics</td>
<td>3</td>
<td>PR: ECO 3203 or ECO 6204</td>
<td>International macroeconomic relationships, foreign exchange market, the international monetary system, balance of payments adjustments, macroeconomic policy in the open economy.</td>
</tr>
<tr>
<td>ECO</td>
<td>6906</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
<td>Independent study. Student must have a contract with an instructor.</td>
</tr>
<tr>
<td>ECO</td>
<td>6917</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td>The course content will depend on student demand and instructor's interest.</td>
</tr>
<tr>
<td>ECO</td>
<td>6936</td>
<td>Selected Topics in Economics</td>
<td>1-4</td>
<td></td>
<td>The course content will depend on student demand and instructor's interest.</td>
</tr>
<tr>
<td>ECO</td>
<td>7116</td>
<td>Microeconomics II</td>
<td>3</td>
<td>PR: ECO 6115</td>
<td>Topics in advanced microeconomic theory, including general equilibrium, welfare economics, intertemporal choice, uncertainty, information, and game theory.</td>
</tr>
<tr>
<td>ECO</td>
<td>7207</td>
<td>Macroeconomics II</td>
<td>3</td>
<td>CR: ECO 6245; PR: ECO 6206</td>
<td>Empirical study of economic growth, business cycles, and the other macroeconomic phenomena.</td>
</tr>
<tr>
<td>ECO</td>
<td>7406</td>
<td>Mathematical Economics II</td>
<td>3</td>
<td>PR: ECO 6115 and ECO 6405</td>
<td>This course provides a continuation of ECO 6405, Mathematical Economics I. Students will become familiar with certain additional mathematical tools needed to pursue a graduate degree in economics.</td>
</tr>
<tr>
<td>ECO</td>
<td>7426</td>
<td>Econometrics III</td>
<td>3</td>
<td>PR: ECO 6425 and ECO 6405</td>
<td>The aim of this course is to provide students several important advanced econometrics techniques and how they can be used in empirical research and practical applications. Emphasis will be on cross-sectional and panel data models.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>ECO</td>
<td>7427</td>
<td>Econometrics IV</td>
<td>3</td>
<td>PR: ECO 7426</td>
<td>Advanced econometric techniques with emphasis on applying the proper method to actual data and to situations where various techniques are appropriate.</td>
</tr>
<tr>
<td>ECO</td>
<td>7980</td>
<td>Dissertation</td>
<td>2-19</td>
<td></td>
<td>Dissertation Research</td>
</tr>
<tr>
<td>ECP</td>
<td>6205</td>
<td>Labor Economics I</td>
<td>3</td>
<td>PR: ECO 3101, ECO 6114, or ECO 6115</td>
<td>Labor demand and supply, unemployment, discrimination in labor markets, labor force statistics.</td>
</tr>
<tr>
<td>ECP</td>
<td>6305</td>
<td>Environmental Economics and Policy</td>
<td>3</td>
<td>PR: ECO 2023 or ECO 6114</td>
<td>An economic analysis of business's and the government's approach to managing environmental issues. The focus of the course is on the analysis of case studies of specific environmental issues using fundamental efficiency analysis.</td>
</tr>
<tr>
<td>ECP</td>
<td>6405</td>
<td>Industrial Organization I</td>
<td>3</td>
<td>PR: ECO 6115</td>
<td>Structure of industry and its effect on economic efficiency.</td>
</tr>
<tr>
<td>ECP</td>
<td>6408</td>
<td>Economics of Organization</td>
<td>3</td>
<td></td>
<td>Theory of the evolution of firms and other hierarchies as alternatives to markets. Topics include the market mechanism as a coordinating system, agency theory, risk-sharing and incentive mechanisms, ownership versus control of organisations, and organizational forms. Intended for PhD and MA in Economics students.</td>
</tr>
<tr>
<td>ECP</td>
<td>6415</td>
<td>Issues in Regulation and Antitrust</td>
<td>3</td>
<td>PR: ECO 3101 or ECP 3703 or GEB 6114</td>
<td>Issues concerning rationale, structure and performance of government regulation and antitrust policy.</td>
</tr>
<tr>
<td>ECP</td>
<td>6456</td>
<td>Law and Economics</td>
<td>3</td>
<td>PR: ECO 3101 or ECO 6114</td>
<td>Impact of Tort, Criminal, Property, and Contract Law on the allocation of resources.</td>
</tr>
<tr>
<td>SUB</td>
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<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>ECP</td>
<td>6536</td>
<td>Economics of Health Care I</td>
<td>3</td>
<td>PR: ECO 3101 or ECO 6114</td>
<td>Analysis of the supply and demand for health care, health insurance and the pharmaceutical industry.</td>
</tr>
<tr>
<td>ECP</td>
<td>6614</td>
<td>Urban Economics</td>
<td>3</td>
<td>PR: ECO 3101 or ECO 6114</td>
<td>Economics of growth and development of urban areas, interurban location patterns.</td>
</tr>
<tr>
<td>ECP</td>
<td>6624</td>
<td>Regional Economics</td>
<td>3</td>
<td>PR: ECO 3101 or ECO 6114</td>
<td>Geographical allocation of resources within and among regions, location of households and firms, inter-regional migration of labor and capital, regional growth and development, regional policy.</td>
</tr>
<tr>
<td>ECP</td>
<td>6702</td>
<td>Managerial Economics</td>
<td>2</td>
<td></td>
<td>This course presents the microeconomic theory of price determination in an exchange economy with special emphasis on the behavior of firms in various market structures.</td>
</tr>
<tr>
<td>ECP</td>
<td>7207</td>
<td>Labor Economics II</td>
<td>3</td>
<td>PR: ECP 6205</td>
<td>Advanced study of labor economics including analysis of the wage structure, labor unions, labor mobility, and unemployment.</td>
</tr>
<tr>
<td>ECP</td>
<td>7406</td>
<td>Industrial Organization II</td>
<td>3</td>
<td>PR: ECO 6115, ECO 6424, ECP 6405</td>
<td>This course will introduce students to advanced topics in empirical industrial organization. Particular emphasis will be placed on techniques to estimate the behavior of firms, market equilibrium, and the impact of economic policy on markets.</td>
</tr>
<tr>
<td>ECP</td>
<td>7537</td>
<td>Economics of Health Care II</td>
<td>3</td>
<td>PR: ECO 6536</td>
<td>Advanced analysis of health economics with emphasis on recent empirical studies of health care.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>ECS</td>
<td>6015</td>
<td>Economic Development</td>
<td>3</td>
<td>CR: ECO 6115; PR:</td>
<td>The course studies human economic development focusing on explaining cross-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ECO 3101 and ECP</td>
<td>country and intertemporal differences in living standards in the world. The course focuses on the microeconomic aspect of economic development.</td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td>6702</td>
<td></td>
</tr>
<tr>
<td>ECT</td>
<td>5386</td>
<td>Preparation and Development for Teaching</td>
<td>4</td>
<td></td>
<td>The development of selected instructional materials, use of new educational</td>
</tr>
<tr>
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<td></td>
<td>media, performance evaluation instruments, and counseling techniques.</td>
</tr>
<tr>
<td>ECT</td>
<td>6197</td>
<td>Enhancing Career and Technical Education</td>
<td>3</td>
<td></td>
<td>Enhancing career &amp; technical education curriculum including broadening</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Curriculum</td>
<td></td>
<td></td>
<td>mission, goals &amp; outcomes, integration with academics, work-based learning,</td>
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<td>contextual learning, appropriate technology &amp; certifying student mastery.</td>
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<td>Open to majors &amp; non-majors.</td>
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<tr>
<td>ECT</td>
<td>6661</td>
<td>Trends and Issues in Career and Technical</td>
<td>3</td>
<td></td>
<td>Historical influences and current trends and issues in career and technical</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Education</td>
<td></td>
<td></td>
<td>education. Emphasis on forces significantly shaping the course of CTE and</td>
</tr>
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<td></td>
<td>its relationship with workforce development and academic education. Open to</td>
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<td></td>
<td></td>
<td></td>
<td>majors and non-majors.</td>
</tr>
<tr>
<td>ECT</td>
<td>6766</td>
<td>Emerging Workplace Competencies</td>
<td>3</td>
<td></td>
<td>An interactive exploration of emerging workplace competencies through</td>
</tr>
<tr>
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<td>research, analysis, and work-based experiences for the purpose of professional</td>
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<td>development and program improvement.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>ECT</td>
<td>6767</td>
<td>Improving Career and Technical Education Programs</td>
<td>3</td>
<td></td>
<td>The purpose of the course is to facilitate the development of essential understandings on the nature and use of action research strategies as a means to support improvement strategies involving data collection and analysis, and reporting skills.</td>
</tr>
<tr>
<td>ECT</td>
<td>6926</td>
<td>Staff Development</td>
<td>1-5</td>
<td></td>
<td>Implementation of new procedures addressed to discrete developmental needs of the staff as identified by an educational agency.</td>
</tr>
<tr>
<td>ECT</td>
<td>6930</td>
<td>Seminar</td>
<td>3</td>
<td></td>
<td>Focuses on special topics, interaction with visiting scholars, recent research and major initiatives within the profession.</td>
</tr>
<tr>
<td>ECT</td>
<td>6948</td>
<td>Practicum: Industrial-Technical Education</td>
<td>3-6</td>
<td></td>
<td>A problem-centered field study in the local community, school, government, office, social agency, business, or industry.</td>
</tr>
<tr>
<td>ECT</td>
<td>7768</td>
<td>Information Research Strategies</td>
<td>1</td>
<td>PR: ECT 7791</td>
<td>This course provides an introduction to information research strategies involving planning, locating, accessing, evaluating, organizing, and managing information as a means to support and document a research proposal or dissertation chapters.</td>
</tr>
<tr>
<td>ECT</td>
<td>7791</td>
<td>Research Seminar In Vocational, Technical, And Adult Education</td>
<td>3</td>
<td></td>
<td>Examination and critical evaluation of research in a particular specialization area of Vocational, Technical, or Adult Education. Preparation of an individual research prospectus.</td>
</tr>
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<tr>
<td>ECT</td>
<td>7910</td>
<td>Directed Research in Vocational Education</td>
<td>1-19</td>
<td></td>
<td>This course permits a doctoral student to conduct advanced research and to pursue specific areas of interest with a faculty member as supervisor. A contract is required with the faculty member.</td>
</tr>
<tr>
<td>ECT</td>
<td>7980</td>
<td>Dissertation</td>
<td>2-30</td>
<td></td>
<td>The purpose of this course is to facilitate the development of scholarly writing skills required for the synthesis and reporting of research literature resulting in research proposals or manuscripts in career in workforce education.</td>
</tr>
<tr>
<td>ECT</td>
<td>7981</td>
<td>Scholarly Writing for Doctoral Students</td>
<td>1</td>
<td>PR: ECT 7791.</td>
<td></td>
</tr>
<tr>
<td>ECW</td>
<td>5315</td>
<td>Program Management: Diversified Cooperative Training</td>
<td>3</td>
<td></td>
<td>Organization, coordination, and budgeting of adult, cooperative, and special programs.</td>
</tr>
<tr>
<td>ECW</td>
<td>6205</td>
<td>Administration Of Local Programs: Vocational Education</td>
<td>3</td>
<td></td>
<td>Organization, personnel selection and assignment, and establishment of policies and procedures for local vocational programs within federal, state and local requirements.</td>
</tr>
<tr>
<td>ECW</td>
<td>6206</td>
<td>Supervision Of Local Programs: Vocational Education</td>
<td>3</td>
<td></td>
<td>A study of the factors involved in the supervision of instruction including plans for teacher education, improvement of instruction, coordination of activities, and personnel relations.</td>
</tr>
<tr>
<td>ECW</td>
<td>6695</td>
<td>School Community Relations</td>
<td>3</td>
<td></td>
<td>Maintaining positive relations between career and technical education programs and stakeholders, enhancing CTE image, interacting positively with customers, positive relations with businesses and marketing the program. Open to majors and non-majors.</td>
</tr>
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<tr>
<td>ECW</td>
<td>6696</td>
<td>Equity and Access in the New Economy</td>
<td>3</td>
<td></td>
<td>Examine workplace/workforce education regarding equity and access issues of gender, race, class and age through reflective practice, research, dialogue, field experience, product development with implications for education, training, personal and systems change.</td>
</tr>
<tr>
<td>ECW</td>
<td>7066</td>
<td>Foundations And Philosophy Of Vocational, Technical And Adult Education</td>
<td>3</td>
<td></td>
<td>Historical development and contemporary philosophies, cultural bases and practices of Vocational, Technical, and Adult Education.</td>
</tr>
<tr>
<td>ECW</td>
<td>7105</td>
<td>Vocational And Adult Education Program Planning And Implementation</td>
<td>3</td>
<td></td>
<td>Knowledge and skills necessary to participate in the initial determination, planning, organization, and implementation of new or expanded adult, vocational and technical education institutions or programs.</td>
</tr>
<tr>
<td>ECW</td>
<td>7167</td>
<td>Career Development in Career and Workforce Education Change</td>
<td>3</td>
<td></td>
<td>This course provides an overview of major theories of career development, examines related research in career and workforce education context, and addresses the implications for integration in the curriculum and service supports in different settings.</td>
</tr>
<tr>
<td>ECW</td>
<td>7168</td>
<td>Instructional Development For Vocational, Technical, And Adult Education</td>
<td>3</td>
<td></td>
<td>The systematic approach to vocational, technical, and adult education curriculum improvement and instructional development. Students will apply an instructional systems approach to the development of practical solutions to critical teaching and learning problems.</td>
</tr>
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<tr>
<td>ECW</td>
<td>7195</td>
<td>Comparative Study of Career Workforce Education Systems</td>
<td>3</td>
<td></td>
<td>This online course provides an overview of global perspectives and models for career and workforce education with an emphasis on comparative analyses of national, state, and international systems.</td>
</tr>
<tr>
<td>EDA</td>
<td>6061</td>
<td>Principles of Educational Administration</td>
<td>3</td>
<td></td>
<td>Educational administration as a profession. Consideration of organization, control, and support of the educational system.</td>
</tr>
<tr>
<td>EDA</td>
<td>6106</td>
<td>Administrative Analysis and Change</td>
<td>3</td>
<td>PR: EDA 6061.</td>
<td>Change and change strategies in formal and informal organizations are foci. Students will develop change strategies and will apply them to selected situations.</td>
</tr>
<tr>
<td>EDA</td>
<td>6192</td>
<td>Educational Leadership</td>
<td>3</td>
<td>PR: EDA 6061.</td>
<td>Administration course that addresses change, influences, and planning systems. Also examines personnel functions for administrators.</td>
</tr>
<tr>
<td>EDA</td>
<td>6194</td>
<td>Educational Leadership II: Building Capacity</td>
<td>3</td>
<td>PR: EDA 6192</td>
<td>Three major themes to improve schools within a clear/compelling moral purpose: 1) communities of differences; 2) teacher development through professional community building; and 3) learners and learning through capacity building at the school level.</td>
</tr>
<tr>
<td>EDA</td>
<td>6195</td>
<td>Policy Development</td>
<td>3</td>
<td>PR: EDA 6061.</td>
<td>Contemporary research on diffusion of innovations, political power in policy decision making. Role of establishing educational policies.</td>
</tr>
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<tr>
<td>EDA</td>
<td>6213</td>
<td>Culturally Relevant Leadership</td>
<td>3</td>
<td></td>
<td>This course prepares culturally responsive leaders to attend to diverse needs of all students. It is organized with the understanding that school leaders are moral stewards and public intellectuals who reflect notions of instructional accountability.</td>
</tr>
<tr>
<td>EDA</td>
<td>6242</td>
<td>School Finance</td>
<td>3</td>
<td>PR: EDA 6061</td>
<td>Financial support of education by local, state, federal sources, with emphasis on Florida; introduction to educational budgeting.</td>
</tr>
<tr>
<td>EDA</td>
<td>6262</td>
<td>Planning Educational Facilities</td>
<td>3</td>
<td>PR: EDA 6061</td>
<td>Problems in the planning, construction, and use of educational facilities. Visitation and/or evaluation of selected schools.</td>
</tr>
<tr>
<td>EDA</td>
<td>6271</td>
<td>Data-based Decision Making Strategies for Educational Leaders</td>
<td>3</td>
<td></td>
<td>Beginning with a truncated review of purposes and applications of statistical methods utilized in academic, legislative, and district-level research, this course acquaints students with various ways of framing data-based questions and interpreting data.</td>
</tr>
<tr>
<td>EDA</td>
<td>6503</td>
<td>The Principalship</td>
<td>3</td>
<td>PR: EDA 6061</td>
<td>Organization and administration of the school. Emphasis on the competencies necessary for leadership and management by the principal as the administrator and instructional leader.</td>
</tr>
<tr>
<td>EDA</td>
<td>6910</td>
<td>Directed Research</td>
<td>1-19</td>
<td>PR: EDA 6061</td>
<td></td>
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<tr>
<td>EDA</td>
<td>6931</td>
<td>Case Studies in School Administration</td>
<td>3</td>
<td>PR: EDA 6061</td>
<td>Helps prospective administrators understand administrative problems, propose feasible solutions, and evaluate courses of action. Develops skill in decision making.</td>
</tr>
<tr>
<td>EDA</td>
<td>6945</td>
<td>Administration Practicum</td>
<td>3-8</td>
<td>PR: EDA 6061</td>
<td>Field experiences in school systems for identifying and analyzing educational problems and their solutions. Application of concepts developed in the student's program.</td>
</tr>
<tr>
<td>EDA</td>
<td>6971</td>
<td>Thesis: Masters/Educational Specialist</td>
<td>2-19</td>
<td></td>
<td>The purpose of this course is to read about, examine, discuss, and critique competing theories of ethics and educational leadership. Students will construct critical cases &amp; statements of responsibility in terms of ethics applied to leadership.</td>
</tr>
<tr>
<td>EDA</td>
<td>7069</td>
<td>Ethics and Educational Leadership</td>
<td>3</td>
<td></td>
<td>The course examines K 12 educational systems through the theoretical frameworks of organizational learning and change applying problem-based approaches that emphasize socio-political and local, state, and federal influences.</td>
</tr>
<tr>
<td>EDA</td>
<td>7193</td>
<td>Organizational Leadership and Systems Theory</td>
<td>3</td>
<td></td>
<td>The purpose of this course is to identify the discourses that have shaped and are shaping the dialogue, scholarship, and practice of public education and to contextualize leadership as a social practice that holds unique values and ideologies.</td>
</tr>
<tr>
<td>EDA</td>
<td>7197</td>
<td>Current Readings and Discourse in Educational Leadership</td>
<td>3</td>
<td></td>
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<tr>
<td>EDA</td>
<td>7206</td>
<td>Appreciative Inquiry and Organizing in Public Education</td>
<td>3</td>
<td></td>
<td>This course introduces Appreciative Inquiry and Appreciative Organizing in Public Education as a strength-based, problem solving and continuous improvement approach to inform and build school and district leadership capacity.</td>
</tr>
<tr>
<td>EDA</td>
<td>7215</td>
<td>Educational Politics and the Engagement of Communities</td>
<td>3</td>
<td></td>
<td>Students explore political frameworks and communication strategies in order to effectively engage multiple communities within and outside schools.</td>
</tr>
<tr>
<td>EDA</td>
<td>7222</td>
<td>Administration Of School Personnel Policies And Practices</td>
<td>3</td>
<td>PR: EDA 6061</td>
<td>Administration of school personnel policies and practices relating to professional staff, supporting staff, and students.</td>
</tr>
<tr>
<td>EDA</td>
<td>7233</td>
<td>Legal Dimensions Of School Administration</td>
<td>3</td>
<td>PR: EDA 6232</td>
<td>Historical perspective in law and education with in-depth reviews of case law showing the evolution of courts as educational policy makers.</td>
</tr>
<tr>
<td>EDA</td>
<td>7238</td>
<td>Special Education Law and Policy Issues</td>
<td>3</td>
<td></td>
<td>This course is focused on the framework of special education law and its application in school systems.</td>
</tr>
<tr>
<td>EDA</td>
<td>7280</td>
<td>Curriculum Theory</td>
<td>3</td>
<td></td>
<td>The purpose of this course is to prepare critical and culturally responsive curriculum leaders to engage curriculum theory in the work of curriculum policy, development, and inquiry.</td>
</tr>
<tr>
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<tr>
<td>EDA</td>
<td>7281</td>
<td>Policy Analysis and Implementation Strategies for Educational</td>
<td>3</td>
<td></td>
<td>This course has students apply systematic frameworks for policy analysis and implementation - utilizing multiple analytical and implementation concepts - to improve educational system, district, school, and student performance.</td>
</tr>
<tr>
<td>EDA</td>
<td>7287</td>
<td>Educational Politics and Policy: Theory &amp; Issues</td>
<td>3</td>
<td></td>
<td>This course seeks to habituate students’ conceptualization of schooling as political and to develop students’ understanding of how educational politics and policies permeate educational systems.</td>
</tr>
<tr>
<td>EDA</td>
<td>7410</td>
<td>Qualitative Case Methods in Educational Leadership</td>
<td>3</td>
<td></td>
<td>Introduces qualitative Case methods, design, data collection, analysis and interpretation of data. Includes theories and sample software tools used in analysis.</td>
</tr>
<tr>
<td>EDA</td>
<td>7980</td>
<td>Dissertation</td>
<td>2-30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDE</td>
<td>6076</td>
<td>Teacher Leadership for Student Learning</td>
<td>3</td>
<td>PR: EDG 4620, EDG 6627.</td>
<td>Prepares teachers as facilitators as they explore leadership roles in the K-12 contexts, including exemplary practitioner, curriculum decision-maker, researcher, advocate, and facilitator or job-embedded professional development.</td>
</tr>
<tr>
<td>EDE</td>
<td>6225</td>
<td>Problems in Curriculum and Instruction: Elementary</td>
<td>1-3</td>
<td>PR: EDG 4620, EDG 6627.</td>
<td>For teachers, supervisors, and administrators. Curricular and instructional problems of the elementary school. Common problems or problems of special interest to the participants. Normally, for certification requirements only.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>EDE</td>
<td>6326</td>
<td>Instructional Planning for Diverse Learners</td>
<td>3</td>
<td></td>
<td>Introduction to the theories and practices that support children’s learning. Includes accessing resources that support teaching, developing lessons, designing appropriate assessments, and the elements that influence instructional decision-making.</td>
</tr>
<tr>
<td>EDE</td>
<td>6366</td>
<td>Professional Development for Student Learning</td>
<td>3</td>
<td>PR: EDE 6076, EDE 6486, EDE 6366.</td>
<td>This course prepares effective teacher leaders for facilitating job-embedded educator learning with a specific focus on P-6 student learning.</td>
</tr>
<tr>
<td>EDE</td>
<td>6458</td>
<td>Reflecting on Instructional Decision Making</td>
<td>1-3</td>
<td>CR: For first hour: EDE 6946. For second hour EDG 6947.</td>
<td>Develops the students’ abilities to reflect upon teaching practice and evaluate instructional decisions on K-6 student learning. The first hour is taken with the practicum. The second hour is to be taken in conjunction with final internship.</td>
</tr>
<tr>
<td>EDE</td>
<td>6486</td>
<td>Teacher Research for Student Learning</td>
<td>3</td>
<td>PR: EDE 6076.</td>
<td>Familiarizes practicing teachers with the application of research methodologies to strengthen teaching &amp; learning in elementary schools. This course cultivates the literacy skills the educators need for professional accountability for student learning.</td>
</tr>
<tr>
<td>EDE</td>
<td>6506</td>
<td>Managing and Differentiating the Instructional Environment in Elementary Schools</td>
<td>3</td>
<td></td>
<td>Examines the legal issues affecting classroom/school management, school safety and professional ethics. Explores research and knowledge of best practices and a variety of teaching and management strategies for a diverse elementary classroom setting.</td>
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<tr>
<td>EDE</td>
<td>6556</td>
<td>Coaching for Student Learning</td>
<td>3</td>
<td>PR: EDE 6076, EDE 6486.</td>
<td>Prepares coaches for facilitating preservice &amp; inservice educator learning with specific focus on P-6 student learning.</td>
</tr>
<tr>
<td>EDE</td>
<td>6906</td>
<td>Independent Study: Elementary/Early Childhood Education</td>
<td>1-6</td>
<td></td>
<td>Independent study in which students must have a contract.</td>
</tr>
<tr>
<td>EDE</td>
<td>6946</td>
<td>Practicum Field Experience</td>
<td>3</td>
<td>CR: EDE 6458-I.; PR: RED 6514, FLE 5345, and 9 additional credits in program courses</td>
<td>This intensive practicum experience is designed to complement foundational MAT course work and is completed during the second block of the MAT program. This course is restricted to majors and is not repeatable. S/U only.</td>
</tr>
<tr>
<td>EDE</td>
<td>6971</td>
<td>Thesis: Masters/Educational Specialist</td>
<td>2-19</td>
<td></td>
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</tr>
<tr>
<td>EDE</td>
<td>7206</td>
<td>Critical Analysis of Curriculum in Elementary Schools</td>
<td>3</td>
<td></td>
<td>The purpose of this course is to critically analyze curriculum in the elementary schools from its historical foundations through the current educational climate. This will enable educators to make informed decisions on curriculum issues.</td>
</tr>
<tr>
<td>EDE</td>
<td>7327</td>
<td>Differentiated Supervision &amp; Teacher Professional Development</td>
<td>3</td>
<td></td>
<td>This course cultivates the knowledge of job-embedded professional development tools that facilitates teacher effectiveness through collaborative instructional and school improvement efforts.</td>
</tr>
<tr>
<td>EDE</td>
<td>7481</td>
<td>Teacher Education Seminar</td>
<td>3</td>
<td></td>
<td>This course prepares doctoral students to integrate, assimilate, and evaluate major research and research issues confronting the field of teacher education.</td>
</tr>
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<tr>
<td>EDE</td>
<td>7910</td>
<td>Directed Research in Elementary Education</td>
<td>1-19</td>
<td></td>
<td>Independent student-faculty research course.</td>
</tr>
<tr>
<td>EDE</td>
<td>7980</td>
<td>Dissertation</td>
<td>2-30</td>
<td></td>
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<tr>
<td>EDF</td>
<td>5607</td>
<td>Trends in Education Politics</td>
<td>3</td>
<td></td>
<td>Contemporary education politics in the U.S. with interdisciplinary social-science perspectives.</td>
</tr>
<tr>
<td>EDF</td>
<td>6165</td>
<td>Group Processes for Educational Personnel</td>
<td>1-3</td>
<td></td>
<td>Application of group process research to the needs of professional educators and training officers.</td>
</tr>
<tr>
<td>EDF</td>
<td>6166</td>
<td>Consulting Skills for Staff Development</td>
<td>1-3</td>
<td></td>
<td>Knowledge and skill training for consulting with organizational clients to solve educational problems and design learning environments or programs.</td>
</tr>
<tr>
<td>EDF</td>
<td>6211</td>
<td>Psychological Foundations of Education</td>
<td>3</td>
<td></td>
<td>Selected topics in psychology of human development and learning, related to schools and educational settings.</td>
</tr>
<tr>
<td>EDF</td>
<td>6213</td>
<td>Biological Bases for Learning Behavior</td>
<td>3</td>
<td>PR: One course in Educational Psychology.</td>
<td>Human biological development and its influence upon learning and behavior.</td>
</tr>
<tr>
<td>EDF</td>
<td>6215</td>
<td>Learning Principles Applied to Instruction</td>
<td>4</td>
<td></td>
<td>Learning principles and their application to classroom instruction.</td>
</tr>
<tr>
<td>EDF</td>
<td>6217</td>
<td>Behavior Theory and Classroom Learning</td>
<td>4</td>
<td>PR: EDF 6215</td>
<td>Theory and practical applications of behavior modification; introduction to experimental methods for behavior modification; operant methods in behavior and development; analysis and field work.</td>
</tr>
<tr>
<td>EDF</td>
<td>6281</td>
<td>Workshop and Conference Design</td>
<td>3</td>
<td></td>
<td>Knowledge and skills to design, conduct and/or administer, and evaluate both workshops and conferences.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>EDF</td>
<td>6284</td>
<td>Problems in Instructional Design for Computers</td>
<td>3</td>
<td></td>
<td>This course focuses on the systematic design of instructional courseware,</td>
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<td>including analysis, media selection, and evaluation. Topics include</td>
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<td>instructional strategies, screen design, response analysis, feedback and</td>
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<td></td>
<td>interactivity.</td>
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<tr>
<td>EDF</td>
<td>6288</td>
<td>Instructional Design I</td>
<td>3</td>
<td>PR: EDF 6215</td>
<td>Instructional design models/theories and their systematic application to</td>
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<td></td>
<td>instructional goals.</td>
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<tr>
<td>EDF</td>
<td>6354</td>
<td>Human Development and Personality Theories</td>
<td>4</td>
<td></td>
<td>A study of psycho-social and cognitive development throughout a person's</td>
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<td></td>
<td>life span with an analysis of the major personality theories.</td>
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<tr>
<td>EDF</td>
<td>6407</td>
<td>Statistical Analysis For Educational Research I</td>
<td>4</td>
<td></td>
<td>Theory and application of statistical procedures to problems in education:</td>
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<td></td>
<td>(1) descriptive statistics, (2) Probability-sampling distributions, (3)</td>
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<td></td>
<td>Inferential statistics-interval estimation, tests of significance (z, t, F-</td>
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<td></td>
<td>one way ANOVA). Coordinated use of computer included.</td>
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<tr>
<td>EDF</td>
<td>6432</td>
<td>Foundations Of Measurement</td>
<td>3</td>
<td></td>
<td>Basic measurement concepts, role of measurement in education, construction</td>
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<td>of teacher-made tests and other classroom assessments, interpretation of</td>
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<td>standardized tests, and fundamental descriptive statistics for use in test</td>
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<td></td>
<td></td>
<td></td>
<td>interpretation.</td>
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<tr>
<td>EDF</td>
<td>6446</td>
<td>Development and Validation of Tests in Education</td>
<td>3</td>
<td>PR: EDF 6432, EDF 6407</td>
<td>Design, construction, and validation of state-wide tests. Special emphasis</td>
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<td>on domain sampling, item response theory, item scaling, item fit, and</td>
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<td>constructing, maintaining, and updating item banks.</td>
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<td>SUB</td>
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<td>TITLE</td>
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<td>PREREQUISITES</td>
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<tr>
<td>EDF</td>
<td>6461</td>
<td>Foundations of Applied Evaluation</td>
<td>3</td>
<td>PR: EDF 6481.</td>
<td>Fundamentals of evaluation approaches and practices; tools &amp; techniques used in evaluation; standards of quality for professional practice; evaluation ethics; appropriate evaluation uses; and impact of evaluation on decision making.</td>
</tr>
<tr>
<td>EDF</td>
<td>6481</td>
<td>Foundations of Educational Research</td>
<td>3</td>
<td>PR: EDF 6432</td>
<td>Analysis of major types of educational research designs, including experimental, correlational, ex post facto and case studies.</td>
</tr>
<tr>
<td>EDF</td>
<td>6492</td>
<td>Applied Educational Program Evaluation</td>
<td>3</td>
<td>PR: EDF 6432, EDF 6446</td>
<td>Design, development, implementation, interpretation, and communication of both formative and summative educational program evaluation studies.</td>
</tr>
<tr>
<td>EDF</td>
<td>6517</td>
<td>Historical Foundations of American Education</td>
<td>4</td>
<td></td>
<td>History of the origins and development of American education, events, and movements that have shaped school policies and practices, and their relationship to contemporary developments.</td>
</tr>
<tr>
<td>EDF</td>
<td>6531</td>
<td>History of Childhood</td>
<td>3</td>
<td></td>
<td>History of modern childhood, including diversity of childhood experiences and social construction of age categories.</td>
</tr>
<tr>
<td>EDF</td>
<td>6606</td>
<td>Socio-Economic Foundations of American Education</td>
<td>4</td>
<td></td>
<td>Socio-economic factors as they relate to the work of professional educators and the role of public education in American society.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>EDF</td>
<td>6705</td>
<td>Gender and the Educational Process</td>
<td>3</td>
<td></td>
<td>Course is designed to enable public school personnel, teachers, counselors, administrators, and other professionals to identify those aspects of public education that perpetuate sex role stereotyping. Emphasis will be placed on how the law and formal and informal affirmative action activities can be employed to correct sexism in schools.</td>
</tr>
<tr>
<td>EDF</td>
<td>6736</td>
<td>Education, Communication, and Change</td>
<td>3</td>
<td></td>
<td>Developments in communication as a process of social change as it affects students, teachers, and traditional school arrangements.</td>
</tr>
<tr>
<td>EDF</td>
<td>6765</td>
<td>Schools and the Future</td>
<td>4</td>
<td></td>
<td>Estimates of future demands upon schools; critique of current paradigms, techniques, and literature.</td>
</tr>
<tr>
<td>EDF</td>
<td>6883</td>
<td>Issues in Multicultural Education</td>
<td>4</td>
<td></td>
<td>Lecture/discussion course, open to both majors and non-majors; address both fundamental concepts and timely issues in multicultural education and working with culturally diverse students.</td>
</tr>
<tr>
<td>EDF</td>
<td>6906</td>
<td>Independent Study: Educational Foundations</td>
<td>1-6</td>
<td></td>
<td>Independent study in which students must have a contract with an instructor.</td>
</tr>
<tr>
<td>EDF</td>
<td>6935</td>
<td>Wellness Programming Seminar</td>
<td>2</td>
<td></td>
<td>This course familiarizes students with the array of extant programs to facilitate wellness and prevent problems that often affect college students. Through review and critique of such programs, participants will be able to design and administer wellness programs in their professional roles.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
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<td>PREREQUISITES</td>
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<tr>
<td>EDF</td>
<td>6938</td>
<td>Selected Topics</td>
<td>1-4</td>
<td></td>
<td>Exploration and demonstration of knowledge in an area of special interest to the student and/or in an area for which the student needs to demonstrate a higher level of competence. Designed to fit the needs of each student.</td>
</tr>
<tr>
<td>EDF</td>
<td>6941</td>
<td>Practicum in Measurement, Evaluation, and Research</td>
<td>1-4</td>
<td></td>
<td>Practicum provides individuals in the M.Ed.in Measurement and Evaluation opportunities to apply research and evaluation skills in applied settings (e.g., local school districts, Centers within the University). May be repeated up to 8 hours.</td>
</tr>
<tr>
<td>EDF</td>
<td>6944</td>
<td>Field Experience</td>
<td>1-4</td>
<td></td>
<td>Demonstrate skills in the practice of the student's specialty. Objectives will be defined by the needs of the individual student.</td>
</tr>
<tr>
<td>EDF</td>
<td>6971</td>
<td>Thesis: Masters/Educational Specialist</td>
<td>2-19</td>
<td></td>
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</tr>
<tr>
<td>EDF</td>
<td>7138</td>
<td>Adolescent Development</td>
<td>4</td>
<td></td>
<td>This course examines adolescent development in the physical, cognitive, social, and motivational domains. Academic achievement, social and cultural contexts, developmental theory, methodology, and educational practices and policies are discussed.</td>
</tr>
<tr>
<td>EDF</td>
<td>7145</td>
<td>Cognitive Issues in Instruction</td>
<td>4</td>
<td>PR: EDF 6215.</td>
<td>Selected cognitive models of intelligence, memory, problem solving, thinking, and motivation applied to instructional strategies.</td>
</tr>
<tr>
<td>EDF</td>
<td>7167</td>
<td>Experiential Learning: Theory and Methods</td>
<td>3</td>
<td></td>
<td>Theory and methods of experiential learning in both formal and organizational contexts.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>EDF</td>
<td>7227</td>
<td>Topics in Behavior Analysis and Automated Instruction</td>
<td>1-12</td>
<td>PR: EDF 6215 or EDF 6217</td>
<td>Seminar in experimental analysis of functional relationships between behavior and relevant environmental variables. Interpretation of complex human behavior and formulation of procedures which expedite instruction in educational procedures for computer delivery.</td>
</tr>
<tr>
<td>EDF</td>
<td>7265</td>
<td>Psychology of Oral and Written Language Development</td>
<td>4</td>
<td></td>
<td>The course focuses on theoretical and empirical perspectives of monolingual and bilingual language and literacy development. A foundational understanding of language and literacy allows a student the ability to critically analyze practical implications.</td>
</tr>
<tr>
<td>EDF</td>
<td>7357</td>
<td>Applications Of Developmental Theories</td>
<td>4</td>
<td></td>
<td>Doctoral course fulfilling the psych. Foundation requirement in the college of education. It reviews theories of development having implications for curriculum, learning, and other educ./mental health practices. Offered via distance learning periodically</td>
</tr>
<tr>
<td>EDF</td>
<td>7359</td>
<td>Resilience in Human Development</td>
<td>4</td>
<td></td>
<td>This course explores developmental, neuro-psychological, socio-emotional, and cultural perspectives on resiliency in various areas of development (e.g., academic achievement, mental and physical health) from infancy to late adulthood.</td>
</tr>
<tr>
<td>SUB</td>
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<td>TITLE</td>
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<tr>
<td>EDF</td>
<td>7408</td>
<td>Statistical Analysis For Educational Research II</td>
<td>4</td>
<td>PR: EDF 6407 or equiv</td>
<td>Theory and application of statistical procedures to problems in education: (1) ANOVA-factorial; ANCOVA; (2) multiple correlation and regression -- a specific technique and a general approach to data analysis. Coordinated use of computer included.</td>
</tr>
<tr>
<td>EDF</td>
<td>7410</td>
<td>Design Of Systematic Studies In Education</td>
<td>4</td>
<td>PR: EDF 6407, EDF 7408 or equiv</td>
<td>Theory and application of major design models to systematic inquiry, from experimental to naturalistic models. Nature and role of sampling in systematic studies.</td>
</tr>
<tr>
<td>EDF</td>
<td>7412</td>
<td>Application of Structural Equation Modeling in Education</td>
<td>3</td>
<td>PR: EDF 7408 or equivalent</td>
<td>Application of structural equation modeling in educational research, including path models, confirmatory factor analysis, structural modeling with latent variables, and latent growth curve models.</td>
</tr>
<tr>
<td>EDF</td>
<td>7426</td>
<td>Action Research in Schools</td>
<td>3</td>
<td>PR: EDF 6432 or equivalent</td>
<td>Introduction to action research, a form of self-reflective systematic inquiry by practitioners on their own practice. The major assignment for the course will be the completion of an action research project.</td>
</tr>
<tr>
<td>EDF</td>
<td>7436</td>
<td>Rasch Measurement Models</td>
<td>3</td>
<td>PR: EDF 6432 or equivalent</td>
<td>Introduction to a family of Rasch models. Estimation procedures of item and ability parameters. Applications of Rasch models for dichotomous and polytomous data, such as item construction/selection and differential item functioning (DIF).</td>
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<tr>
<td>SUB</td>
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<td>TITLE</td>
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<tr>
<td>EDF</td>
<td>7437</td>
<td>Advanced Educational Measurement I</td>
<td>3</td>
<td>PR: EDF 6432 or equiv.; EDF 6407 or equiv.</td>
<td>Logical, empirical, and statistical models of measurement processes. Examination of issues relative to scaling with a focus on reliability of measurement. Critique of available instruments for measurement in psychology and education. Examination of issues relative to scaling with a focus on reliability of measurement. Critique of available instruments for measurement in psychology and education.</td>
</tr>
<tr>
<td>EDF</td>
<td>7439</td>
<td>Foundations of Item Response Theory</td>
<td>3</td>
<td>PR: EDF 6432.</td>
<td>Basic foundation underlying Item Response Theory (IRT) as well as most common applications in educational and psychological measurement, in terms of the theoretical basis, practical aspects, and specific applications.</td>
</tr>
<tr>
<td>EDF</td>
<td>7462</td>
<td>Metaevaluation</td>
<td>4</td>
<td>PR: EDF 7940.</td>
<td>In-depth study of the theory and practice of metaevaluation; planned field applications of principles of metaevaluation; and use of metaevaluation checklists and standards of quality for professional practice to conduct metaevaluations.</td>
</tr>
<tr>
<td>SUB</td>
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<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>EDF</td>
<td>7469</td>
<td>Introduction to Computer-Based Testing</td>
<td>3</td>
<td>PR: EDF 6432.</td>
<td>This course should serve as an introduction to the field of computer-based testing. The material covered will be applicable to most operational educational, psychological, credentialing and licensure assessments, for research and measurement.</td>
</tr>
<tr>
<td>EDF</td>
<td>7474</td>
<td>Applied Multilevel Modeling in Education</td>
<td>3</td>
<td>PR: Multiple Regression.</td>
<td>Helps students develop skills in defining, estimating, testing, and reporting the results of multilevel models. Design issues, model specification, estimation, statistical software, and model evaluation will be discussed.</td>
</tr>
<tr>
<td>EDF</td>
<td>7477</td>
<td>Qualitative Research in Education Part I</td>
<td>4</td>
<td></td>
<td>First of two sequenced seminars examining the theoretical and pragmatic aspects of conducting qualitative research in educational settings.</td>
</tr>
<tr>
<td>EDF</td>
<td>7478</td>
<td>Qualitative Research in Education Part II</td>
<td>4</td>
<td>PR: EDF 7477</td>
<td>Second of two sequenced seminars examining the theoretical and pragmatic aspects of conducting qualitative research.</td>
</tr>
<tr>
<td>EDF</td>
<td>7485</td>
<td>Theory and Practice of Program Evaluation</td>
<td>3</td>
<td>PR: EDF 6481.</td>
<td>Comparative analysis of contemporary evaluation approaches; theory and scientific basis of evaluation; social and political impact of evaluation on educational decision making; and the design, implementation and reporting of evaluation studies.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
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<td>PREREQUISITES</td>
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<tr>
<td>EDF</td>
<td>7488</td>
<td>Problems in Educational Data Analysis</td>
<td>2</td>
<td>PR: EDF 7408</td>
<td>Strategies and techniques for data processing and quantitative analysis using statistical software, including data screening, transformation, diagnostic indices, and interpretation.</td>
</tr>
<tr>
<td>EDF</td>
<td>7491</td>
<td>Consulting and Project Management Skills for Evaluators</td>
<td>3</td>
<td>PR: EDF 7485</td>
<td>In-depth study of consulting and management skills applied to highly complex evaluations; techniques to use and control resources such as scope, time, risk, communications, and human resource management in a broad range of evaluation activities.</td>
</tr>
<tr>
<td>EDF</td>
<td>7497</td>
<td>Theory and Practice of Personnel Evaluation</td>
<td>3</td>
<td>PR: EDF 7485</td>
<td>In-depth theoretical and practical knowledge of evaluation systems and standards for personnel evaluations, and interpersonal dynamics as related to the major personnel evaluation functions.</td>
</tr>
<tr>
<td>EDF</td>
<td>7498</td>
<td>Analysis for Single-Case Experiments</td>
<td>3</td>
<td>PR: EDF 7408</td>
<td>Methods for analyzing data from single-case experiments (e.g., multiple baseline, reversal, and alternating treatment studies) including applications of visual analysis, effect size estimation, randomization tests, and multilevel modeling.</td>
</tr>
<tr>
<td>SUB</td>
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<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>EDF</td>
<td>7530</td>
<td>History of Higher Education in the United States</td>
<td>3</td>
<td>PR: EDF 6517 or its equivalent</td>
<td>Historical overview of American higher education from Colonial period to present. History of undergraduate curriculum, changing purpose of higher ed, and growth in hierarchical categorization of higher ed as college became more accessible to students.</td>
</tr>
<tr>
<td>EDF</td>
<td>7555</td>
<td>Moral Development and Education</td>
<td>3-4</td>
<td></td>
<td>This course will examine the dynamics of moral development. We will study the psychological foundations of moral education through examining the empirical research and philosophical work underlying social scientists’ conceptions of morality.</td>
</tr>
<tr>
<td>EDF</td>
<td>7586</td>
<td>Classics in Educational Research</td>
<td>4</td>
<td>PR: EDF 6517, EDF 6544, EDF 6606</td>
<td>Examination of the context, methods, and significance of selected research studies in education.</td>
</tr>
<tr>
<td>EDF</td>
<td>7682</td>
<td>Education in Metropolitan Areas</td>
<td>3</td>
<td>PR: EDF 6517, EDF 6544, EDF 6606</td>
<td>Modern public education and its relationship to national development.</td>
</tr>
<tr>
<td>EDF</td>
<td>7910</td>
<td>Directed Research in Measurement and Evaluation</td>
<td>1-19</td>
<td></td>
<td>Independent student-faculty research course.</td>
</tr>
<tr>
<td>EDF</td>
<td>7930</td>
<td>Professional Seminar</td>
<td>1</td>
<td></td>
<td>Ph.D. course fulfilling Educational Psych. concentration requirement under the Curr. &amp; Instruc. doctoral program. It covers professional issues of working as an academic in research intensive or teaching college as well as working in non-academic settings.</td>
</tr>
<tr>
<td>EDF</td>
<td>7934</td>
<td>Seminar in Social Foundations of Education</td>
<td>4</td>
<td>PR: EDF 6517, EDF 6544, or EDF 6606</td>
<td>Significant research on socio-cultural issues in Education.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
<td>DESCRIPTION</td>
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<tr>
<td>EDF</td>
<td>7940</td>
<td>Practicum In Educational Planning, Evaluation, And Development</td>
<td>1-8</td>
<td>PR: EDF 7408, EDF 7493</td>
<td>Supervised practicum in which the student assumes major responsibility for significant planning, evaluation, research, or development activity.</td>
</tr>
<tr>
<td>EDF</td>
<td>7946</td>
<td>Supervised Experience in College Teaching</td>
<td>1</td>
<td></td>
<td>A seminar to increase knowledge and competencies in college instruction. Students must have advanced graduate standing, be currently teaching a college level course, willing to be observed, and able to discuss ongoing classroom practices and problems. Open to all doctoral level Education majors, other doctoral students if space available. S/U optional.</td>
</tr>
<tr>
<td>EDF</td>
<td>7947</td>
<td>Research Practicum</td>
<td>1</td>
<td></td>
<td>Provides research experience for students who plan to pursue teaching and research. Registration is restricted to doctoral students in College of Education or by permission. This doctoral course fulfils Educational Psychology concentration requirement.</td>
</tr>
<tr>
<td>EDF</td>
<td>7980</td>
<td>Dissertation</td>
<td>2-30</td>
<td></td>
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</tr>
<tr>
<td>EDG</td>
<td>6285</td>
<td>School Curriculum Improvement</td>
<td>3</td>
<td></td>
<td>Open only to teachers in service. Complete faculty participation required.</td>
</tr>
<tr>
<td>EDG</td>
<td>6344</td>
<td>Project T.E.A.C.H. (Teacher Effectiveness and Classroom Handling)</td>
<td>3</td>
<td></td>
<td>Topics and techniques in verbal communication skills, questioning, paraphrasing, positive support skills, problem solving, counseling techniques, non-confrontation strategies, group dynamics, and discipline decision making.</td>
</tr>
<tr>
<td>EDG</td>
<td>6436</td>
<td>Cybersecurity in the Schools</td>
<td>3</td>
<td></td>
<td>Knowledge in developing and implementing cybersecurity policies that govern schools and districts.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
<td>DESCRIPTION</td>
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<tr>
<td>EDG</td>
<td>6627</td>
<td>Foundations Of Curriculum And Instruction</td>
<td>3</td>
<td>PR: EDG 4620</td>
<td>Open to all graduate students. Introductory course in curriculum and instruction at the graduate level, basic to all specialized courses in the field. Emphasis on foundations, design, basic concepts, theory, and trends of curriculum from early childhood through secondary levels.</td>
</tr>
<tr>
<td>EDG</td>
<td>6906</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
<td>Independent study in which students must have a contract with an instructor.</td>
</tr>
<tr>
<td>EDG</td>
<td>6931</td>
<td>Selected Topics in Education</td>
<td>1-4</td>
<td></td>
<td>Each topic is a course under the supervision of a faculty member. The title and content will vary according to the topic.</td>
</tr>
<tr>
<td>EDG</td>
<td>6935</td>
<td>Seminar in Curriculum Research</td>
<td>1-3</td>
<td></td>
<td>Critical evaluation of current research and curriculum literature, design and analysis of individual research topics leading to satisfaction of research requirements.</td>
</tr>
<tr>
<td>EDG</td>
<td>6947</td>
<td>MAT Final Internship</td>
<td>1-9</td>
<td></td>
<td>Open to graduate degree candidates only. Supervised teaching at the secondary or junior college level as appropriate.</td>
</tr>
<tr>
<td>EDG</td>
<td>6971</td>
<td>Thesis: Masters/Education Specialist</td>
<td>2-19</td>
<td></td>
<td>Individual scholarly project planned and completed with the approval of the advisor and program committee.</td>
</tr>
<tr>
<td>EDG</td>
<td>6975</td>
<td>Project: Master's/Specialist</td>
<td>1-9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
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<tr>
<td>EDG</td>
<td>7035</td>
<td>Design and Evaluation of Teacher Education Programs</td>
<td>3</td>
<td></td>
<td>Students in this course will examine theories for design and evaluation of teacher ed programs. The course uses a problem-based approach in which instruction is structured around the design and evaluation of model teacher education programs.</td>
</tr>
<tr>
<td>EDG</td>
<td>7046</td>
<td>Trends and Issues in Educational Policy: Literacy and Teacher</td>
<td>3</td>
<td></td>
<td>Offers the opportunity for wide reading and vigorous discussion of a variety of texts focused on the historical and current educational policies impacting literacy, elementary, and teacher education.</td>
</tr>
<tr>
<td>EDG</td>
<td>7066</td>
<td>Critical Pedagogy in Teacher Education</td>
<td>3</td>
<td></td>
<td>Introductions to key concepts and frameworks related to critical pedagogy. Graduate students will develop connections between theoretical exploration to teaching and scholarship in teacher education.</td>
</tr>
<tr>
<td>EDG</td>
<td>7069</td>
<td>Sustainable Innovation in Education</td>
<td>3</td>
<td></td>
<td>Research and theory on sustainable innovation, including life-cycles and evolution. Includes development of case study of existing or defunct innovation's origins, development, effectiveness and current status. Open to doctoral students in COEDU.</td>
</tr>
<tr>
<td>EDG</td>
<td>7207</td>
<td>Transforming the Curriculum</td>
<td>3</td>
<td></td>
<td>Theory and research in curriculum development, including historical perspectives on curriculum movements, comparative global curriculum issues, and curriculum theories and models in use. Special attention given to innovations that succeed or fail.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>EDG</td>
<td>7357</td>
<td>Mentoring Theory and Leadership Practice</td>
<td>3</td>
<td></td>
<td>This cross-disciplinary doctoral course is for students interested in the topic and process of mentoring in education. Students from inside and outside the College of Education are eligible.</td>
</tr>
<tr>
<td>EDG</td>
<td>7368</td>
<td>Visual Research Methods in Education</td>
<td>3</td>
<td></td>
<td>Introduces students to analytical and interpretative methods for understanding visual and media culture within an education context.</td>
</tr>
<tr>
<td>EDG</td>
<td>7667</td>
<td>Analysis of Curriculum and Instruction</td>
<td>3</td>
<td>PR: EDG 6627</td>
<td>Various theoretical frameworks for analyzing curriculum and instruction. Emphasis on rational models of curriculum inquiry.</td>
</tr>
<tr>
<td>EDG</td>
<td>7692</td>
<td>Issues in Curriculum and Instruction</td>
<td>3</td>
<td>PR: EDG 6627</td>
<td>Identification and analysis of major problems and issues in curriculum and instruction. Critical examination of efforts to deal with these issues.</td>
</tr>
<tr>
<td>EDG</td>
<td>7695</td>
<td>Problems of Practice in Education</td>
<td>3</td>
<td></td>
<td>Theory and research in curriculum development, including historical perspectives on curriculum movements, comparative global curriculum issues, and curriculum theories and models in use. Special attention given to innovations that succeed or fail.</td>
</tr>
<tr>
<td>EDG</td>
<td>7910</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDG</td>
<td>7931</td>
<td>Selected Topics</td>
<td>1-4</td>
<td></td>
<td>Selected topics in advanced Education.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
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<td>PREREQUISITES</td>
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<tr>
<td>EDG</td>
<td>7936</td>
<td>Graduate Seminar: Leader-Scholar Community</td>
<td>3</td>
<td>PR: EDG 7046</td>
<td>Participation in leader-scholar learning community to develop dissertation/capstone project concept, review literature, plan intervention, and design research. Registration begins in second year of program and continues until candidacy.</td>
</tr>
<tr>
<td>EDG</td>
<td>7937</td>
<td>Graduate Seminar</td>
<td>1-4</td>
<td></td>
<td>Seminar in advanced Education.</td>
</tr>
<tr>
<td>EDG</td>
<td>7938</td>
<td>Advanced Graduate Seminar: Introduction to Research</td>
<td>3</td>
<td></td>
<td>Students will survey educational theories that contribute to the scholarly literature in Childhood Education &amp; Literacy Studies and acquire academic literacies that are used to share information within the doctoral program and across academic texts.</td>
</tr>
<tr>
<td>EDG</td>
<td>7939</td>
<td>Advanced Graduate Seminar: Research in Progress</td>
<td>3</td>
<td>PR: EDG 7938</td>
<td>Interdisciplinary work and collaborative research will be fostered through an inquiry group. The group will work as a community of discursive social practice with the goal of more fully engaging doctoral students in the intellectual life of the discipline.</td>
</tr>
<tr>
<td>EDG</td>
<td>7941</td>
<td>Practicum in Educational Innovation</td>
<td>1-4</td>
<td>PR: EDG 7046</td>
<td>Requires doctoral students to actively engage in the development and operation of an innovative educational practice or program in the student’s workplace or other institution.</td>
</tr>
<tr>
<td>EDG</td>
<td>7980</td>
<td>Dissertation</td>
<td>2-19</td>
<td></td>
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<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
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<tr>
<td>EDH</td>
<td>6051</td>
<td>Higher Education in America</td>
<td>3</td>
<td></td>
<td>For current and prospective faculty, administrators, policy analysts, and staff seeking to learn about American higher education. The topics addressed include the history, recent developments, and projections for the future of various aspects of higher education, including its missions, purposes, students, faculty and staff, administration, finance, organization, governance, and role in American society.</td>
</tr>
<tr>
<td>EDH</td>
<td>6081</td>
<td>Junior College in American Higher Education</td>
<td>3</td>
<td></td>
<td>Philosophical and cultural bases for definition of its role and contemporary issues, such as control, financing, and curricular patterns. Emphasis on the place and problems of the community junior college.</td>
</tr>
<tr>
<td>EDH</td>
<td>6406</td>
<td>Ethics and Higher Education</td>
<td>3</td>
<td></td>
<td>The purpose of this course is to assist students in developing a detailed ethical framework that will guide their actions and decision-making as they serve in leadership and teaching positions in higher education. Areas of emphasis include (a) learning selected philosophies of ethics; (b) exploring student, faculty, and classroom ethical issues; (c) discussing administrator/board ethical issues; (d) examining the college or university as an ethical organization.</td>
</tr>
<tr>
<td>EDH</td>
<td>6906</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
<td>Independent study in which students must have a contract with an instructor. Rpt. S/U.</td>
</tr>
<tr>
<td>SUB</td>
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<td>TITLE</td>
<td>HRS</td>
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<tr>
<td>EDH</td>
<td>6938</td>
<td>Seminar in College Teaching</td>
<td>3</td>
<td></td>
<td>Implications of learning theory and student characteristics for teaching at the college level. Types of teaching procedures, innovation, evaluation, student freedom, and responsibility for learning.</td>
</tr>
<tr>
<td>EDH</td>
<td>6947</td>
<td>Internship in Higher Education</td>
<td>1-6</td>
<td></td>
<td>This course provides higher education program graduate students with an extensive, semester-long, field experience in a two- or four-year college, under the dual guidance of a campus-based supervisor and a USF higher education program faculty member. The internship experience must relate to the student’s goals in the doctoral program. Students should be at or near the end of their graduate program.</td>
</tr>
<tr>
<td>EDH</td>
<td>7057</td>
<td>Introduction to Research Studies in Higher Education</td>
<td>3</td>
<td></td>
<td>This course introduces key studies in higher education selected from across areas of focus and a brief overview of research methodologies. Must be completed early after admittance to the doctoral program.</td>
</tr>
<tr>
<td>EDH</td>
<td>7225</td>
<td>Curriculum Development In Higher Education</td>
<td>3</td>
<td></td>
<td>Emphasis on curriculum perspectives, procedures, and practices in higher education; principles of curriculum and instruction in higher education; theory and practices in goal setting, curriculum planning, instructional improvement, and curriculum design.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
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<td>PREREQUISITES</td>
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<tr>
<td>EDH</td>
<td>7325</td>
<td>Supervised Teaching in Childhood Ed &amp; Literacy Studies I</td>
<td>3</td>
<td></td>
<td>The purpose of this course is for graduate assistants to consider challenges and issues involved in preservice education. Students will reflect on their instruction, survey preservice teacher literature and develop an inquiry plan to study their teaching.</td>
</tr>
<tr>
<td>EDH</td>
<td>7326</td>
<td>Supervised Teaching in Childhood Ed &amp; Literacy Studies II</td>
<td>3</td>
<td></td>
<td>The purpose of this course is to provide new graduate assistants a foundation for studying their teaching at the collegiate level.</td>
</tr>
<tr>
<td>EDH</td>
<td>7405</td>
<td>Policy and Legal Dimensions in Higher Education</td>
<td>3</td>
<td></td>
<td>This course is a doctoral level course with primary focus on the interface of policy and law as they address the nature, process and product of community college and higher education in the United States and Florida. Constitutional, statutory and contract law is also discussed, as are critical legal and policy issues in higher education, including governance, academic freedom, student rights, discrimination, tort liability, contracts and collective bargaining.</td>
</tr>
<tr>
<td>EDH</td>
<td>7505</td>
<td>Higher Education Finance</td>
<td>3</td>
<td></td>
<td>Emphasis on financial policies, planning, and budgeting; allocation; financial analysis and management, patterns of expenditure, sources of income. Relationships between educational objectives and resource allocations.</td>
</tr>
<tr>
<td>EDH</td>
<td>7632</td>
<td>Leadership in Higher Education</td>
<td>3</td>
<td></td>
<td>This cross-disciplinary doctoral course is for students interested in the topic and process of mentoring in education. Students from inside and outside the College of Education are eligible.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
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<tr>
<td>EDH</td>
<td>7633</td>
<td>Governing Colleges and Universities</td>
<td>3</td>
<td></td>
<td>Students in this course will examine and compare existing models of state and local college and university governance structures Demographic, social, legal, financial, and planning issues and forces that effect how colleges and universities are governed will also be explored. Policy analysis and research will be explored as it relates to governance in higher education.</td>
</tr>
<tr>
<td>EDH</td>
<td>7635</td>
<td>Organization And Administration Of Higher Education</td>
<td>3</td>
<td></td>
<td>Examines the concepts about higher education organizations and administration, the behaviors of those organizations and administrators, and the relationships between concept and practice.</td>
</tr>
<tr>
<td>EDH</td>
<td>7636</td>
<td>Organizational Theory and Practices in Higher Education</td>
<td>3</td>
<td></td>
<td>Explores theories and models of organizations and their applicability to colleges and universities and the work done in the influence of internal and external actors. Also examines many of the administrative practices and processes common in colleges and universities today.</td>
</tr>
<tr>
<td>EDH</td>
<td>7910</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td>This course provides higher education program graduate students with an opportunity for directed research, under the supervision of a higher education program faculty member.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>EDH</td>
<td>7935</td>
<td>Higher Education Capstone Seminar</td>
<td>3</td>
<td>PR:</td>
<td>The course is designed to encourage students’ integration and synthesis of</td>
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<td></td>
<td>theories, concepts and themes in previous coursework; to critique research</td>
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<td>in the field; and to provide some in-depth study of selected areas in</td>
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<td></td>
<td>higher education. Advanced Graduate Standing. Instructor approval required</td>
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<td></td>
<td></td>
<td></td>
<td>– majors only.</td>
</tr>
<tr>
<td>EDH</td>
<td>7980</td>
<td>Dissertation</td>
<td>2-30</td>
<td></td>
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</tr>
<tr>
<td>EDM</td>
<td>6256</td>
<td>Problems In Curriculum And Instruction: Middle</td>
<td>1-3</td>
<td>PR: EDG 4620,</td>
<td>For teachers, supervisors, and administrators. Curricular and instructional</td>
</tr>
<tr>
<td></td>
<td></td>
<td>School</td>
<td></td>
<td>EDG 6627.</td>
<td>problems of the middle school. Common problems or problems of special</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>interest to the participants. Normally, for certification requirements only.</td>
</tr>
<tr>
<td>EDM</td>
<td>6622</td>
<td>Client Centered Middle Schools</td>
<td>3</td>
<td>PR: EDM 6622 and EDM 6623</td>
<td>Combination lecture/discussion/independent study course that examines in depth the current research on needs/characteristics of the early adolescent and its implications for both organization of the middle grade school and its delivery of curriculum and instruction.</td>
</tr>
<tr>
<td>EDM</td>
<td>6624</td>
<td>Effective Instruction for Middle Schools</td>
<td>3</td>
<td>PR: EDM 6622 and EDM 6623</td>
<td>Combination lecture/discussion/individual study course that examines in depth the current research on both alternative instructional strategies and assessment practices that are successful with middle level students.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>EDM</td>
<td>6935</td>
<td>Middle School Issues Seminar</td>
<td>1-3</td>
<td></td>
<td>Combines discussion/individual study seminar modeling the advisory seminar in a university setting and examining the current research on a variety of important trends/issues affecting middle level education.</td>
</tr>
<tr>
<td>EDS</td>
<td>6131</td>
<td>Clinical Supervision</td>
<td>3</td>
<td>PR: EDS 6050</td>
<td>Trains administrators, supervisors, and peer teachers in observing and diagnosing teacher classroom performance, writing remedial plans, conducting post observation conferences, and evaluating performance.</td>
</tr>
<tr>
<td>EDS</td>
<td>6239</td>
<td>Problems In Supervision</td>
<td>3</td>
<td>PR: EDS 6050</td>
<td>Analysis of instructional problems in schools. Emphasis on supervisory tasks, case studies, and the application of problem solving techniques and strategies.</td>
</tr>
<tr>
<td>EDS</td>
<td>7130</td>
<td>Teacher Evaluation: Process and Instruments</td>
<td>3</td>
<td>PR: EDA 6061, EDF 6432</td>
<td>Examines procedures for establishing content validity, reliability, norms, and predictive validity of teacher evaluation systems. Examines the psychometric qualities of selected instruments.</td>
</tr>
<tr>
<td>EEC</td>
<td>6055</td>
<td>Advocacy and Leadership in Early Childhood Education</td>
<td>3</td>
<td></td>
<td>This course focuses on developing leadership skills and knowledge necessary to help individuals build coalitions and design effective public policy/advocacy initiatives. This course is open to graduate non-majors and is repeatable for 3 hours credit.</td>
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<tr>
<td>SUB</td>
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<tr>
<td>EEC</td>
<td>6205</td>
<td>E.C.: Curriculum and Authentic Assessment</td>
<td>3</td>
<td></td>
<td>This course focuses issues, strategies and research associated with curriculum and authentic assessment. This course is open to graduate non-majors and is repeatable for three hours credit.</td>
</tr>
<tr>
<td>EEC</td>
<td>6265</td>
<td>Early Childhood Programs and Advanced Curriculum</td>
<td>3</td>
<td></td>
<td>Historical traditions and contemporary programs and curriculum models analyzed with an emphasis on dominant practices, methodologies, and current research that influences curriculum development in programs serving young children. Open non-majors/RTHC.</td>
</tr>
<tr>
<td>EEC</td>
<td>6415</td>
<td>EC: Diversity in Home and School</td>
<td>3</td>
<td></td>
<td>Focuses on issues of diversity that affect classroom practices with emphasis on analyzing and synthesizing pertinent literature and research. This course is open to graduate non-majors and is repeatable for three credit hours.</td>
</tr>
<tr>
<td>EEC</td>
<td>6517</td>
<td>Social Justice in Early Childhood Education</td>
<td>3</td>
<td></td>
<td>This course uses a social justice lens to examine the impact of diversities on social functioning and development of young children. Research skill development includes analysis of social policies. Course is open to non-maj and is rpt for 3 credit hours.</td>
</tr>
<tr>
<td>EEC</td>
<td>6525</td>
<td>Early Childhood Program Development and Administration</td>
<td>3</td>
<td></td>
<td>An analysis of current educational programs for young children with emphasis on designing, developing, and administering a program commensurate with the needs of young children. This course is open for non-majors and is repeatable for 3 credit hours.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
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<td>PREREQUISITES</td>
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<tr>
<td>EEC</td>
<td>6626</td>
<td>EC: Play and Learning</td>
<td>3</td>
<td></td>
<td>This course includes an analysis of play theories, the role of play in the total development of young children, and the role of play as a curricular tool and implications for program planning and evaluation. Open non-majors/RTHC.</td>
</tr>
<tr>
<td>EEC</td>
<td>6678</td>
<td>Research Seminar: Issues and Trends in Early Childhood Education</td>
<td>3</td>
<td></td>
<td>This course is designed to create an awareness of developing trends and issues facing the field of early childhood education. Relevant research is reviewed and possible avenues for advocacy are explored. Course open to non-majors, repeatable for 3 credit hours.</td>
</tr>
<tr>
<td>EEC</td>
<td>6926</td>
<td>Workshop In Early Childhood Education</td>
<td>3</td>
<td></td>
<td>Individual problems and innovations related to methods and materials of instruction in early childhood.</td>
</tr>
<tr>
<td>EEC</td>
<td>7056</td>
<td>Leadership and Advocacy: Issues Affecting Young Children</td>
<td>3</td>
<td></td>
<td>This course focuses on developing leadership and advocacy knowledge and skills necessary for designing public policy/advocacy initiatives directly affecting children and families. Open to all adv. grad stud &amp; may not be repeated for credit.</td>
</tr>
<tr>
<td>EEC</td>
<td>7057</td>
<td>Critical Perspectives in Early Childhood Education</td>
<td>3</td>
<td></td>
<td>An exploration of how philosophical ideas of education impact todayâ€™s practice in early childhood education. Open to all adv. grad stud &amp; may not be repeated for credit.</td>
</tr>
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<td>SUB</td>
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<tr>
<td>EEC</td>
<td>7306</td>
<td>Teaching and Learning in Early Childhood</td>
<td>3</td>
<td></td>
<td>Policies and research focusing on teaching and learning in Early Childhood Education with an naturalistic inquiry / action research component. Course is open to all adv. grad students and may not be repeated for credit.</td>
</tr>
<tr>
<td>EEC</td>
<td>7317</td>
<td>ICT in the Early Years</td>
<td>3</td>
<td></td>
<td>Explores the interface between young children and information and communication technology (ICT) from a developmental perspective.</td>
</tr>
<tr>
<td>EEC</td>
<td>7416</td>
<td>Sociocultural Approaches to Working with Children and Families</td>
<td>3</td>
<td></td>
<td>Focuses on issues relevant to young children within the context of their families and communities. Foundational and current research is examined in light of social policies. Open to all adv. grad stud &amp; may not be repeated for credit.</td>
</tr>
<tr>
<td>EEC</td>
<td>7417</td>
<td>Family Literacy</td>
<td>3</td>
<td></td>
<td>Students will examine how literacy is acquired, how culture, language, and family life relate to literacy development, and how home, school, and community contexts influence literacy acquisition.</td>
</tr>
<tr>
<td>EEC</td>
<td>7615</td>
<td>Trends and Issues in Early Childhood Education</td>
<td>3</td>
<td></td>
<td>This course will focus on current issues and trends in the field of Early Childhood Education, which serves young children from birth to age 8. Open to all adv. grad stud &amp; may not be repeated for credit.</td>
</tr>
<tr>
<td>EEC</td>
<td>7617</td>
<td>Assessment In Early Childhood Education</td>
<td>3</td>
<td></td>
<td>Focuses on the goals, benefits &amp; uses of assessment for young children &amp; their teachers. It explores evaluation and accreditation of programs serving young children &amp; ec teacher educators. Open to all adv. Grad stud &amp; may not be repeated for credit.</td>
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<tr>
<td>EEC</td>
<td>7627</td>
<td>Arts &amp; Aesthetics in Early Childhood Education</td>
<td>3</td>
<td></td>
<td>Provides a synthesis of theoretical perspectives on aesthetic issues and the ramifications for the development, teaching, and the critique of arts in early childhood curriculum.</td>
</tr>
<tr>
<td>EEC</td>
<td>7910</td>
<td>Directed Research in Early Childhood Education</td>
<td>1-19</td>
<td></td>
<td>Independent student-faculty research course.</td>
</tr>
<tr>
<td>EEC</td>
<td>7980</td>
<td>Dissertation</td>
<td>2-30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EEE</td>
<td>5344C</td>
<td>Digital CMOS/VLSI Design</td>
<td>3</td>
<td>PR: EEL 4705</td>
<td>Design, layout, simulation, and test of custom digital CMOS/VLSI chips, using a CMOS cell library and state-of-the-art CAD tools. Digital CMOS static and dynamic gates, flip flops, CMOS array structures commonly used in digital systems. Top down design example of a bit slice processor.</td>
</tr>
<tr>
<td>EEE</td>
<td>5356</td>
<td>Integrated Circuit Technology</td>
<td>3</td>
<td>PR: EEL 4351</td>
<td>Physics and Chemistry of integrated circuit and discrete device fabrication, materials limitations, processing schemes, failure and yield analysis. A laboratory is integral to the course.</td>
</tr>
<tr>
<td>EEE</td>
<td>5382</td>
<td>Physical Basis Of Microelectronics</td>
<td>3</td>
<td>PR: EEL 4471</td>
<td>Quantum mechanics with emphasis on electronic properties in atoms, molecules, and crystals; quantum statistics; energy band theory; crystal structures; defect chemistry; semiconductor properties.</td>
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<tr>
<td>EEE</td>
<td>6205</td>
<td>Personal Health Systems</td>
<td>3</td>
<td></td>
<td>The theory and design of personal health systems. Students design, build and evaluate personal health systems that are patient-facing; enable ubiquitous interaction with health; and employ persuasive techniques for behavior change.</td>
</tr>
<tr>
<td>EEE</td>
<td>6273</td>
<td>Chemical/Biological Sensors and Microfabrication</td>
<td>3</td>
<td></td>
<td>This course discusses general concepts of MEMS, microfabrication and chem/bio sensors. The course concentrates on basics of MEMS, different processes involved and principles of sensing and understanding systems approaches to problems that require Sensors/MEMS.</td>
</tr>
<tr>
<td>EEE</td>
<td>6277</td>
<td>Bioelectronics</td>
<td>3</td>
<td></td>
<td>Second course in the series covering bioelectrical phenomena and systems. The focus is electronics for biomedical applications.</td>
</tr>
<tr>
<td>EEE</td>
<td>6282</td>
<td>Biomedical Systems and Pattern Recognition</td>
<td>3</td>
<td></td>
<td>Covers models for analysis of biomedical systems, both theoretical and computer-based™ and “biomedical pattern spaces, feature extraction and statistical pattern recognition™ for insight into bio-systems and efficient integration with medical systems.</td>
</tr>
<tr>
<td>EEE</td>
<td>6318</td>
<td>Characterization of Semiconductors</td>
<td>3</td>
<td></td>
<td>Electrical, optical, chemical, and physical methods used to characterize semiconductor materials and devices; includes surface and near surface spectroscopes. Available to non-majors.</td>
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<tr>
<td>EEE</td>
<td>6353</td>
<td>Semiconductor Device Theory I</td>
<td>3</td>
<td></td>
<td>Theory of operation and application of circuits and devices.</td>
</tr>
<tr>
<td>EEE</td>
<td>6355</td>
<td>Compound Semiconductor Technology</td>
<td>3</td>
<td></td>
<td>Bulk crystal and epitaxial growth technologies of III-V and II-VI compound semiconductors. The properties, characterization, and device applications of these compounds will be emphasized.</td>
</tr>
<tr>
<td>EEE</td>
<td>6358</td>
<td>Semiconductor Device Theory II</td>
<td>3</td>
<td>PR: EEL 6353</td>
<td>Theory of operation and application of circuits and devices.</td>
</tr>
<tr>
<td>EEE</td>
<td>6368</td>
<td>RF/MW Power Amp Design</td>
<td>3</td>
<td>PR: EEL 6427</td>
<td>The emphasis of this course is on microwave power amplifier design for hybrid and monolithic microwave integrated circuit implementations.</td>
</tr>
<tr>
<td>EEE</td>
<td>6407</td>
<td>Semiconductor Materials and Devices</td>
<td>3</td>
<td></td>
<td>This is a course in semiconductor materials basics leading to a detailed discussion of semiconductor device structures and operation, with a review of current topics. Topics will include a review on semiconductor theory, industry drivers from a systems perspective.</td>
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<tr>
<td>EEE</td>
<td>6412</td>
<td>System on a Chip</td>
<td>3</td>
<td></td>
<td>Fundamental concepts: 2D and 3D SoCs. Digital, analog, MEMS, sensors, optoelectronics, and communication/networking blocks for SoC. DNA chips. Fabrication techniques including photolithography, TFD, and etching. Platform based design. Applications.</td>
</tr>
<tr>
<td>EEE</td>
<td>6425</td>
<td>Introduction to Nanotechnology</td>
<td>3</td>
<td>PR: Physics I, Chemistry I and II</td>
<td>Basic nanotechnology fabrication and characterization techniques. Nanomaterials, Top-down and bottom-up assembly processes. Applications of nanotechnology.</td>
</tr>
<tr>
<td>EEE</td>
<td>6432</td>
<td>Nanostructures and Nanomaterials for Sustainable Systems</td>
<td>3</td>
<td></td>
<td>Introduction to nanostructures (tubes, wires, fibers, laminates, spheres, etc.) and materials used to create these structures for sustainable systems to solve global issues for the environment, alternative energy, medicine, pharmacy, sports, space, etc.</td>
</tr>
<tr>
<td>EEE</td>
<td>6514</td>
<td>Biomedical Image Processing</td>
<td>3</td>
<td></td>
<td>2D signal processing: image enhancement; edge detection and image segmentation. Medical imaging: 3D computerized tomography, magnetic resonance imaging; single photon emission computed tomography; positron emission tomography; radiographs.</td>
</tr>
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<tr>
<td>EEL</td>
<td>5250</td>
<td>Power System Analysis</td>
<td>3</td>
<td>PR: EGN 3375.</td>
<td>Analysis and design technique for AC power systems.</td>
</tr>
<tr>
<td>EEL</td>
<td>5462</td>
<td>Antenna Theory</td>
<td>3</td>
<td>PR: EEL 4471</td>
<td>Antenna theory beginning with fundamental parameter definitions and continuing with mathematical concepts, elemental antennas and arrays.</td>
</tr>
<tr>
<td>EEL</td>
<td>5594L</td>
<td>Wireless Circuits and Systems Laboratory</td>
<td>2</td>
<td>PR: EEL 4471</td>
<td>This class will provide introductory tutorial learning, plus hands-on experience in analysis, design and measurement in the field of wireless communications.</td>
</tr>
<tr>
<td>EEL</td>
<td>5771</td>
<td>Introduction to Computer Graphics I</td>
<td>3</td>
<td>PR: COP 4530</td>
<td>An introduction to the evolution of computer graphics including point-plotting, line drawing, two-dimensional transformations and graphics software packages.</td>
</tr>
<tr>
<td>EEL</td>
<td>5935</td>
<td>Special Electrical Engineering Topics I</td>
<td>1-3</td>
<td></td>
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<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>EEL</td>
<td>5936</td>
<td>Special Electrical Engineering Topics II</td>
<td>1-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EEL</td>
<td>5937</td>
<td>Special Electrical Engineering Topics III</td>
<td>1-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EEL</td>
<td>6018</td>
<td>System of Systems Eng &amp; Model</td>
<td>3</td>
<td>PR: MAP 2302</td>
<td>A methodical, disciplined approach for the design, realization, technical management, operations, and implementation of a system. Methodologies based on System of Systems Engineering approach to solve complex engineering problems will be presented.</td>
</tr>
<tr>
<td>EEL</td>
<td>6022</td>
<td>Engin Apps of Complex Analysis</td>
<td>3</td>
<td></td>
<td>Analytic functions, conformal mapping, residue theory, Laurent series, transforms. Applications to various problems in engineering and physics.</td>
</tr>
<tr>
<td>EEL</td>
<td>6024</td>
<td>Math for Communication</td>
<td>3</td>
<td></td>
<td>Advanced matrix algorithms: LU and QR factorizations, least-squares, pseudoinverses. Optimization methods.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>EEL</td>
<td>6026</td>
<td>Math II for Professionals</td>
<td>1</td>
<td>PR: EEL 6025</td>
<td>Fourier analysis: frequency domain nomenclature, transfer function formulations, mathematical issues. Matrix analysis: linear system quantification, algorithms, equivalent formulations.</td>
</tr>
<tr>
<td>EEL</td>
<td>6027</td>
<td>Engin Apps for Vector Analysis</td>
<td>3</td>
<td></td>
<td>Vector methods of electromagnetism and fluid mechanics. Vector operators, line and flux integrals, potential and transport theorems, applications.</td>
</tr>
<tr>
<td>EEL</td>
<td>6028</td>
<td>Math III for Professionals</td>
<td>1</td>
<td>PR: EEL 6025 and EEL 6026</td>
<td>Vector analysis: vector algebra, characterization of physical aspects of electric and magnetic fields. Partial differential equations, reading solution characteristics from separation-of-variables formulas.</td>
</tr>
<tr>
<td>EEL</td>
<td>6226</td>
<td>Microsystems and MEMS Technology</td>
<td>3</td>
<td></td>
<td>This course provides an overview of the MEMS Technology, focusing on devices and systems that can be developed using standard processing approaches.</td>
</tr>
<tr>
<td>EEL</td>
<td>6227</td>
<td>Electrical Machines and Drives</td>
<td>3</td>
<td></td>
<td>A graduate course intended to familiarize students with the electrical to mechanical energy converters known as machines and the power electronic circuits used to control the machines and produce integrated drives.</td>
</tr>
<tr>
<td>EEL</td>
<td>6245</td>
<td>Power Electronics</td>
<td>3</td>
<td>CR: EEL 3302</td>
<td>Covers topology, circuit analysis, and applications of various converters. Converters include switch-mode dc/dc converters, dc/ac converters and line frequency rectifiers and inverters. Applications of converters in dc motor control and ac motor control.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>EEL</td>
<td>6256</td>
<td>Power Systems II</td>
<td>3</td>
<td>PR: EEL 5250, EGN 3375.</td>
<td>A graduate course intended to familiarize students with the dynamics, control and protection of electrical power systems.</td>
</tr>
<tr>
<td>EEL</td>
<td>6262</td>
<td>Industrial Power Distribution</td>
<td>3</td>
<td>PR: EGN 3375</td>
<td>Prepares student to design electrical power systems for industrial applications. Focuses on power system configurations, transformer connections, fault calculations, protective device sizing, arc flash calculations, and cable raceway system design.</td>
</tr>
<tr>
<td>EEL</td>
<td>6263</td>
<td>Industrial Power Distribution II</td>
<td>3</td>
<td>PR: EEL 6262</td>
<td>Prepares student to design electrical power systems for industrial applications. Focuses on switchgear and motor control centers, ladder logic, motor application, lighting systems, power factor correction, and power quality.</td>
</tr>
<tr>
<td>EEL</td>
<td>6285</td>
<td>Energy Delivery Systems</td>
<td>3</td>
<td>PR: EGN 3373, EGN 3375.</td>
<td>The course provides the students the fundamentals and analysis of the electric power delivery system to facilitate the integration of renewal energy resources “wind energy and solar energy.</td>
</tr>
<tr>
<td>EEL</td>
<td>6292</td>
<td>Power Sys Market: Oper &amp; Analys</td>
<td>3</td>
<td></td>
<td>This course aims to present the backgrounds, state-of-the-art and challenges in current power systems, the operational models and computational methods, the basic economics on electricity market as well as system expansion and investment.</td>
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<td>SUB</td>
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<tr>
<td>EEL</td>
<td>6293</td>
<td>Power Quality</td>
<td>3</td>
<td>PR: EEL 6263, EEL 6256</td>
<td>Course in basic power quality concepts including interruptions, voltage sags and swells, transient overvoltages, and harmonics. Emphasis is placed on identifying and designing means of mitigation for commonly-encountered power quality problems.</td>
</tr>
<tr>
<td>EEL</td>
<td>6425</td>
<td>RF &amp; Microwave Measurements</td>
<td>2</td>
<td>PR: Wireless Circuits Systems Lab.</td>
<td>Concentrates on the theory and applications of modern radio frequency and microwave measurements. Topics include network analyzer, spectrum analyzer, noise, power and non-linear distortion measurements.</td>
</tr>
<tr>
<td>EEL</td>
<td>6426</td>
<td>RF and Microwave Circuits I</td>
<td>3</td>
<td>PR: EEL 4471 and ELR 4316L</td>
<td>Provides an introduction to passive RF/microwave/wireless circuit design. Topics to be covered include distributed transmission line theory, lumped circuit and network analysis, impedance matching, and the design of various microwave components.</td>
</tr>
<tr>
<td>EEL</td>
<td>6427</td>
<td>RF and Microwave Circuits II</td>
<td>3</td>
<td>PR: EEL 6426.</td>
<td>This course presents the design theory and analysis of microwave transistor amplifiers and oscillators. Lectures, homework, and CAD projects develop an understanding of the design and performance issues for this class of circuits.</td>
</tr>
<tr>
<td>EEL</td>
<td>6463</td>
<td>Advanced Antenna Theory</td>
<td>3</td>
<td>PR: EEL 5462.</td>
<td>Electromagnetic radiating systems studied by analytical and numerical methods.</td>
</tr>
<tr>
<td>SUB</td>
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<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>EEL</td>
<td>6486</td>
<td>Electromagnetic Field Theory and Applications</td>
<td>3</td>
<td></td>
<td>Graduate-level course in time varying electromagnetic fields. This course is the basis for further study in wireless systems, antenna theory, power systems, high speed networks or electronics. Low frequency as well as high frequency concepts.</td>
</tr>
<tr>
<td>EEL</td>
<td>6487C</td>
<td>Advanced Electromagnetic Field Theory</td>
<td>3</td>
<td>PR: EEL 6486C</td>
<td>Time harmonic fields emphasizing problems with exact solutions in the rectangular, cylindrical and spherical coordinate systems. Solutions by methods, Green's functions and vector methods.</td>
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<tr>
<td>EEL</td>
<td>6584</td>
<td>RFID and NFC Technologies for IT</td>
<td>3</td>
<td>PR: COP 2270 (or similar)</td>
<td>This course will cover an overview of the state-of-the-art radio frequency identification (RFID) and near field communication (NFC) technologies, basic science behind RF wireless communications, and tools and methods for application deployment.</td>
</tr>
<tr>
<td>EEL</td>
<td>6593</td>
<td>Mobile and Personal Communication</td>
<td>3</td>
<td>PR: EEL 6534.</td>
<td>Characteristics of wireless mobile channels indoor and outdoor; multipath and shadow fading, frequency reuse; micro and pico cells; base-station and portable units. Cell coverage, blocking, and co-channel interference. TDMA, FDMA, CDMA and hybrid approaches to multiple access. Protocols, hand-over. Voice, data, and multi-media over wireless indoor channels.</td>
</tr>
<tr>
<td>EEL</td>
<td>6614</td>
<td>Systems and Control Theory I</td>
<td>3</td>
<td></td>
<td>Analysis of multi-variable linear systems continuous and discrete time, state-space methodology and transfer functions description. Analysis and design of feedback control systems. Effects of plant and measurement noise. Optimal control.</td>
</tr>
<tr>
<td>EEL</td>
<td>6615</td>
<td>Systems and Control Theory II</td>
<td>3</td>
<td>PR: EEL 6614.</td>
<td>Continuation of EEL 6614.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
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<td>HRS</td>
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<tr>
<td>EEL</td>
<td>6630</td>
<td>Digital Control Systems</td>
<td>3</td>
<td>PR: EEL 4657</td>
<td>Review of linear control systems, discrete time linear systems analysis, Z-transforms, modeling and design of digital control systems, digital implementation of analog controller, discrete state space representation, concepts of observability and control.</td>
</tr>
<tr>
<td>EEL</td>
<td>6654</td>
<td>Control Systems Engineering</td>
<td>3</td>
<td>PR: EEL 4657</td>
<td>A course with emphasis on dynamic system modeling, design, analysis, and system verification following systems engineering approaches. The course introduces techniques, applications and trends from a trans/multi/inter/disciplinary perspectives.</td>
</tr>
<tr>
<td>EEL</td>
<td>6722C</td>
<td>DSP/FPGA Laboratory</td>
<td>3</td>
<td>PR: EEL 6502</td>
<td>Development of real-time digital signal processing (DSP) systems from algorithm to hardware using DSP, FPGA and hybrid DSP/FPGA rapid prototyping platforms. The course has both lecture and laboratory components.</td>
</tr>
<tr>
<td>EEL</td>
<td>6728</td>
<td>Intro to VHDL</td>
<td>3</td>
<td></td>
<td>An in-depth study of the VHDL hardware description language with emphasis on digital circuit simulation and digital design for synthesis.</td>
</tr>
<tr>
<td>EEL</td>
<td>6729</td>
<td>Rapid System Prototyping</td>
<td>3</td>
<td></td>
<td>Focus on digital synthesis targeting FPGAs as a way of obtaining rapid prototypes of digital circuits.</td>
</tr>
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<tr>
<td>EEL</td>
<td>6753</td>
<td>Digital Signal Processing III</td>
<td>3</td>
<td>PR: EEE 6502 or EEL 6752</td>
<td>Advanced topics in digital signal processing, e.g., A. adaptive arrays, beam forming and applications to radar and sonar; B. multi-rate filtering, multi-resolution analysis, sub-band analysis, wavelet transforms and applications to images and other large-scale measurements; C. noise cancellation; and D. inverse problems, such as CT reconstruction.</td>
</tr>
<tr>
<td>EEL</td>
<td>6764</td>
<td>Principles Of Computer Architecture</td>
<td>3</td>
<td>PR: CDA 4100</td>
<td>Arithmetic algorithms, CPU speedup techniques, memory hierarchies, virtual memory, input-output. Study of the number systems and the algorithms used for digital arithmetic computation with emphasis on their implementation, speed and reliability considerations.</td>
</tr>
<tr>
<td>EEL</td>
<td>6846</td>
<td>Coding Theory</td>
<td>3</td>
<td>PR: EGN 5423</td>
<td>Error-correcting codes, algebraic block codes, linear codes and feedback shift registers; BCH codes; convolutional codes; burst error correcting codes; arithmetic codes; decoding methods.</td>
</tr>
<tr>
<td>EEL</td>
<td>6908</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
<td>Independent study in which students must have a contract with an instructor.</td>
</tr>
<tr>
<td>EEL</td>
<td>6935</td>
<td>Selected Electrical Topics</td>
<td>1-3</td>
<td></td>
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<tr>
<td>EEL</td>
<td>6936</td>
<td>Special Topics</td>
<td>1-3</td>
<td>PR: EEL 6427</td>
<td>Selected topics.</td>
</tr>
<tr>
<td>EEL</td>
<td>6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EEL</td>
<td>7910</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EEL</td>
<td>7931</td>
<td>ST in Communication</td>
<td>3</td>
<td>PR: EEL 6535</td>
<td>Advanced topics in communications such as synchronization, spread-spectrum communications, fading channels, large constellation signaling schemes, mobile radio, statistical multiplexing, performance measurement, etc.</td>
</tr>
<tr>
<td>EEL</td>
<td>7980</td>
<td>Dissertation: Doctoral</td>
<td>2-19</td>
<td></td>
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<tr>
<td>EES</td>
<td>6107</td>
<td>Biological Principles of Environmental Engineering</td>
<td>3</td>
<td></td>
<td>This course improves the student’s knowledge and problem solving skills with respect to the Biological Principles used by Environmental Engineers to design biological processes. Students will learn about microbial physiology and metabolism.</td>
</tr>
<tr>
<td>EEX</td>
<td>5705</td>
<td>Seminar in Preschool Handicapped</td>
<td>2</td>
<td></td>
<td>Intended to familiarize the education student with the wide range of needs and services of the preschool children with disabilities and their families and how they coordinate with educational services.</td>
</tr>
<tr>
<td>EEX</td>
<td>5752</td>
<td>Working With Families: A Pluralistic Perspective</td>
<td>3</td>
<td>PR: Introductory course in special education</td>
<td>The impact of the socio/cultural environment on the education of at-risk children and children with disabilities; family systems theory, principles of multi-cultural education, strategies for working effectively with families of school-age children, diverse cultures and family structures represented in school populations today.</td>
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<tr>
<td>EEX</td>
<td>6025</td>
<td>Trends and Issues in Special Education</td>
<td>3</td>
<td></td>
<td>Survey of all exceptionalities including current trends and issues related to the field of special education.</td>
</tr>
<tr>
<td>EEX</td>
<td>6051</td>
<td>Creating Positive Learning Environments for Students with Disabilities</td>
<td>6</td>
<td></td>
<td>This course presents an overview of assessment, behavior management, and instructional planning for students with disabilities. It also incorporates content about the historical and legal foundations of special education and theories and research that focus on defining, describing and intervening with students who have learning disabilities, behavior disorders, mild-moderate mental retardation, mild to moderate developmental disabilities, and physical disabilities.</td>
</tr>
<tr>
<td>EEX</td>
<td>6065</td>
<td>Collaborative Transition and Career Planning for Students with Low Incidence Disabilities</td>
<td>3</td>
<td></td>
<td>This course offers an analysis of collaborative, interdisciplinary transition planning strategies and explores issues surrounding the development and use of functional, community-based curriculum for adolescents with severe or profound disabilities.</td>
</tr>
<tr>
<td>EEX</td>
<td>6222</td>
<td>Advanced Psychoeducational Assessment of Exceptional Students</td>
<td>3</td>
<td></td>
<td>Theory and methodology associated with norm-referenced, criterion-referenced, curriculum-based, ecological, and psychoneurological assessment procedures for exceptional students.</td>
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<tr>
<td>EEX</td>
<td>6224</td>
<td>Developing Individualized Educational Programs for Students with Disabilities</td>
<td>6</td>
<td>PR: EEX 6051</td>
<td>This 6-hour course reinforces and extends competencies in assessment, behavior management, legal and ethical foundations of special education, instructional planning, working with families, collaboration, and characteristics of disabilities. Content emphasizes knowledge and skills needed by teachers who are working with students who have mild disabilities and those from diverse cultural, socioeconomic and ethnic areas.</td>
</tr>
<tr>
<td>EEX</td>
<td>6234</td>
<td>Identification and Assessment of Individuals with Low Incidence Intellectual Disabilities and ASD</td>
<td>3</td>
<td></td>
<td>Critical analysis of the processes in place to identify students with severe/profound intellectual disabilities and/or autism spectrum disorder (ASD). Explores curriculum instruction and assessment in a least restrictive environment.</td>
</tr>
<tr>
<td>EEX</td>
<td>6245</td>
<td>Transitional Programming for the Adolescent and Young Adult Exceptional Student</td>
<td>3</td>
<td></td>
<td>Procedures for implementing educational programs with exceptional adolescents. Includes educational programming, alternative programs, community resource coordination, career/occupational education, and advocacy.</td>
</tr>
<tr>
<td>EEX</td>
<td>6247</td>
<td>Implementing Programs for Students with Disabilities</td>
<td>6</td>
<td>PR: EEX 6224.</td>
<td>Course emphasizes instructional approaches for implementing reading, math, language arts and social skills instruction in conjunction with classroom management for students with emotional, learning and/or cognitive disabilities. Majors only. Not repeatable</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>EEX</td>
<td>6248</td>
<td>Instructional Approaches for Exceptional Populations</td>
<td>3</td>
<td></td>
<td>In-depth study of instructional strategies that are effective when teaching students with emotional disturbance, mental retardation, and learning disabilities. Content includes techniques for curriculum adaptation, IEP development; direct, data-based and metacognitive strategy instruction; and micro-computer applications.</td>
</tr>
<tr>
<td>EEX</td>
<td>6307</td>
<td>Qualitative Research in Special Education</td>
<td>3</td>
<td>PR: one graduate level course in research design or methods</td>
<td>Graduate research seminar that introduces students to the philosophies, methods, epistemologies &amp; ethical foundations of qualitative research for those interested in students with disabilities &amp; their families; non restrictive; repeatable for credit.</td>
</tr>
<tr>
<td>EEX</td>
<td>6476</td>
<td>Curriculum and Instruction for Students with Low Incidence Disabilities</td>
<td>3</td>
<td></td>
<td>Analysis of current issues and best practices in assessment for teaching, curriculum content, and instruction for students with severe disabilities and the provision of educational services within inclusive general education settings and home communities.</td>
</tr>
<tr>
<td>EEX</td>
<td>6511</td>
<td>Administration of Exceptional Student Programs</td>
<td>3</td>
<td></td>
<td>Procedures that local, state, and national administrators may use to implement services for exceptional students.</td>
</tr>
<tr>
<td>EEX</td>
<td>6602</td>
<td>Observational Methods and Functional Assessment</td>
<td>3</td>
<td></td>
<td>Provide students with instruction in functional assessment procedures and direct observation methods to be used consistent with the principles of applied behavior analysis in mental health and education settings.</td>
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<tr>
<td>EEX</td>
<td>6612</td>
<td>Management and Motivation of Exceptional and At-Risk Students</td>
<td>3</td>
<td>PR: Introductory course in special education</td>
<td>Available to non-majors. Focuses on approaches to classroom management and motivational strategies when working with exceptional students. Content includes applied behavior analysis techniques, psychoeducational approaches, and social skills training.</td>
</tr>
<tr>
<td>EEX</td>
<td>6619</td>
<td>Positive Behavior Support Low Incid. Intellectual Disab. &amp; ASD</td>
<td>3</td>
<td></td>
<td>Knowledge and skills necessary to develop, implement, and evaluate the impact of positive behavior support for students with s/pintellect. disab and/or autism spectrum disorder. Communicative function of challenging behaviors, teaching new skills &amp; prevention.</td>
</tr>
<tr>
<td>EEX</td>
<td>6706</td>
<td>Education of the Preschool Handicapped Child</td>
<td>3</td>
<td></td>
<td>Education of children ages birth through five with special needs. Basic concepts, curricular intervention strategies, and organizational structures are covered.</td>
</tr>
<tr>
<td>EEX</td>
<td>6732</td>
<td>Consultation and Collaboration in Special Education</td>
<td>3</td>
<td>PR: Introductory course in special education</td>
<td>Theories of consultation and collaboration. Overview of service delivery models in special education.</td>
</tr>
<tr>
<td>EEX</td>
<td>6767</td>
<td>Assistive Technology For Students With Low Incidence</td>
<td>3</td>
<td></td>
<td>This course is an introduction to educational and assistive technology used for instruction of students w/ low incidence disabilities with emphasis on students w/ asd. Strategies for at devices include augmentative/alternative communication systems.</td>
</tr>
<tr>
<td>EEX</td>
<td>6906</td>
<td>Independent Study: Special Education</td>
<td>1-6</td>
<td></td>
<td>Independent study in which students must have a contract with an instructor.</td>
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<tr>
<td>EEX</td>
<td>6939</td>
<td>Advanced Seminar: Paradigms, Practices, and Policies in Special Education</td>
<td>3</td>
<td></td>
<td>An advanced graduate seminar stressing cross-categorical relationships. Topics include research that deals with paradigms for providing service, service models, and legal mandates.</td>
</tr>
<tr>
<td>EEX</td>
<td>6943</td>
<td>Practicum in Exceptional Student Education</td>
<td>1-4</td>
<td></td>
<td>Supervised field work in exceptional student education with children (including preschool handicapped) who have learning disabilities, mental handicaps, emotional and behavioral disabilities, physical disabilities, or multiple disabilities.</td>
</tr>
<tr>
<td>EEX</td>
<td>6971</td>
<td>Thesis: Masters/Educational Specialist</td>
<td>2-19</td>
<td></td>
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<tr>
<td>EEX</td>
<td>7301</td>
<td>Selected Topics in Special Education</td>
<td>1-8</td>
<td>PR: EEX 7341</td>
<td>Identification and study of ethical and research issues in special education. Opportunity will be provided for the student to gather and process data, as appropriate, culminating in a written report and/or oral presentation to fellow student researchers.</td>
</tr>
<tr>
<td>EEX</td>
<td>7341</td>
<td>Research Studies and Their Implications in the Education of Exceptional Children</td>
<td>3</td>
<td>PR: EDF 6431, EDF 6481, or equiv.</td>
<td>This course will involve a study of current research and research methods used in exceptional child education. The transition from theory to practice will be made through the examination and discussion of implications in the field of special education that can be drawn from the research.</td>
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<td>SUB</td>
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<tr>
<td>EEX</td>
<td>7342</td>
<td>Making your Research Accessible</td>
<td>3</td>
<td></td>
<td>This doctoral seminar critically examines performance theories and performance and qualitative arts-based research methods as a mechanism for disseminating research findings and making research more accessible to the community in which it takes place.</td>
</tr>
<tr>
<td>EEX</td>
<td>7346</td>
<td>Crit. Analysis Theories &amp; Research on Instructional Practices</td>
<td>3</td>
<td></td>
<td>This course provides doctoral students with an opportunity to critically examine the research base in SPED instructional practice and make connections to related theories and educational policy.</td>
</tr>
<tr>
<td>EEX</td>
<td>7425</td>
<td>Special Education Leadership Studies</td>
<td>1-2</td>
<td></td>
<td>Introduction to doctoral studies in the Department of Special Education. Discussion forum for new students, mentoring and support.</td>
</tr>
<tr>
<td>EEX</td>
<td>7428</td>
<td>Teacher Education in Special Education: Conceptual</td>
<td>3</td>
<td></td>
<td>This four-semester seminar focuses on teacher education in special education.</td>
</tr>
<tr>
<td>EEX</td>
<td>7429</td>
<td>Special Education Teacher Education</td>
<td>3</td>
<td></td>
<td>This seminar will explore historical foundations of teacher education and special education specifically. Professional development and pathways to teaching will be explored. Existing research in SPED teacher preparation will be reviewed.</td>
</tr>
<tr>
<td>EEX</td>
<td>7516</td>
<td>Critical Analysis of Compensatory, Remedial, Special Education</td>
<td>3</td>
<td></td>
<td>The purpose of this course is to engage students in intensive study of the relationship between social policy and educational services for students who have been marginalized because of disability, race, poverty, and/or native language.</td>
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<tr>
<td>EEX</td>
<td>7743</td>
<td>Philosophies of Inquiry</td>
<td>3</td>
<td>PR: EDF 6481 or Equivalent</td>
<td>The purpose of this course is to introduce doctoral students to different approaches to educational research and to alternative frames for criticism, including postpositivism, constructivism, poststructuralism, pragmatism, critical theory, narrative, race and gender, ethics, and aesthetics.</td>
</tr>
<tr>
<td>EEX</td>
<td>7744</td>
<td>Curriculum and Instructional Issues in Urban Special Education</td>
<td>3</td>
<td></td>
<td>The purpose of this course is to review and critically examine the theoretical and research literature on the interactions of race, culture, class, and disability on the schooling experiences of urban (ethnic minority and impoverished) children and their families. The course also takes into account that ethnic minority and poor children may or may not reside in urban areas and as a result of school and community desegregation movements, those learners may also attend suburban and rural schools, in addition to urban schools. The course will provide varied formats for graduate students to identify and address critical issues and trends in urban special education and related services areas that impact outcomes for minority learners across social classes and impoverished learners from majority cultural backgrounds.</td>
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<tr>
<td>EEX</td>
<td>7745</td>
<td>Historical, Ethical, and Disciplinary Foundations of Special Education</td>
<td>3</td>
<td></td>
<td>Historical, Ethical, and Disciplinary Foundations of Special Education provides doctoral students a critical understanding of the social, political, ethical, and legal contexts that shaped the research, policies, and practices in the field of Special Education during the twentieth century.</td>
</tr>
<tr>
<td>EEX</td>
<td>7746</td>
<td>Ethics in Teacher Education and Teacher Development</td>
<td>3</td>
<td></td>
<td>This course will focus on the philosophical and theoretical perspectives of ethics and ethical decision making as they relate to the roles and responsibilities of teacher educators in the preparation and professional development of teachers.</td>
</tr>
<tr>
<td>EEX</td>
<td>7797</td>
<td>Language and Learning Variability in Urban Schools</td>
<td>3</td>
<td></td>
<td>This seminar explores the opportunities and challenges facing urban schools as cultural identity construction sites by focusing on the experiences of students and their families as well as language, power and politics in education, and social justice.</td>
</tr>
<tr>
<td>EEX</td>
<td>7815</td>
<td>Research Seminar</td>
<td>1-9</td>
<td></td>
<td>This seminar, taken each semester of the first and second years of the doctoral program, will contribute to the development of the skills and values that lead to the creation of new knowledge and its application to the field of special education in order to improve outcomes for students who have disabilities and their families. Issues in urban schools will be emphasized.</td>
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<tr>
<td>EEX</td>
<td>7868</td>
<td>Fieldwork With Exceptional Students</td>
<td>1-5</td>
<td></td>
<td>Practical field experience in curriculum development, classroom teaching, supervision, and/or administrative areas in special education.</td>
</tr>
<tr>
<td>EEX</td>
<td>7910</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
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</tr>
<tr>
<td>EEX</td>
<td>7911</td>
<td>Specialized Study In: Mental Retardation, Behavior Disorders, Specific Learning Disabilities, and Gifted Education</td>
<td>1-8</td>
<td></td>
<td>The specialized study enables advanced exploration of knowledge in an area of interest to the student in special education.</td>
</tr>
<tr>
<td>EEX</td>
<td>7980</td>
<td>Dissertation</td>
<td>2-30</td>
<td></td>
<td></td>
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<tr>
<td>EGI</td>
<td>5051</td>
<td>Nature and Needs of the Gifted</td>
<td>3</td>
<td></td>
<td>This survey course examines the characteristics and educational needs of children and youth who are gifted, including those from special populations. Emphasis is on giftedness as defined historically, nationally and locally. The course also explores changing views of intelligence and talent development related to policy and practice in gifted education as well as the processes of identification and programming.</td>
</tr>
<tr>
<td>EGI</td>
<td>5307</td>
<td>Theory and Development of Creativity</td>
<td>3</td>
<td></td>
<td>Exploration of the concept of creativity, its factors, measurement, and application to education. Opportunities are given to work with children in a laboratory setting and to prepare materials to be used with small groups of children.</td>
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<td>SUB</td>
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<tr>
<td>EGI</td>
<td>6232</td>
<td>Advanced Educational Strategies for the Gifted</td>
<td>3</td>
<td>PR: EGI 5051</td>
<td>Curriculum adjustments, methods and techniques, as well as classroom organizations necessary for teaching students who are gifted will be the focus of this course. Emphasis will also be on curriculum in gifted programs within the context of school reform and restructuring.</td>
</tr>
<tr>
<td>EGI</td>
<td>6415</td>
<td>Consultation, Counseling, and Guidance Skills for Gifted Students</td>
<td>3</td>
<td></td>
<td>Primary emphasis of this course will be to provide an awareness, knowledge, and understanding of the unique guidance and counseling needs of students who are gifted and talented or from special populations.</td>
</tr>
<tr>
<td>EGI</td>
<td>6936</td>
<td>Seminar in Education of the Gifted: Special Population</td>
<td>3</td>
<td></td>
<td>This seminar will provide a critical survey of the research, issues, policy, ethics, and practices related culturally diverse, economically disadvantaged, limited, English proficient, twice exceptional, highly gifted, or very young.</td>
</tr>
<tr>
<td>EGI</td>
<td>6943</td>
<td>Supervised Practicum in Gifted Education</td>
<td>1-12</td>
<td></td>
<td>Planned experiences working with students who are gifted, program development and administration, or an individualized inquiry of a specific issue related to gifted education.</td>
</tr>
<tr>
<td>EGN</td>
<td>5421</td>
<td>Engineering Applications for Vector Analysis</td>
<td>3</td>
<td></td>
<td>Vector methods in electromagnetism and fluid mechanics. Vector operators, line and flux integrals, potential and transport theorems, applications.</td>
</tr>
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<tr>
<td>EGN</td>
<td>5423</td>
<td>Neural Networks and Mathematics for Communication</td>
<td>3</td>
<td></td>
<td>Advanced matrix algorithms: LU and QR factorizations, least-squares, pseudoinverse. Techniques for optimization.</td>
</tr>
<tr>
<td>EGN</td>
<td>5424</td>
<td>Engineering Applications of Complex Analysis</td>
<td>3</td>
<td></td>
<td>Analytic functions, conformal mapping, residue theory, Laurent series, transforms. Applications to various problems in engineering and physics.</td>
</tr>
<tr>
<td>EGN</td>
<td>5940</td>
<td>Professional Engineering Internship</td>
<td>0-6</td>
<td></td>
<td>Professional or interdisciplinary work period in engineering or career-related field.</td>
</tr>
<tr>
<td>EGN</td>
<td>6333</td>
<td>Continuum Mechanics</td>
<td>3</td>
<td></td>
<td>This course covers the fundamental mathematical and physical principles of Newtonian Mechanics as applied to continuous media, including solids &amp; fluids, and complete linear &amp; non-linear description of kinematics and equilibrium in the Lagrangian frame.</td>
</tr>
<tr>
<td>EIN</td>
<td>5174</td>
<td>Total Quality Management Concepts</td>
<td>3</td>
<td></td>
<td>This course will examine the methodology and procedures that companies use to improve quality and its operational benefits, including the management transformation (paradigm shift) that is evolving. Unrestricted. Nonrepeatable for credit.</td>
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<tr>
<td>EIN</td>
<td>5182</td>
<td>Principles of Engineering Management</td>
<td>3</td>
<td></td>
<td>Introduction to the fundamentals of planning, organizing and leadership as needed by engineers, scientists, and other professionals considering managerial positions.</td>
</tr>
<tr>
<td>EIN</td>
<td>5201</td>
<td>Creativity in Technology</td>
<td>3</td>
<td></td>
<td>Designed to aid engineers, and others, re-open the creativity within themselves. It is focused on the student and his/her interests in technology and innovation. Graduate students and senior undergraduates.</td>
</tr>
<tr>
<td>EIN</td>
<td>5275</td>
<td>Work Physiology and Biomechanics</td>
<td>3</td>
<td></td>
<td>Human physiological limitations encountered in design, analysis and evaluation of man-machine systems.</td>
</tr>
<tr>
<td>EIN</td>
<td>5350</td>
<td>Technology and Finance</td>
<td>3</td>
<td></td>
<td>A course for technical managers that focuses on how financial and economic principles are utilized to make technical investments and manage technical enterprises.</td>
</tr>
<tr>
<td>EIN</td>
<td>5452</td>
<td>Engineering a Lean Enterprise</td>
<td>3</td>
<td></td>
<td>Engineering the Lean Enterprise introduces you to one of the most successful strategies in operations: lean manufacturing, as seen at Toyota and other companies. Lean manufacturing is a philosophy that applies both on and off the factory floor.</td>
</tr>
<tr>
<td>EIN</td>
<td>5510</td>
<td>Manufacturing Systems Analysis</td>
<td>3</td>
<td></td>
<td>The study of systems of manufacturing entities such as machine tools, robots, and materials handlers. Emphasis is on mathematical description of integrated systems and system optimization.</td>
</tr>
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<tr>
<td>EIN</td>
<td>6106</td>
<td>Technology and Law</td>
<td>3</td>
<td></td>
<td>Selected topics related to the relationships between and among technology, law and social policy, including governmental regulation, products liability, professional liability, contract negotiation and formation, and developments and trends affecting engineering professionals.</td>
</tr>
<tr>
<td>EIN</td>
<td>6108</td>
<td>EM-Human Relations</td>
<td>3</td>
<td></td>
<td>Human relations, understanding oneself, understanding other people, influencing and motivation performance, improving moral and discipline, and self appraisal and analysis for the technical manager.</td>
</tr>
<tr>
<td>EIN</td>
<td>6112</td>
<td>Information Systems Design for Engineers</td>
<td>3</td>
<td></td>
<td>This course introduces students to the design and implementation of information systems, with special emphasis on industrial applications. The topics to be covered include the relational database model, structured query language, and design methodologies.</td>
</tr>
<tr>
<td>EIN</td>
<td>6121</td>
<td>Technology and Markets</td>
<td>3</td>
<td></td>
<td>Marketing strategy and its relationship to the development of technology from the viewpoint of interaction between the technical enterprise and its industrial and government customers.</td>
</tr>
<tr>
<td>EIN</td>
<td>6145</td>
<td>Project Management</td>
<td>3</td>
<td>PR: EGN 3443 or equivalent.</td>
<td>Provide principles and techniques for planning, scheduling and managing projects in engineering and related environments. Applies analytical tools and techniques including software to solve project management problems. Not restricted. Non-repeatable.</td>
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1017
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<tr>
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<tbody>
<tr>
<td>EIN</td>
<td>6154</td>
<td>Technical Entrepreneurship</td>
<td>3</td>
<td></td>
<td>A comprehensive study of developing and starting an engineering venture. Student teams work out a business plan for a company to develop, manufacture, and distribute a technical product or service.</td>
</tr>
<tr>
<td>EIN</td>
<td>6177</td>
<td>Total Quality Management Seminar</td>
<td>3</td>
<td>PR: EIN 5174.</td>
<td>Study and analysis of TQM Principles through discussion, guest lecturers, critiques of published articles. A variety of quality techniques will be examined to determine their level of adoption and effectiveness. Unrestricted. Nonrepeatable for credit.</td>
</tr>
<tr>
<td>EIN</td>
<td>6178</td>
<td>ISO 9000/14000</td>
<td>3</td>
<td>PR: EIN 5174.</td>
<td>Study and analysis of ISO 9000/14000 publications with a view to understanding the documentation process and auditing process for registration purposes and the relationship to other quality systems and programs. Unrestricted. Nonrepeatable for credit.</td>
</tr>
<tr>
<td>EIN</td>
<td>6179</td>
<td>Advanced TQM Methods: Six Sigma</td>
<td>3</td>
<td>PR: EIN 5174.</td>
<td>This course is a presentation of Six Sigma in industry: details of the methodology that comprise it, and how it relates to Total Quality Management. This course is restricted to students pursuing majors in the IMSE Department. Nonrepeatable for credit.</td>
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<tr>
<td>EIN</td>
<td>6183</td>
<td>Engineering Management Policy And Strategy</td>
<td>3</td>
<td></td>
<td>Strategic planning and policy formulation in technical and scientific organizations. General managers in the middle. Translation of strategic plans into action plans and implementation of the strategic change process. This is a capstone course in the EM program to be taken during the last semester of the student's program.</td>
</tr>
<tr>
<td>EIN</td>
<td>6215</td>
<td>Engineering System Safety</td>
<td>3</td>
<td>PR: Statistics.</td>
<td>The theory and practical implications of the concept of systems safety as these relate to the life cycle of a product or system. Analysis of the fundamental concepts, design implications, and specifications of safety in human machine environments.</td>
</tr>
<tr>
<td>EIN</td>
<td>6216</td>
<td>Occupational Safety Engineering</td>
<td>3</td>
<td></td>
<td>Introduction to the principles of designing, maintaining, and managing a workplace free from hazards. Covers mechanical hazards, fall and lifting hazards, climatic and environmental hazards, fire and explosive hazards, and pressure hazards. Considers design issues, warnings, and personal protective equipment. Term project required.</td>
</tr>
<tr>
<td>EIN</td>
<td>6217</td>
<td>Construction Safety Engineering</td>
<td>3</td>
<td></td>
<td>Course based on OSHA course 510; covers applicable standards to industry's most common violations; examples of accidents resulting from ignoring standards; documented incidents are researched. Completion of course includes receipt of 30-hour OSHA Card.</td>
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<tr>
<td>EIN</td>
<td>6247</td>
<td>Engineering Information Processing</td>
<td>3</td>
<td></td>
<td>A study of human information processing theories and measurement techniques as applied to engineering problems emphasizing perceptual, cognitive, and learning aspects of interpersonal and human-computer communication.</td>
</tr>
<tr>
<td>EIN</td>
<td>6319</td>
<td>Work Design And Productivity Engineering</td>
<td>3</td>
<td></td>
<td>Foundations of motivated work performance, job satisfaction and organizational productivity. Analysis of job content and job context, comparison of different concepts for improving organizational effectiveness; suggestions for productivity improvements through effective work redesign.</td>
</tr>
<tr>
<td>EIN</td>
<td>6336</td>
<td>Production Control Systems</td>
<td>3</td>
<td></td>
<td>Forecasting models, development of production plans, loading and scheduling models and basic inventory models. Use of MRP. Design and evaluation of production control systems.</td>
</tr>
<tr>
<td>EIN</td>
<td>6386</td>
<td>Management of Technological Change</td>
<td>3</td>
<td></td>
<td>A study of problems encountered by managers in the planning, organizing, directing, and controlling of resources in technology-based organizations.</td>
</tr>
<tr>
<td>EIN</td>
<td>6392</td>
<td>New Product Development</td>
<td>3</td>
<td></td>
<td>Course focused on various aspects of the new product development process including market sizing, concept testing, financing, and protecting intellectual property.</td>
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<tr>
<td>EIN</td>
<td>6430</td>
<td>Overview of Regulated Industries</td>
<td>3</td>
<td></td>
<td>This course provides students with basic information on regulated industries, emphasizing challenges experienced in medical device development, manufacture and commercialization with regard to regulatory requirements. Unrestricted. Nonrepeatable.</td>
</tr>
<tr>
<td>EIN</td>
<td>6431</td>
<td>Regulated Quality Systems and Control</td>
<td>3</td>
<td>PR: EIN 6430</td>
<td>This course provides students with information to design quality systems for regulated industries, emphasizing medical device manufacturing. The application of various statistical techniques to the control of industrial processes will be used.</td>
</tr>
<tr>
<td>EIN</td>
<td>6432</td>
<td>Regulated Product Approval Process</td>
<td>3</td>
<td>PR: EIN 6430</td>
<td>The course provides students with information to collaborate effectively with the FDA to navigate the product approval process, emphasizing medical devices. The underlying scientific, regulatory and quality processes for submission will be reviewed.</td>
</tr>
<tr>
<td>EIN</td>
<td>6433</td>
<td>Human Factors Engineering in Medical Devices</td>
<td>3</td>
<td>PR: EIN 6430</td>
<td>The course provides students with information for the ergonomic design and operability of medical devices. These systematic designs are critical in improving the safety of medical devices by reducing the probability of user error.</td>
</tr>
<tr>
<td>EIN</td>
<td>6434</td>
<td>Design Controls for Medical Devices</td>
<td>3</td>
<td>PR: EIN 6430</td>
<td>The course provides students with information to establish procedures to effectively control the design requirements and specifications for medical devices. The design process will be examined to apply the best approaches for verification and validation.</td>
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<tr>
<td>EIN</td>
<td>6435</td>
<td>International Regulations for Medical Devices</td>
<td>3</td>
<td>PR: EIN 6430</td>
<td>The course provides students with information regarding the major global compliance issues related to medical devices. The initiatives of the Global Harmonization Task Force to facilitate international trade without compromising safety will be explored.</td>
</tr>
<tr>
<td>EIN</td>
<td>6518</td>
<td>Systems Integration</td>
<td>3</td>
<td></td>
<td>The planning and process that results integration of components, various functions, organizations and how integrated work together or share resources to produce an integrated system.</td>
</tr>
<tr>
<td>EIN</td>
<td>6520</td>
<td>Systems Modeling and Performance Analysis</td>
<td>3</td>
<td></td>
<td>This course is a course in modeling and performance analysis of systems. We will study both discrete and continuous systems, with an emphasis on modeling, performance analysis and control of these systems.</td>
</tr>
<tr>
<td>EIN</td>
<td>6934</td>
<td>Special Industrial Topics I</td>
<td>1-3</td>
<td>PR: EIN 6430</td>
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<tr>
<td>EIN</td>
<td>6935</td>
<td>Special Industrial Topics II</td>
<td>1-3</td>
<td></td>
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<tr>
<td>EIN</td>
<td>6936</td>
<td>Special Industrial Topics III</td>
<td>1-3</td>
<td></td>
<td></td>
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<tr>
<td>EIN</td>
<td>6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td></td>
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<tr>
<td>ELD</td>
<td>6015</td>
<td>Advanced Theories and Practices in Specific Learning Disabilities</td>
<td>3</td>
<td>PR: Introductory course in exceptional child education</td>
<td>Various conceptual and/or theoretical models are reviewed; current trends and issues related to education of children with specific learning disabilities.</td>
</tr>
<tr>
<td>ELD</td>
<td>6147</td>
<td>Educational Strategies for Student With Specific Learning Disabilities</td>
<td>3</td>
<td>PR: ELD 6015, EEX 6222</td>
<td>Advanced educational procedures and materials development for the student with specific learning disabilities. For certification.</td>
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<td>EMA</td>
<td>5326</td>
<td>Corrosion Control</td>
<td>3</td>
<td>PR: EGN 3365.</td>
<td>Provide understanding of corrosion fundamentals. Introduce design for</td>
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<td>corrosion detection, protection, and control. Acquire research project</td>
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<td></td>
<td>experience.</td>
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<tr>
<td>EMA</td>
<td>6001</td>
<td>Advance Materials</td>
<td>3</td>
<td></td>
<td>Principles of structure, structure modification and properties of materials</td>
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<td>with emphasis on structure-property relationships and modern theory of</td>
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<td></td>
<td></td>
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<td>solids.</td>
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<tr>
<td>EMA</td>
<td>6510</td>
<td>Characterization of</td>
<td>3</td>
<td></td>
<td>Designed to help students engineers and technicians who have little to</td>
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<td></td>
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<td>Materials</td>
<td></td>
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<td>moderate background in materials analysis to realize and or gain and deeper</td>
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<td>understanding of the many analytical characterization methods available.</td>
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<tr>
<td>EME</td>
<td>5403</td>
<td>Computers in Education</td>
<td>3</td>
<td></td>
<td>A survey course designed to introduce practicing teachers to microcomputer</td>
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<td>technology and its function in the classroom to augment the teaching and</td>
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<td>learning processes. Objectives include the use and evaluation of</td>
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<td>educational software, classroom use of computers, instructional computing</td>
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<td>research, generic applications software (word processors, database</td>
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<td>managers, etc.), programming, disk operating systems, and microcomputer</td>
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<td></td>
<td>hardware.</td>
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<tr>
<td>EME</td>
<td>6053</td>
<td>Internet in Education</td>
<td>3</td>
<td></td>
<td>The course is completely online. Topics include: educational resources,</td>
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<td>copyright and safety issues, webpage construction (HTML), and evaluation</td>
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<td>of websites.</td>
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<tr>
<td>EME</td>
<td>6055</td>
<td>Current Trends in Instructional Technology</td>
<td>3</td>
<td></td>
<td>Development of concepts, strategies, and materials for the use of computer technology in the enhancement of instruction. The course explores the impact that computer technology can have on the nature of the teaching/learning process.</td>
</tr>
<tr>
<td>EME</td>
<td>6207</td>
<td>Web Design</td>
<td>3</td>
<td></td>
<td>This course focuses on the design and development of instructional and informational web sites.</td>
</tr>
<tr>
<td>EME</td>
<td>6208</td>
<td>Interactive Media</td>
<td>3</td>
<td></td>
<td>Focuses on the design, development, and implementation of interactive media in instructional settings. Examples include interactive presentations, digital audio &amp; video, digital photography, virtual worlds, as well as basic web publishing.</td>
</tr>
<tr>
<td>EME</td>
<td>6209</td>
<td>Digital Video</td>
<td>3</td>
<td></td>
<td>This course addresses concepts issues and practices associated with creating effective instructional DVD videos. Included in the course topics are production mgmt, storyboarding, camera lighting techniques, editing, graphics, hardware systems.</td>
</tr>
<tr>
<td>EME</td>
<td>6215</td>
<td>Instructional Graphics</td>
<td>3</td>
<td></td>
<td>Advance knowledge and application of the principles underlying the design and use of graphics in instructional settings.</td>
</tr>
<tr>
<td>EME</td>
<td>6235</td>
<td>Technology Project Management</td>
<td>3</td>
<td>PR: EDF 6284</td>
<td>Introduction to the basic processes of project management for instructional design projects. Students will be introduced to organizational issues, methods of planning, and techniques for managing the business and creative processes.</td>
</tr>
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<tr>
<td>EME</td>
<td>6425</td>
<td>Technology For School Management</td>
<td>3</td>
<td></td>
<td>This course provides information and skills necessary for administrators and teachers to effectively use the computer and application software to manage information. Students use programs such as word processors, database managers, and spreadsheets to facilitate management tasks at the school and classroom level. In addition, general computer education topics are covered which provide for the computer literacy of school administrators.</td>
</tr>
<tr>
<td>EME</td>
<td>6457</td>
<td>Distance Learning</td>
<td>3</td>
<td></td>
<td>This online course about distance learning is designed to provide an integrated framework to explore theory within practice. The course will explore all types of distance and distributed learning—not just online learning.</td>
</tr>
<tr>
<td>EME</td>
<td>6613</td>
<td>Development of Technology-Based Instruction</td>
<td>3</td>
<td>PR: EDF 6284</td>
<td>Application of computer-based instructional design principles to the development of technology-based instruction. This course also incorporates state-of-the-art materials and methods involving digital technologies.</td>
</tr>
<tr>
<td>EME</td>
<td>6906</td>
<td>Independent Study in Instructional Technology</td>
<td>1-6</td>
<td></td>
<td>Independent study under the direction of an IT faculty member. Student must have contract with instructor.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
<td>DESCRIPTION</td>
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<tr>
<td>EME</td>
<td>6930</td>
<td>Programming Languages for Education</td>
<td>3</td>
<td></td>
<td>Development of concepts, strategies, and materials for using programming languages in educational settings. Separate sections will focus on different programming languages such as LOGO, BASIC, Hyperscripting, Pascal, Advanced Pascal.</td>
</tr>
<tr>
<td>EME</td>
<td>6936</td>
<td>Applications of Computers as Educational Tools</td>
<td>3</td>
<td></td>
<td>Selected topics in the application of computing and related technology to the teaching and learning processes. Separate sections will focus on topics such as telecommunications, image and sound processing, interactive media, artificial intelligence, data acquisition, and information systems.</td>
</tr>
<tr>
<td>EME</td>
<td>6971</td>
<td>Thesis: Masters/Ed. Specialist</td>
<td>2-9</td>
<td></td>
<td>The purpose of the thesis/project(Education Specialist student requirement)is to provide an opportunity for the student to apply knowledge gained in the program to the resolution of significant needs arising from professional practice.</td>
</tr>
<tr>
<td>EME</td>
<td>7458</td>
<td>Research in Distance Learning</td>
<td>3</td>
<td></td>
<td>An on-line course about distance learning designed to provide an integrated framework to explore theory within practice. Topics include distance technologies; implications for teaching and learning; issues and trends; and research.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
<td>DESCRIPTION</td>
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<tr>
<td>EME</td>
<td>7615</td>
<td>Instructional Game Design for eBooks</td>
<td>3</td>
<td></td>
<td>Instructional design and development of games in eBooks to promote reading comprehension, analysis of existing research and participation in new research on games to promote reading comprehension. Focus is games for eBooks for web and portable devices.</td>
</tr>
<tr>
<td>EME</td>
<td>7631</td>
<td>Research in Technology Project Management</td>
<td>3</td>
<td>PR: EDF 6284</td>
<td>A graduate level course that examines project management and provides tools and process to apply sound project management principles to the field of instructional design and technology. Topics include project management issues related to time, resources, technical, and people skills.</td>
</tr>
<tr>
<td>EME</td>
<td>7910</td>
<td>Directed Research in Instructional Technology</td>
<td>1-19</td>
<td></td>
<td>This course permits a doctoral student to conduct advanced research and to pursue specific areas of interest with a faculty member as supervisor. A contract is required with the faculty member. S/U.</td>
</tr>
<tr>
<td>EME</td>
<td>7938</td>
<td>Computer-Augmented Instructional Paradigms in Education</td>
<td>3</td>
<td></td>
<td>Seminar examining theory and application of computers and related technology in teaching and learning.</td>
</tr>
<tr>
<td>EME</td>
<td>7939</td>
<td>Research in Technology-Based Education</td>
<td>3</td>
<td></td>
<td>Seminar examining in-depth research on the uses of computers and related technology on teaching and learning. Also includes investigation on role of computers and related technology as research instrumentation.</td>
</tr>
<tr>
<td>EME</td>
<td>7980</td>
<td>Dissertation</td>
<td>2-30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
<td>DESCRIPTION</td>
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<tr>
<td>EML</td>
<td>4421</td>
<td>Internal Combustion Engines</td>
<td>3</td>
<td>PR: EGN 3343 and EML 3500, both</td>
<td>This course is for the application of thermodynamics, chemistry, dynamics of machinery, electronics and fluid mechanics. Topics covered are: introduction of engines, fuels and combustion, numerical modeling, ignition, fuel systems, balance of reciprocating mechanisms and emission control of exhaust pollutants.</td>
</tr>
<tr>
<td>EML</td>
<td>6105</td>
<td>Advanced Thermodynamics and Statistical Mechanics</td>
<td>3</td>
<td></td>
<td>Topics in classical thermodynamics, some elementary subjects in statistical mechanics and some applications in combustion.</td>
</tr>
<tr>
<td>EML</td>
<td>6154</td>
<td>Advanced Conduction Analysis</td>
<td>3</td>
<td>PR: EML 4124, EML 3041</td>
<td>Multi-dimensional heat transfer. Emphasis on solution techniques, exact and numerical.</td>
</tr>
<tr>
<td>EML</td>
<td>6157</td>
<td>Radiation</td>
<td>3</td>
<td>PR: EML 4124</td>
<td>Review of basic principles of radiation, grey bodies and real surfaces, calculation of shape factors, absorbing gases.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
<td>DESCRIPTION</td>
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<tr>
<td>EML</td>
<td>6232</td>
<td>Composite Laminated Materials</td>
<td>3</td>
<td>PR: EML 3500</td>
<td>Fundamental relationships for predicting the mechanical and thermal response of multi-layered materials and structures. Micromechanical and macromechanical relationships are developed for laminated materials with emphasis on continuous filament. Material, structural and strength optimization to design laminated composite materials using user-friendly software.</td>
</tr>
<tr>
<td>EML</td>
<td>6273</td>
<td>Advanced Dynamics of Machinery</td>
<td>3</td>
<td>PR: EML 3624</td>
<td>Detailed study of velocities, accelerations and forces in machines with parts having rotating, reciprocating, and combined motion.</td>
</tr>
<tr>
<td>EML</td>
<td>6290</td>
<td>Micro and Nano Manufacturing</td>
<td>3</td>
<td>PR: EGN 3365.</td>
<td>Covers the fundamental understanding of design, fabrication, and applications of microelectromechanical systems (MEMS) and nanomanufacturing processes including sensing and actuation of mechanical, optical and microfluidic devices.</td>
</tr>
<tr>
<td>EML</td>
<td>6594</td>
<td>Haptics</td>
<td>3</td>
<td>PR: EML 3041, EML 4312.</td>
<td>Course covers the theory and implementation of haptic interfaces and rendering, teleoperation, modeling, control and stability of feedback for robotic systems and virtual environments, and introduces the related human haptic sensing capabilities.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>EML</td>
<td>6653</td>
<td>Applied Elasticity</td>
<td>3</td>
<td>PR: EML 3500</td>
<td>Students will apply the fundamentals of elasticity to engineering problems. Practical problems will be solved and advantages of using particular methods will be illustrated.</td>
</tr>
<tr>
<td>EML</td>
<td>6713</td>
<td>Advanced Fluid Mechanics</td>
<td>3</td>
<td></td>
<td>Introduction to computational problem solutions in fluid mechanics and heat and mass transfer as applied to mechanical engineering. The emphasis is on the formulation and solution of computational engineering problems.</td>
</tr>
<tr>
<td>EML</td>
<td>6801</td>
<td>Robotic Systems</td>
<td>3</td>
<td></td>
<td>Overview of existing industrial and specialized robot types and operation; vision systems; tactile sensors; ranging and proximity techniques; actuation/transmission methods; power sources; autonomous vehicle mobility and navigation methods; and artificial intelligence.</td>
</tr>
<tr>
<td>EML</td>
<td>6808</td>
<td>Mechanics and Control of Robotic Manipulators</td>
<td>3</td>
<td></td>
<td>The purpose of this course is to understand the mechanics and control of robot manipulators. Topics include: Spatial descriptions and transformations; manipulator kinematics; manipulator dynamics; path planning and trajectory generation; position and force control implementation.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
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<td>PREREQUISITES</td>
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<tr>
<td>EML</td>
<td>6907</td>
<td>Independent Study</td>
<td>1-6</td>
<td></td>
<td>Independent study in which students must have a contract with an instructor.</td>
</tr>
<tr>
<td>EML</td>
<td>6930</td>
<td>Special Problems I</td>
<td>1-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EML</td>
<td>6931</td>
<td>Special Problems II</td>
<td>1-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EML</td>
<td>6971</td>
<td>Thesis: Master's</td>
<td>2-6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EML</td>
<td>7915</td>
<td>Directed Research</td>
<td>1-6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EML</td>
<td>7980</td>
<td>Dissertation: Doctoral</td>
<td>2-12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EMR</td>
<td>6052</td>
<td>Advanced Theories and Practices in Mental Retardation</td>
<td>3</td>
<td>PR: introductory course in exceptional student education.</td>
<td>In-depth study of the complex social and biological aspects of mental retardation with particular reference to effects on education.</td>
</tr>
<tr>
<td>EMR</td>
<td>6255</td>
<td>Educational Strategies for the Mentally Retarded</td>
<td>3</td>
<td></td>
<td>In-depth study of the specific curriculum and methodological problems in teaching students with mental retardation. For certification.</td>
</tr>
<tr>
<td>ENC</td>
<td>6261</td>
<td>Professional and Technical Communication</td>
<td>3</td>
<td></td>
<td>We’ll engage with Professional writing as a workplace practice, as a theoretical locus, as a historical object, a protean disciplinary endeavor that spans several departments, and a pedagogical practice.</td>
</tr>
<tr>
<td>ENC</td>
<td>6319</td>
<td>Scholarly Writing for Publication in English Studies</td>
<td>3</td>
<td></td>
<td>Methods of writing and publishing scholarly articles, monographs, and textbooks in rhetoric and composition, literary scholarship, and criticism. Required for Literature majors.</td>
</tr>
<tr>
<td>SUB</td>
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<td>TITLE</td>
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<td>PREREQUISITES</td>
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<tr>
<td>ENC</td>
<td>6333</td>
<td>Contemporary Rhetorics</td>
<td>3</td>
<td></td>
<td>This course examines the impact of postmodern theories on theory and practice of rhetoric &amp; particularly the rhetoric of rhetoric and composition. The course examines ways post modern rhetoric lends itself to the developing media and complexity theory.</td>
</tr>
<tr>
<td>ENC</td>
<td>6336</td>
<td>Studies in the History of Rhetoric</td>
<td>3</td>
<td></td>
<td>Examines the evolving relationship between rhetoric and composition from antiquity to the present.</td>
</tr>
<tr>
<td>ENC</td>
<td>6421</td>
<td>Studies in Rhetoric and Technology</td>
<td>3</td>
<td></td>
<td>Examines the intersection of Rhetoric and technology, with emphasis on contemporary critical issues in composition studies.</td>
</tr>
<tr>
<td>ENC</td>
<td>6422</td>
<td>New Media Production</td>
<td>3</td>
<td></td>
<td>Beyond familiarity with the ethical and epistemological implications of new media, 21st century rhetoricians require knowledge of new media communicative tools and techniques. They include html, css, javascript, blogging, podcasting, vblogging, and Flash.</td>
</tr>
<tr>
<td>ENC</td>
<td>6700</td>
<td>Studies in Composition Theory</td>
<td>3</td>
<td></td>
<td>Major theories and models of composing. Selected theorists include Rohman, Emig, Sommers, Flowers, and Hayes.</td>
</tr>
<tr>
<td>ENC</td>
<td>6720</td>
<td>Studies in Composition Research</td>
<td>3</td>
<td></td>
<td>Examines and evaluates a broad range of important research studies conducted in composition and a variety of research techniques such as descriptive statistics, qualitative research design, and measurement and evaluation. Instruction in how to conduct composition research.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>ENC</td>
<td>6740</td>
<td>Theory and Development of Writing Programs</td>
<td>3</td>
<td></td>
<td>Operating theories of and administrative procedures for implementing writing programs on various levels; focuses on remedial, freshman, advanced, and technical writing programs as well as writing centers.</td>
</tr>
<tr>
<td>ENC</td>
<td>6745</td>
<td>Teaching Practicum</td>
<td>3</td>
<td></td>
<td>To supplement and deepen theoretical and practical experiences during the first teaching semester. To combine and apply different theoretical approaches to teaching writing in actual classroom practice.</td>
</tr>
<tr>
<td>ENG</td>
<td>6005</td>
<td>Scholarly Research and Writing</td>
<td>3</td>
<td></td>
<td>PhD students will improve their skills with advanced research methods in preparation for writing the prospectus and dissertation, work on conference papers and journal articles, and research the job market and the challenges that face new faculty.</td>
</tr>
<tr>
<td>ENG</td>
<td>6009</td>
<td>Introduction to Graduate Study</td>
<td>3</td>
<td></td>
<td>New graduate students will read about the discipline, learn the methods of scholarly research and inquiry, and adjust their academic skills for graduate-level work. The course will also introduce them to some key research databases and resources.</td>
</tr>
<tr>
<td>ENG</td>
<td>6018</td>
<td>Studies in Criticism and Theory I</td>
<td>3</td>
<td></td>
<td>This course examines selected controversies in literary criticism and scholarship from the classical period to 1800, including problems of imitation, the quarrel between Ancients and Moderns, the ethics of the imagination, and the roles of women critics.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>ENG</td>
<td>6019</td>
<td>Studies in Criticism and Theory II</td>
<td>3</td>
<td></td>
<td>This course focuses on important trends in contemporary literary criticism with the major theoretical texts that inform these trends.</td>
</tr>
<tr>
<td>ENG</td>
<td>6067</td>
<td>History of the English Language</td>
<td>3</td>
<td></td>
<td>This course traces the evolution of the English Language from its early Germanic and Scandinavian roots to its emergence in time as tantamount to a universal language. The course uses literary works to show the stages of dramatic change.</td>
</tr>
<tr>
<td>ENG</td>
<td>6145</td>
<td>Rogue Cinema</td>
<td>3</td>
<td></td>
<td>Examine films by revolutionary filmmakers who have deviated significantly and strategically from earlier traditions, considering how these filmmakers challenged cinematic, intellectual, aesthetic, and cultural codes beginning in 1915.</td>
</tr>
<tr>
<td>ENG</td>
<td>6916</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td>Intensive small-group discussion as well as shared and individual guided research in one of the student's areas of concentration.</td>
</tr>
<tr>
<td>ENG</td>
<td>6939</td>
<td>Graduate Seminar in English</td>
<td>3</td>
<td></td>
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<tr>
<td>ENG</td>
<td>6946</td>
<td>Internship</td>
<td>3</td>
<td></td>
<td>This course consists of supervised work-and-learning experience in professional and technical communication or related fields under the direction of a University faculty member and an employee of a participating firm.</td>
</tr>
<tr>
<td>ENG</td>
<td>6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG</td>
<td>7916</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td></td>
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<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
<td>DESCRIPTION</td>
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<tr>
<td>ENG</td>
<td>7939</td>
<td>Doctoral Seminar</td>
<td>1</td>
<td></td>
<td>Individual guided research in a student's area of doctoral specialty.</td>
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<td>Restricted to majors. Repeatable once for credit (total of 2 credits)</td>
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<td></td>
<td>counting as requirements toward the degree.</td>
</tr>
<tr>
<td>ENG</td>
<td>7980</td>
<td>Dissertation: Doctoral</td>
<td>2-19</td>
<td></td>
<td>A study of Old English language,</td>
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<td></td>
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<td>prose style, poetry.</td>
</tr>
<tr>
<td>ENL</td>
<td>6206</td>
<td>Studies in Old English</td>
<td>3</td>
<td></td>
<td>A study of Old English language,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>prose style, poetry.</td>
</tr>
<tr>
<td>ENL</td>
<td>6216</td>
<td>Studies in Middle English</td>
<td>3</td>
<td></td>
<td>Selected focused studies in language and in various authors and writings,</td>
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<tr>
<td></td>
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<td></td>
<td>1100-1500; Chaucer, the Pearl poet, Everyman, ballads, drama.</td>
</tr>
<tr>
<td>ENL</td>
<td>6226</td>
<td>Studies in Sixteenth-Century British</td>
<td>3</td>
<td></td>
<td>Selected focused studies in sixteenth-century British literature;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Literature</td>
<td></td>
<td></td>
<td>Shakespeare, Sidney, Spenser, Marlowe, and others.</td>
</tr>
<tr>
<td>ENL</td>
<td>6228</td>
<td>Studies in Seventeenth-Century British</td>
<td>3</td>
<td></td>
<td>Selected focused studies in British literature, 1600-1660; Bacon,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Literature</td>
<td></td>
<td></td>
<td>Donne, Jonson, Herbert, Milton, and others.</td>
</tr>
<tr>
<td>ENL</td>
<td>6236</td>
<td>Studies in Restoration and Eighteenth-</td>
<td>3</td>
<td></td>
<td>Selected focused studies in Restoration and Eighteenth-Century British</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Century British Literature</td>
<td></td>
<td></td>
<td>literature: Dryden, Defoe, Pope, Swift, Fielding, Sheridan, Johnson,</td>
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<td></td>
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<td></td>
<td>Boswell, and others.</td>
</tr>
<tr>
<td>ENL</td>
<td>6246</td>
<td>Studies of the English Romantic Period</td>
<td>3</td>
<td></td>
<td>A study of pre-Romantic and Romantic prose, fiction, nonfiction,</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>and poetry.</td>
</tr>
<tr>
<td>ENL</td>
<td>6256</td>
<td>Studies in Victorian Literature</td>
<td>3</td>
<td></td>
<td>A study of Victorian poetry, fiction, non-fictional prose, and drama.</td>
</tr>
<tr>
<td>ENL</td>
<td>6276</td>
<td>Studies in Modern British Literature</td>
<td>3</td>
<td></td>
<td>A study of Irish and English drama,</td>
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<td>the modern novel, poetry, criticism, and the short story.</td>
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<td>ENT</td>
<td>6016</td>
<td>New Venture Formation</td>
<td>3</td>
<td>PR: ACG 6025, MAR 6815</td>
<td>An introductory entrepreneurship course. Students learn to develop venture ideas, evaluate venture opportunities and understand financial, marketing, and managerial needs of a venture.</td>
</tr>
<tr>
<td>ENT</td>
<td>6116</td>
<td>Business Plan Development</td>
<td>3</td>
<td>PR: ACG 6025, MAR 6815</td>
<td>Course is designed to enable students to prepare and present a business/venture plan. Students can prepare a plan for their own venture or a client organization.</td>
</tr>
<tr>
<td>ENT</td>
<td>6119</td>
<td>Mergers and Acquisitions: An Entrepreneurial Perspective</td>
<td>3</td>
<td>PR: Completion of Entrepreneurship core or business foundation courses in accounting, finance, and marketing (ACG 6026, FIN 6406, MAR 6815 or equivalents)</td>
<td>This course introduces students to the serious professional art and science of doing successful deals. Students are introduced to all aspects and stages of the merger/acquisition process and how to effectively manage the inherent challenges.</td>
</tr>
<tr>
<td>ENT</td>
<td>6126</td>
<td>Strategies in Technology Entrepreneurship</td>
<td>3</td>
<td></td>
<td>Students will learn that entrepreneurial opportunities are both identified in the existing socioeconomic environment and created through innovation. Students will learn theory based models and their application through case studies and a final project.</td>
</tr>
<tr>
<td>ENT</td>
<td>6186</td>
<td>Strategic Market Assessment</td>
<td>3</td>
<td></td>
<td>This course is designed to enable the student to gain an in-depth understanding of the techniques used to analyze market opportunities for new inventions and intellectual properties.</td>
</tr>
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<tr>
<td>ENT</td>
<td>6415</td>
<td>Fundamentals of Venture Capital and Private Equity</td>
<td>3</td>
<td></td>
<td>The purpose of the course is to convey five primary areas of knowledge: learning to think like an investor, the capital raising process, how to perform business valuations, securities law, and what venture capitalists do.</td>
</tr>
<tr>
<td>ENT</td>
<td>6606</td>
<td>New Product Development</td>
<td>3</td>
<td></td>
<td>This course is designed to prepare both business and engineering students to contribute to the development of strategies and tasks relevant to new product introductions. The skills developed will enable students to analyze and develop product strategies.</td>
</tr>
<tr>
<td>ENT</td>
<td>6930</td>
<td>Special Topics in Entrepreneurship</td>
<td>3</td>
<td></td>
<td>A special topics section for students pursuing their MS in Entrepreneurship and Applied Technology. Faculty will periodically offer elective courses on topics of interest.</td>
</tr>
<tr>
<td>ENT</td>
<td>6947</td>
<td>Advanced Topics in Entrepreneurship</td>
<td>3</td>
<td></td>
<td>Provides students the opportunity to apply the skills and knowledge acquired in previous entrepreneurship courses. Students gain practical experience through an internship or writing a business plan.</td>
</tr>
<tr>
<td>ENV</td>
<td>5103</td>
<td>Air Pollution Control</td>
<td>3</td>
<td>PR: EGN 3353.</td>
<td>Behavior and effects of atmospheric contaminants and the principles of making measurements in the air environment. Basic concepts of meteorology and control technology are discussed. Regulatory aspects and air pollution standards are covered.</td>
</tr>
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<tr>
<td>ENV</td>
<td>5334</td>
<td>Hazardous Waste Management and Remedial Action</td>
<td>3</td>
<td>PR: ENV 5345 and one of the following: ENV 6347, ENV 6519, ENV 6558;</td>
<td>Introduction to hazardous waste management and remediation: RCRA regulatory concepts, definitions, aspects of hazardous waste management from within the plant to final disposal. History of hazardous waste cleanup leading to CERCLA and its amendments, site investigations; site control; those aspects of treatment that are unique to remedial action.</td>
</tr>
<tr>
<td>ENV</td>
<td>5345</td>
<td>Solid Waste Control</td>
<td>3</td>
<td></td>
<td>Introduction to solid waste management, including its definition as an umbrella for hazardous waste: regulatory concepts; waste types, quantities, and characterization; collection and recycling; facility siting; disposal; thermal treatment.</td>
</tr>
<tr>
<td>ENV</td>
<td>5504C</td>
<td>Environmental Engineering Processes</td>
<td>3</td>
<td>PR: ENV 4001, ENV 4004L, ENV 4417</td>
<td>Theory, experimental investigation, and modeling of operations and processes in engineered and natural systems. Laboratory evaluation of unit operations and process used in water and wastewater treatment including chlorination, activated carbon adsorption, biological treatment, gas/liquid mass transfer, filtration, coagulation, flocculation, and settling. This course is restricted to majors, has no external laboratory section associated with the course, is not available on an S/U basis only, is not cross-listed with another department or college.</td>
</tr>
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<tr>
<td>ENV</td>
<td>6002</td>
<td>Physical and Chemical Principles in Environmental Engineering</td>
<td>3</td>
<td></td>
<td>Investigates how chemical properties, physical processes, and environmental characteristics all influence the fate and transport of chemicals in natural and engineered systems. Includes theory, practical examples, and laboratory experiments.</td>
</tr>
<tr>
<td>ENV</td>
<td>6105</td>
<td>Air Pollution Fundamentals</td>
<td>3</td>
<td>PR: College calculus, college chemistry.</td>
<td>A graduate level survey of air pollution fundamentals, including physics/chemistry of air pollution, sources and emissions estimation, Gaussian dispersion models, exposures and effects, measurement/monitoring, and management/control.</td>
</tr>
<tr>
<td>ENV</td>
<td>6337</td>
<td>Environmental Site Assessment</td>
<td>3</td>
<td></td>
<td>All of the fundamental elements of Environmental Site Assessments, including a review of pertinent laws and regulations, the process of interviews, file reviews, and the site reconnaissance, through the use of procedures based on the Scientific Method.</td>
</tr>
<tr>
<td>ENV</td>
<td>6438</td>
<td>Physical &amp; Chemical Processes for Treatment of Drinking Water</td>
<td>3</td>
<td></td>
<td>Theory, analysis, and design of physical and chemical processes typically used for treatment of U.S. public water supply.</td>
</tr>
<tr>
<td>ENV</td>
<td>6510</td>
<td>Sustainable Development Engineering</td>
<td>3</td>
<td></td>
<td>Study of the application of appropriate and sustainable engineering solutions and technology to control environmental pollutants found in a developing world setting and smaller communities in North America.</td>
</tr>
<tr>
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<tr>
<td>ENV</td>
<td>6518</td>
<td>Environmental Field Sampling</td>
<td>3</td>
<td></td>
<td>This course is designed to provide students with an interest in the field of environmental science/engineering, with the highest level of practical, hands-on environmental field training to help them advance their careers.</td>
</tr>
<tr>
<td>ENV</td>
<td>6519</td>
<td>Physical and Chemical Processes for Groundwater Remediation</td>
<td>3</td>
<td>PR: ENV 6666</td>
<td>Theory and design of processes used in advanced water and wastewater treatment, including membrane processes, absorption, electrodialysis, ozonation, irradiation.</td>
</tr>
<tr>
<td>ENV</td>
<td>6539</td>
<td>Sludge Treatment &amp; Disposal</td>
<td>3</td>
<td>PR: ENV 6667</td>
<td>Examines the physical, chemical, and biological unit operations and processes utilized in treating and disposing of sludges produced at water and wastewater treatment facilities.</td>
</tr>
<tr>
<td>ENV</td>
<td>6564</td>
<td>Environmental Engineering Design</td>
<td>3</td>
<td>PR: ENV 6002, EES 6107</td>
<td>An engineering design experience for Environmental Engineering graduate students. Students will work in teams on real world design projects in water or wastewater treatment.</td>
</tr>
<tr>
<td>ENV</td>
<td>6614</td>
<td>Quantitative Environmental Risk Analysis</td>
<td>3</td>
<td></td>
<td>Quantitative approach to the determination of risk. Focus is on environmental and control and protection, but techniques apply widely. Covers assessment of risk factors, failure, contaminant transport, and health effects. Includes discussion of significance, implementation, and policy. Course project involves the development of small risk analysis model.</td>
</tr>
<tr>
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<tr>
<td>ENV</td>
<td>6617</td>
<td>Green Engineering for Sustainability</td>
<td>3</td>
<td></td>
<td>Offers an overview of principles of green engineering including innovation, inherency, interdisciplinary, integration, and international, with an emphasis on applications of green engineering principles in different design stages.</td>
</tr>
<tr>
<td>ENV</td>
<td>6666</td>
<td>Aquatic Chemistry</td>
<td>3</td>
<td></td>
<td>An introduction to the form, structure, and chemical activities of the important processes essential to treatment of domestic and industrial wastewater.</td>
</tr>
<tr>
<td>ENV</td>
<td>6667</td>
<td>Environmental Biotechnology</td>
<td>3</td>
<td></td>
<td>Study of biochemical relations and processes in treatment of pollutants with emphasis on control of effluents for the protection of water quality.</td>
</tr>
<tr>
<td>ENY</td>
<td>5505C</td>
<td>Aquatic Entomology</td>
<td>4</td>
<td>CPR: PCB 3023 or PCB 3043 or PCB 3063 or PCB 3712 and CHM 2211.; PR: ENY 3004C and CHM 2210 and MAC 1105 or higher-level MAC course</td>
<td>Taxonomy, development, and ecology of aquatic insects with emphasis on local forms. Fieldwork required. Lecture and Laboratory.</td>
</tr>
<tr>
<td>EPD</td>
<td>5051</td>
<td>Advanced Theories in Motor and Physical Disabilities</td>
<td>3</td>
<td>PR: EEX 4012</td>
<td>Biological and functional aspects of motor and physical health disabilities, including dysfunctions in central nervous system covering motor, sensory, language and psychological disorders.</td>
</tr>
<tr>
<td>EPD</td>
<td>5321</td>
<td>Educational Strategies for Physically and Multi-handicapped Students</td>
<td>3</td>
<td>PR: EPD 5051.</td>
<td>Educational management of students with cerebral palsy, motor disabilities and multihandicapped conditions including rehabilitation and other community services.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>EPD</td>
<td>6944</td>
<td>Supervised Practicum in Motor Disabilities</td>
<td>3-12</td>
<td>PR: EEX 4012</td>
<td>Supervised graduate practicum encompassing teaching and supervising experiences in public/private educational or vocational programs for students with physical disabilities in the classroom, hygiene, and educational implications.</td>
</tr>
<tr>
<td>ESE</td>
<td>5342</td>
<td>Teaching the Adolescent Learner</td>
<td>3</td>
<td></td>
<td>Emphasis is placed on adolescent developmental and learning needs linking them to practices in the classroom appropriate to the diverse secondary education population (ESOL, special education, multicultural, at-risk, etc.) in preparation for planning responsive standards-based instruction.</td>
</tr>
<tr>
<td>ESE</td>
<td>5344</td>
<td>Classroom Management for a Diverse School and Society</td>
<td>3</td>
<td></td>
<td>This course covers practical, theoretical, philosophical and ethical aspects of school and society, the education profession, and secondary schools with particular focus on classroom management, school violence, school safety, educational law and other critical social issues.</td>
</tr>
<tr>
<td>ESE</td>
<td>6256</td>
<td>Problems In Curriculum Instruction: Secondary</td>
<td>1-3</td>
<td>PR: EDG 4620, EDG 6627.</td>
<td>For teachers, supervisors, and administrators. Curricular and instructional problems of the secondary school. Common problems or problems of special interest to the participants. Normally, for certification requirements only.</td>
</tr>
<tr>
<td>ESE</td>
<td>6906</td>
<td>Independent Study: Secondary Education</td>
<td>1-6</td>
<td></td>
<td>Independent study in which students must have a contract with an instructor.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>ESE</td>
<td>7220</td>
<td>Curriculum Frameworks in Teacher Education</td>
<td>3</td>
<td></td>
<td>This course introduces and informs advanced graduate students about the conceptions of curriculum development related to teacher preparation, exploring topics related to the comprehensive process of certification, standards, governance, and accreditation.</td>
</tr>
<tr>
<td>ESE</td>
<td>7343</td>
<td>Teaching and Learning in the Content Area</td>
<td>3</td>
<td></td>
<td>Examine aspects of sec reform movement &amp; effect on various content fields associated with sec sch. Attention is given to motives for school reform, public policy issues associated, effect of reform, &amp; how school reform movements affect teaching &amp; learning.</td>
</tr>
<tr>
<td>ESE</td>
<td>7346</td>
<td>Collegiate Teaching In Secondary Education</td>
<td>3</td>
<td></td>
<td>This course prepares new phd students for successful teaching in secondary education. Special attention will be given to the state of collegiate teaching, understanding how people learn, facilitating student learning, and becoming a reflective educator.</td>
</tr>
<tr>
<td>ESE</td>
<td>7910</td>
<td>Directed Research in Secondary Education</td>
<td>1-19</td>
<td></td>
<td>Directed research under the direction of a faculty member in Secondary Education. Student must have contract with instructor.</td>
</tr>
<tr>
<td>ESI</td>
<td>5219</td>
<td>Statistical Methods For Engineering Managers</td>
<td>3</td>
<td>ESI 5219 or equiv., EGN 3443 or equivalent.</td>
<td>Study of statistical methods applied to engineering management problems involving estimation and prediction under conditions of uncertainty.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>ESI</td>
<td>5306</td>
<td>Operations Research For Engineering Management</td>
<td>3</td>
<td>PR: ESI 5219 or equiv.</td>
<td>Linear programming, non-linear programming, queuing, inventory, network analysis.</td>
</tr>
<tr>
<td>ESI</td>
<td>5522</td>
<td>Computer Simulation</td>
<td>3</td>
<td>PR: ESI 4521 or equiv</td>
<td>Design of discrete and continuous simulation models. Model validation and verification. Statistical analysis of simulation model output.</td>
</tr>
<tr>
<td>ESI</td>
<td>6213</td>
<td>Stochastic Decision Models I</td>
<td>3</td>
<td>PR: ESI 5219 or equiv</td>
<td>Study of the theory behind the statistical techniques applied to the solving of engineering problems.</td>
</tr>
<tr>
<td>ESI</td>
<td>6246</td>
<td>Advanced Statistical Design Models</td>
<td>3</td>
<td></td>
<td>Introduces theory and applications in the design &amp; analysis of experiments. Students learn skills and techniques to develop successful experiments that can lead to reduced development lead time, enhanced process performance, and improved product quality.</td>
</tr>
<tr>
<td>ESI</td>
<td>6247</td>
<td>Statistical Design Models</td>
<td>3</td>
<td>PR: ESI 5219 or equiv</td>
<td>Design of experimental mathematical models. Application of advanced analysis of variance techniques as applied to industrial problems.</td>
</tr>
<tr>
<td>ESI</td>
<td>6324</td>
<td>Engineering the Supply Chain</td>
<td>3</td>
<td>PR: ESI 4312 or equivalent.</td>
<td>The course will focus on the discussion of analytical optimization models and tools. To learn how logistical decisions impact the performance of a firm as well as an entire supply chain. To understand supply chain structures and logistical capacities.</td>
</tr>
<tr>
<td>SUB</td>
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<td>PREREQUISITES</td>
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<tr>
<td>ESI</td>
<td>6340</td>
<td>Probabilistic Systems Analysis</td>
<td>3</td>
<td></td>
<td>Exposes the students to the fundamental principles and techniques of applied probability and stochastic processes. Students will be able to formulate and solve engineering problems surrounding systems operating under uncertain conditions.</td>
</tr>
<tr>
<td>ESI</td>
<td>6346</td>
<td>Stochastic Decision Models II</td>
<td>3</td>
<td>PR: ESI 6213</td>
<td>Introduction to modern decision and risk analysis and utility theory. It focuses on the mathematical foundations underlying the quantification and management of risk to support dynamic decision making under uncertainty.</td>
</tr>
<tr>
<td>ESI</td>
<td>6353</td>
<td>Risk and Decision Analysis</td>
<td>3</td>
<td></td>
<td>This course gives a formal introduction to risk analysis and utility theory. It focuses on the conceptual and mathematical foundations underlying the quantification and management of risk to support dynamic decision making under uncertainty.</td>
</tr>
<tr>
<td>ESI</td>
<td>6410</td>
<td>Optimization in Operations Research</td>
<td>3</td>
<td></td>
<td>To train students with analytical modeling techniques and solution methods for linear programming, nonlinear programming and discrete optimization. Covers professional modeling &amp; solution software packages to solve practical problems.</td>
</tr>
<tr>
<td>ESI</td>
<td>6420</td>
<td>Non-Linear Programming</td>
<td>3</td>
<td>PR: ESI 6491</td>
<td>General theory and characteristics of NLP, as well as effective solution algorithms that can be used to solve NLP problems and support effective management decision making.</td>
</tr>
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<td>SUB</td>
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<tr>
<td>ESI</td>
<td>6447</td>
<td>Large-scale and Computational Optimization</td>
<td>3</td>
<td>PR: ESI 6491.</td>
<td>Efficient algorithm development for large-scale and computationally intensive optimization problems. Specific topics include Lagrangian relaxation, Benders’ decomposition, column generation and primal-dual approximation algorithms.</td>
</tr>
<tr>
<td>ESI</td>
<td>6448</td>
<td>Integer Programming</td>
<td>3</td>
<td>PR: ESI 6491.</td>
<td>The course will present the theory and algorithms of integer programming, with emphasis on its applications in engineering. The tentative topics include integer programming formulation and relaxation and decomposition algorithms.</td>
</tr>
<tr>
<td>ESI</td>
<td>6491</td>
<td>Linear Programming and Network Optimization</td>
<td>3</td>
<td>PR: ESI 4312 or equivalent.</td>
<td>To provide students with the general theory and characteristics of linear programming, network flows and integer programming as well as effective solution algorithms that can be used to support effective decision making.</td>
</tr>
<tr>
<td>ESI</td>
<td>6605</td>
<td>Engineering Data Mining</td>
<td>3</td>
<td>PR: ESI 6247 or equivalent.</td>
<td>The course will present the theory and methods of data mining, with emphasis on applications in engineering. The topics include linear models, classification, smoothing and kernel methods, model selection and inference, and support vector machines, etc.</td>
</tr>
<tr>
<td>ESI</td>
<td>6635</td>
<td>Advanced Analytics I</td>
<td>3</td>
<td>PR: EIN 4606, and ESI 6247 or equivalent</td>
<td>Data are motivating a profound transformation in the operation management in all fields of engineering and business. Navigate the overload to optimally prepare and enrich data to use as a key ingredient for powerful analytical insights.</td>
</tr>
<tr>
<td>SUB</td>
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<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>ESI</td>
<td>6636</td>
<td>Advanced Analytics II</td>
<td>3</td>
<td></td>
<td>Covers broad aspects of the emerging field of data analytics, with focus on statistical learning and predictive modeling methods. Basic knowledge in probability &amp; statistical methods and linear algebra required. Prior programming experience a plus.</td>
</tr>
<tr>
<td>ESI</td>
<td>6906</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
<td>Independent study in which students must have a contract with an instructor.</td>
</tr>
<tr>
<td>ESI</td>
<td>6911</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
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</tr>
<tr>
<td>ESI</td>
<td>7911</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ESI</td>
<td>7980</td>
<td>Dissertation: Doctoral</td>
<td>2-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ETG</td>
<td>6932</td>
<td>Special Technical Topics</td>
<td>1-4</td>
<td></td>
<td>Special Topics in Technology.</td>
</tr>
<tr>
<td>EVR</td>
<td>6101</td>
<td>Geomorphology for Environmental Scientists</td>
<td>3</td>
<td></td>
<td>Course will explore the evolution of landscapes, natural processes that alter Earth's surface, and rates of change in the surficial environment. The course will emphasize topics relevant to environmental scientists in Florida - esp. soils, karst, &amp; coasts.</td>
</tr>
<tr>
<td>EVR</td>
<td>6216</td>
<td>Advances in Water Quality Policy and Management</td>
<td>3</td>
<td></td>
<td>Conceptual structure and practical implementation of U.S. watershed-based water quality regulations and policies. Practical application of scientific information and quantitative methods in management/policy decisions for water quality protection.</td>
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<td>SUB</td>
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<tr>
<td>EVR</td>
<td>6320</td>
<td>Environmental Management</td>
<td>3</td>
<td></td>
<td>This course introduces the students to environmental management from technical and non-technical perspectives. The major topics covered will be water and air quality, environmental sustainability, collaboration and building consensus.</td>
</tr>
<tr>
<td>EVR</td>
<td>6408</td>
<td>Wildlife Ecology</td>
<td>3</td>
<td></td>
<td>Population ecology, animal behavior, food resources, habitat resources, wildlife diseases, predation, competition, wildlife and water, wildlife and soils, hunting and trapping, exotic wildlife, urban wildlife, and conservation.</td>
</tr>
<tr>
<td>EVR</td>
<td>6908</td>
<td>Environ Science, Policy And Mgmt</td>
<td>1-3</td>
<td></td>
<td>The courses offered under Independent Study will provide students with a greater range of more detailed information about Environmental Science, Policy, Ethics, Economics, Law and Management.</td>
</tr>
<tr>
<td>EVR</td>
<td>6921</td>
<td>Scholarly Presentation of Environmental Research</td>
<td>1-2</td>
<td>CR: EVR 6971</td>
<td>Discussion and practice in methods of writing, presenting, and defending cross-disciplinary environmental research. Written and oral assignments on communicating research objectives, methods, results, theory, and analysis of policy relevance.</td>
</tr>
<tr>
<td>EVR</td>
<td>6922</td>
<td>ESP Capstone Seminar</td>
<td>3</td>
<td></td>
<td>A capstone graduate course that integrates issues related to science, policy and management in making decisions. Each semester, the program selects an environmental issue to serve as a case study. Some anticipated themes include global warming, water quantity and quality, air pollution and restoration.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>EVR</td>
<td>6930</td>
<td>Research Colloquium in Environmental Science and Policy</td>
<td>1</td>
<td></td>
<td>Scholarly presentations by invited academic researchers and leading policy decision-makers.</td>
</tr>
<tr>
<td>EVR</td>
<td>6934</td>
<td>Grad Environ Sci, Policy &amp; Mgmt Selected Topics</td>
<td>3</td>
<td></td>
<td>Selected topics, issues and problems in Environmental Science and Policy.</td>
</tr>
<tr>
<td>EVR</td>
<td>6936</td>
<td>Seminar in Environmental Science</td>
<td>3</td>
<td></td>
<td>A seminar course that reviews a major theme or themes in environmental science that integrates knowledge and research from various scientific disciplines.</td>
</tr>
<tr>
<td>EVR</td>
<td>6937</td>
<td>Seminar in Environmental Policy</td>
<td>3</td>
<td></td>
<td>Critical assessment of environmental policy and regulatory formulation, implementation, evaluation, and revision in the context of scientific, technological, institutional, political, social and economic factors; case studies of major U.S. policies.</td>
</tr>
<tr>
<td>EVR</td>
<td>6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td></td>
<td>This course will assist students in developing dissertation topics; to think creatively about their topics; to draft a dissertation proposal and a dissertation outline. Students should register for either evr or geo 7921 depending on his/her subject area.</td>
</tr>
<tr>
<td>EVR</td>
<td>7923</td>
<td>Doctoral Dissertation Preparation</td>
<td>3</td>
<td></td>
<td>The dissertation is an original contribution to scholarship. The research is performed under the guidance of the major professor, which determines how many dissertation hours are completed (maximum 42 hours).</td>
</tr>
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<td>SUB</td>
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<tr>
<td>EVS</td>
<td>6920</td>
<td>Environmental Research Interdisciplinary Colloquium</td>
<td>1</td>
<td></td>
<td>Interdisciplinary seminar series that exposes students to a variety of environmental topics through presentations and interactive discussions with scholars and practitioners.</td>
</tr>
<tr>
<td>EVT</td>
<td>6971</td>
<td>Thesis: Masters/Educational Specialist</td>
<td>2-19</td>
<td></td>
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</tr>
<tr>
<td>EXP</td>
<td>6608</td>
<td>Cognitive Psychology</td>
<td>3</td>
<td></td>
<td>A survey of the research and theory dealing with higher memory, language, and the higher mental processes. Core requirement for all graduate students in Psychology.</td>
</tr>
<tr>
<td>EXP</td>
<td>7099</td>
<td>Graduate Seminar in Experimental Psychology</td>
<td>1-3</td>
<td></td>
<td>Seminars on topics, such as learning, perception, memory, cognitive processes, and quantitative methods.</td>
</tr>
<tr>
<td>FIL</td>
<td>5469C</td>
<td>Cinematography</td>
<td>4</td>
<td>PR: PGY 4520C</td>
<td>Advanced studio work using black and white, color and sound as technical and aesthetic factors in visual, artistic productions.</td>
</tr>
<tr>
<td>FIN</td>
<td>6246</td>
<td>Advanced Money and Capital Markets</td>
<td>3</td>
<td>PR: ECO 6204</td>
<td>The study of the role of financial markets, instruments, and institutions in the economy. It includes the study of flow of funds, interest rate determination, and the pricing of capital assets.</td>
</tr>
<tr>
<td>FIN</td>
<td>6326</td>
<td>Bank Management</td>
<td>3</td>
<td>PR: FIN 6406</td>
<td>Theory, policy and practice of commercial bank management with emphasis on strategic issues and decision making in an expanding financial services environment.</td>
</tr>
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<tr>
<td>FIN</td>
<td>6406</td>
<td>Financial Management</td>
<td>2-3</td>
<td>PR: ACG 6025 and ECP 6702.</td>
<td>The study of processes, decision structures, and institutional arrangements concerned with the acquisition and utilization of funds by a firm. The course includes the management of the asset and liability structures of the firm under both certainty and uncertainty.</td>
</tr>
<tr>
<td>FIN</td>
<td>6416</td>
<td>Advanced Financial Management</td>
<td>3</td>
<td>PR: FIN 6406 or equivalent.</td>
<td>A synthesis of the theory and the practice of corporate finance. Particular attention is given to the role of the agency problems and agency cost in explaining why the observed consequences of financial decisions often deviate from those predicted by traditional theory.</td>
</tr>
<tr>
<td>FIN</td>
<td>6418</td>
<td>Working Capital Management</td>
<td>3</td>
<td>PR: FIN 6406</td>
<td>This course is designed to provide the student with an understanding of short-term financial management which includes decision making concerning sources and uses of cash flows to support short-term operations.</td>
</tr>
<tr>
<td>FIN</td>
<td>6425</td>
<td>Financial Policy</td>
<td>3</td>
<td></td>
<td>A case study approach to financial policy and strategy with emphasis on the firm’s major financial decisions.</td>
</tr>
<tr>
<td>FIN</td>
<td>6465</td>
<td>Financial Statement Analysis</td>
<td>3</td>
<td>PR: FIN 6406</td>
<td>This course provides an understanding of the relationship between financial statements produced in accordance with generally accepted accounting principles (GAAP) and the information such statements contain that is useful to stakeholders.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>FIN</td>
<td>6466</td>
<td>Financial Analysis</td>
<td>2</td>
<td>PR: ACG 6026, FIN 6406</td>
<td>Financial analysis focuses on how information disseminated that is by a company is used by such stakeholders as managers, stockholders, creditors, and financial analysts when making decisions concerning the firm’s value.</td>
</tr>
<tr>
<td>FIN</td>
<td>6515</td>
<td>Investments</td>
<td>3</td>
<td>PR: FIN 6406</td>
<td>An examination of the risks and returns of alternative investment media within the framework of various valuation models. Special attention is given to the investment process and the criteria for investment decisions.</td>
</tr>
<tr>
<td>FIN</td>
<td>6537</td>
<td>Financial Options &amp; Futures</td>
<td>3</td>
<td>PR: FIN 6515 or equivalent.</td>
<td>This course covers financial futures and options markets and the fundamental properties and the pricing principles of these instruments. In addition, hedging and risk management strategies are covered in the course.</td>
</tr>
<tr>
<td>FIN</td>
<td>6605</td>
<td>International Financial Management</td>
<td>3</td>
<td>PR: FIN 6406 or equiv</td>
<td>The course provides a foundation for the understanding of financial management of international business. The subjects covered relate to: international finance, multinational business finance, and financial market theory.</td>
</tr>
<tr>
<td>FIN</td>
<td>6804</td>
<td>Theory of Finance</td>
<td>3</td>
<td>PR: FIN 6406</td>
<td>A systematic and rigorous course in the theory of finance. Topics will include the theory of choice and the allocation of financial resources, the theory of optimal investment decisions and the theory of risk and uncertainty in financial decisions. It will also cover the theoretical concepts underlying financing decisions and the cost of capital.</td>
</tr>
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<td>SUB</td>
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<tr>
<td>FIN</td>
<td>6906</td>
<td>Independent Study</td>
<td>var.</td>
<td></td>
<td>Students must have a contract with an instructor.</td>
</tr>
<tr>
<td>FIN</td>
<td>6915</td>
<td>Directed Research</td>
<td>var.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIN</td>
<td>6934</td>
<td>Selected Topics in Finance</td>
<td>1-4</td>
<td></td>
<td>Depending upon the scope and magnitude of the work required. Includes special lecture series.</td>
</tr>
<tr>
<td>FIN</td>
<td>7808</td>
<td>Advanced Micro Finance</td>
<td>3</td>
<td>PR: FIN 6406, FIN 6804, ECO 6424</td>
<td>The study of advanced theoretical and empirical works in finance primarily relating to financial decisions at the level of the firm.</td>
</tr>
<tr>
<td>FIN</td>
<td>7817</td>
<td>Financial Markets</td>
<td>3</td>
<td>PR: FIN 6246, FIN 6515</td>
<td>The study of advanced theoretical and empirical works in finance primarily relating to financial institutions and markets.</td>
</tr>
<tr>
<td>FIN</td>
<td>7930</td>
<td>Selected Topics in Finance</td>
<td>3</td>
<td>PR: FIN 7808, QMB 7566</td>
<td>A study of selected topics of current issues on the frontiers of financial thought.</td>
</tr>
<tr>
<td>FIN</td>
<td>7935</td>
<td>Finance Research Seminar</td>
<td>3</td>
<td>PR: FIN 7930</td>
<td>Theoretical and/or empirical research on finance related problems. This course will require research papers to be written and presented. It is designed to aid the student in developing a thesis and the research methodology necessary for the doctoral dissertation.</td>
</tr>
<tr>
<td>FIN</td>
<td>7939</td>
<td>Executive Issues in Finance</td>
<td>2-4</td>
<td></td>
<td>A research seminar for executives that explores contemporary issues in finance. The specific theme of the seminar will be determined through consultations between the instructor and the students prior to the first class meeting.</td>
</tr>
<tr>
<td>FIN</td>
<td>7980</td>
<td>Dissertation</td>
<td>2-19</td>
<td></td>
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<tr>
<td>FLE</td>
<td>5145</td>
<td>Language Principles, Acquisition and Teaching</td>
<td>3</td>
<td>PR: FLE 5345</td>
<td>Restricted to Education majors and not repeatable for credit. Overview of applied SLA theory and components of language. Methods &amp; techniques of comprehensible instruction and the development of oral proficiency and literacy skills for LEP children.</td>
</tr>
<tr>
<td>FLE</td>
<td>5291</td>
<td>Technology in the Foreign Language Classroom</td>
<td>3</td>
<td>PR: FLE 5313 and FLE 5331.</td>
<td>This course is intended to prepare foreign/second language teachers to provide pedagogically sound and technologically enhanced instruction for foreign language and second language students in the K-16 realm. Basic computer literacy is recommended.</td>
</tr>
<tr>
<td>FLE</td>
<td>5313</td>
<td>Methods of Teaching Foreign Language and ESOL in the Elementary School</td>
<td>3</td>
<td></td>
<td>This course is designed to provide training in the theory and methods of teaching foreign languages and ESOL in the elementary school (FLES) to both pre- and in-service teachers.</td>
</tr>
<tr>
<td>FLE</td>
<td>5331</td>
<td>Methods of Teaching Foreign Language and ESOL in the Secondary School</td>
<td>3</td>
<td>PR: FLE 5313</td>
<td>This course provides for the development of knowledge and skills necessary to prepare students to assume roles as foreign language (FL) and ESOL teachers at the secondary school level. It represents the second part of a sequence of methods courses.</td>
</tr>
<tr>
<td>FLE</td>
<td>5345</td>
<td>Teaching English Language Learners K-12</td>
<td>3</td>
<td></td>
<td>This course is restricted to Education majors and is not repeatable for credit. It is designed to prepare preprofessional teachers to provide linguistically and culturally appropriate instruction, assessment, and learning opportunities for LEP students.</td>
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<tr>
<td><strong>FLE</strong></td>
<td>5366</td>
<td>ESOL Education in Content Areas</td>
<td><strong>3</strong></td>
<td></td>
<td>Enables participants to meet the special linguistic &amp; cultural educational needs of limited English proficient (LEP) students in content area classes. Provides a theoretical &amp; practical foundation for ESOL competencies in courses include ESOL infusion.</td>
</tr>
<tr>
<td><strong>FLE</strong></td>
<td>5895</td>
<td>Dual Language Education</td>
<td><strong>3</strong></td>
<td></td>
<td>This course is for teachers who are interested in bilingual education. The aim is to deconstruct the philosophical, theoretical, political, social and educational underpinning of instruction (K-16) when it is delivered through two languages.</td>
</tr>
<tr>
<td><strong>FLE</strong></td>
<td>5946</td>
<td>Practicum in Foreign Language/ESOL Teaching</td>
<td><strong>3</strong></td>
<td><strong>CR: FLE 5331; PR: FLE 5313</strong></td>
<td>This course prepares students for their internship by providing a structured pre-internship experience while meeting regularly in a university class. Opportunity to see teachers in action.</td>
</tr>
<tr>
<td><strong>FLE</strong></td>
<td>6167</td>
<td>Cross-Cultural Issues in Teaching ESOL</td>
<td><strong>3</strong></td>
<td></td>
<td>Designed for K-12 &amp; adult educ environment to help participants develop awareness &amp; understanding of the major cultures represented by the different language groups within the State of Florida (teach cultural awareness &amp; cross-cultural understanding).</td>
</tr>
<tr>
<td><strong>FLE</strong></td>
<td>6639</td>
<td>Second Language Reading and Literacy</td>
<td><strong>3</strong></td>
<td></td>
<td>Explores theoretical issues in L2 language and literacy learning from a sociocultural perspective an covers seminal perspectives on L2 language development.</td>
</tr>
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<tr>
<td>FLE</td>
<td>6829</td>
<td>Graduate Instruction Methods</td>
<td>1-4</td>
<td></td>
<td>Special course to be used primarily for the training of graduate teaching assistants.</td>
</tr>
<tr>
<td>FLE</td>
<td>6906</td>
<td>Independent Study in Foreign Language Education</td>
<td>1-6</td>
<td></td>
<td>Independent Study in which students must have a contract with an instructor. Rpt. S/U</td>
</tr>
<tr>
<td>FLE</td>
<td>6932</td>
<td>Selected Topics in Second Language Acquisition</td>
<td>3</td>
<td></td>
<td>This course would provide a flexible format to offer specialized courses in second language acquisition not available in the regular curriculum. This would allow faculty to address issues at the frontiers of the field in second language acquisition. Repeat as topics vary</td>
</tr>
<tr>
<td>FLE</td>
<td>6947</td>
<td>Internship for Secondary Education in Foreign Language</td>
<td>6</td>
<td></td>
<td>Students will work with a cooperating teacher and university supervisor to complete their internship requirements in a classroom setting assigned by the university.</td>
</tr>
<tr>
<td>FLE</td>
<td>7367</td>
<td>Sociocultural Theory in Second Language Acquisition</td>
<td>3</td>
<td></td>
<td>1. Examines the theoretical contributions of Vygotskian theory and explores the development of sociocultural theory based on Vygotsky and extending to contemporary post-Vygotskian theories and practices in the field of SLA.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>FLE</td>
<td>7700</td>
<td>Applications of Technology in Second Language Acquisition</td>
<td>3</td>
<td></td>
<td>This course introduces key approaches to computer-assisted language learning (CALL). Students learn about pedagogical approaches and assessment in CALL. Students share ideas on blogs and in class discussions, and design and execute a pilot study.</td>
</tr>
<tr>
<td>FLE</td>
<td>7939</td>
<td>Advanced Seminar in Foreign Language Education</td>
<td>3</td>
<td>PR: FLE 6665</td>
<td>Advanced readings and discussion of theories, perspectives and issues in foreign/second language education from K-20, including examination of current practices, action research, accreditation, certification, teacher development, and assessment in the field.</td>
</tr>
<tr>
<td>FOL</td>
<td>5906</td>
<td>Directed Study</td>
<td>1-3</td>
<td>PR: FOL 4101 or equivalent.</td>
<td>Research methods. Includes familiarity with major journals and bibliographies, with a practicum.</td>
</tr>
<tr>
<td>FOW</td>
<td>6805</td>
<td>Bibliography</td>
<td>1</td>
<td></td>
<td>Course is designed to give advanced training in free composition in French.</td>
</tr>
<tr>
<td>FRE</td>
<td>5425</td>
<td>Advanced Written Expression</td>
<td>3</td>
<td>PR: FRE 4421, or equivalent.</td>
<td>An advanced course in French civilization and culture including a study of recent social, artistic and political trends as well as various current intellectual movements. Text and discussions in French.</td>
</tr>
<tr>
<td>FRE</td>
<td>5566</td>
<td>Contemporary France</td>
<td>3</td>
<td>PR: FRE 3500 or equivalent</td>
<td>Emphasis on Malherbe, Descartes, Pascal, La Fontaine, and Boileau.</td>
</tr>
<tr>
<td>FRE</td>
<td>6910</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td>Subjects in the field.</td>
</tr>
<tr>
<td>FRE</td>
<td>6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td></td>
<td>Effectiveness of the results.</td>
</tr>
<tr>
<td>FRW</td>
<td>5222</td>
<td>Classical Prose and Poetry</td>
<td>3</td>
<td>PR: FRW 4101.</td>
<td>Subjects in the field.</td>
</tr>
<tr>
<td>FRW</td>
<td>5226</td>
<td>20th Century Poetry and Theatre</td>
<td>3</td>
<td>PR: FRW 4101.</td>
<td>Subjects in the field.</td>
</tr>
<tr>
<td>SUB</td>
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<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>FRW</td>
<td>5314</td>
<td>Classical Drama</td>
<td>3</td>
<td>PR: FRW 4101.</td>
<td>Corneille, Moliere, and Racine.</td>
</tr>
<tr>
<td>FRW</td>
<td>5415</td>
<td>Literature of the Middle Ages</td>
<td>3</td>
<td>PR: FRW 4100 or FRW 4101.</td>
<td>Major genres, including epics, Arthurian romances, drama and lyric poetry. Reading in modern French translation.</td>
</tr>
<tr>
<td>FRW</td>
<td>5425</td>
<td>Literature of the Renaissance</td>
<td>3</td>
<td>PR: FRW 4100 or FRW 4101.</td>
<td>A study of Renaissance French humanism including Rabelais, Montaigne, and Pleiade poets.</td>
</tr>
<tr>
<td>FRW</td>
<td>5445</td>
<td>18th Century Literature</td>
<td>3</td>
<td>PR: FRW 4100.</td>
<td>The classical tradition and the new currents of thought in the Age of Enlightenment.</td>
</tr>
<tr>
<td>FRW</td>
<td>5535</td>
<td>Romanticism and Early Realism</td>
<td>3</td>
<td>PR: FRW 4101.</td>
<td>A study of the romantic and early realistic movements with emphasis on Lamartine, Vigny, Musset, Hugo, and Balzac.</td>
</tr>
<tr>
<td>FRW</td>
<td>5556</td>
<td>Naturalism and Realism</td>
<td>3</td>
<td>PR: FRW 4100 or FRW 4101.</td>
<td>A detailed study of realism and naturalism with emphasis on Flaubert, Zola, les Goncourt, Maupassant, and Daudet.</td>
</tr>
<tr>
<td>FRW</td>
<td>5745</td>
<td>French Literature of Quebec</td>
<td>3</td>
<td></td>
<td>Overview of the main representative literary works in French from Quebec in all genres (poetry, drama, novel, short story) as well as a survey of the main traits of Quebec history &amp; culture. Open to non-majors. Not repeatable for credit. Taught in French.</td>
</tr>
<tr>
<td>FRW</td>
<td>5755</td>
<td>African and Caribbean Literature</td>
<td>3</td>
<td></td>
<td>An overview of the main representative literary works in French from North and SubSahara Africa as well as the Caribbean. Open to non-majors and not repeatable for credit. Course taught in French.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>FRW</td>
<td>5829</td>
<td>An Introduction to Modern French Literary Criticism</td>
<td>3</td>
<td></td>
<td>A graduate elective 3 credit course entirely taught in French, which offers a survey of the main trends and methods in 20th Century literature, the French having been at the avant-garde of the field.</td>
</tr>
<tr>
<td>FRW</td>
<td>5934</td>
<td>Selected Topics</td>
<td>1-3</td>
<td></td>
<td>Study of an author, movement or theme.</td>
</tr>
<tr>
<td>FRW</td>
<td>6405</td>
<td>Old French</td>
<td>3</td>
<td></td>
<td>An introduction to the Old French language and literature. Readings from representative texts.</td>
</tr>
<tr>
<td>GEA</td>
<td>6195</td>
<td>Seminar in Advanced Regional Geography</td>
<td>3</td>
<td></td>
<td>Analytic study of a selected region of the world.</td>
</tr>
<tr>
<td>GEA</td>
<td>6215</td>
<td>Seminar in North American Geography</td>
<td>3</td>
<td></td>
<td>Advanced survey of historical and contemporary issues in North American geography including: west and non-west exchange, revolutionary transformation, nation-building, regional disparities, and continental relations among states.</td>
</tr>
<tr>
<td>GEA</td>
<td>6406</td>
<td>Seminar in Latin American and Caribbean Geography</td>
<td>3</td>
<td></td>
<td>Readings and discussions organized around an examination of regional and systematic analysis of selected topics of Latin American and Caribbean geography. Emphasis is on combining physical and cultural analysis of this region.</td>
</tr>
<tr>
<td>GEA</td>
<td>6504</td>
<td>Seminar in European Geography</td>
<td>3</td>
<td></td>
<td>Readings and discussions organized around an examination of regional and systematic analysis of selected topics of European Geography. Emphasis is on combining physical and cultural analysis of this region.</td>
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<td>SUB</td>
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<tr>
<td>GEA</td>
<td>6745</td>
<td>Asian Geography Seminar</td>
<td>3</td>
<td></td>
<td>Analysis of regional divisions and spatial variations within Asia.</td>
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<td>Examines the significance of Asia in the global context. Focus on</td>
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<td>political, economic, cultural, and historical geographies, including</td>
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<td>development, environment, religion, and gender.</td>
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<tr>
<td>GEB</td>
<td>6215</td>
<td>Communication Skills for Managers</td>
<td>2</td>
<td></td>
<td>One of six Advanced Tools courses required for the MBA, Communication</td>
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<td>Skills for Managers focuses on developing the oral and written</td>
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<td>communication and presentation skills essential to projecting a</td>
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<td>professional image and influencing others.</td>
</tr>
<tr>
<td>GEB</td>
<td>6224</td>
<td>Improvisation in Business Organizations</td>
<td>3</td>
<td></td>
<td>Facilitates learning and skill building based on organization studies</td>
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<td>research on business improvisation. Students will participate in a variety</td>
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<td>of experiential exercises and cases from organizational behavior and</td>
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<td></td>
<td>theatrical improvisation.</td>
</tr>
<tr>
<td>GEB</td>
<td>6226</td>
<td>Leadership Speaker Series</td>
<td>1</td>
<td></td>
<td>This course addresses a range of issues that impact how leaders craft</td>
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<td>strategies, create commitment, communicate effectively, delegate, and</td>
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<td>lead by example. A diverse group of individuals will deliver thought-</td>
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<td>provoking presentations and lead discussions.</td>
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<tr>
<td>GEB</td>
<td>6228</td>
<td>Management Through Constructive Persuasion</td>
<td>3</td>
<td></td>
<td>Effective persuasion is the ability to deliver a message that leads to</td>
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<td>others’ support, which includes consensus building, motivating and</td>
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<td>convincing others. The course explores persuasion methods and applies</td>
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<td>them in a contemporary business setting.</td>
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<tr>
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<tr>
<td>GEB</td>
<td>6445</td>
<td>Social, Ethical, Legal Systems</td>
<td>2</td>
<td></td>
<td>A study of the influence of social, cultural, legal, and political environment of institutional behavior, including the changing nature of the business system, the public policy process, corporate power, legitimacy and managerial autonomy, and organizational reactions to environmental forces.</td>
</tr>
<tr>
<td>GEB</td>
<td>6527</td>
<td>Lean Six Sigma</td>
<td>3</td>
<td></td>
<td>In this course students gain experience with process improvement from a Lean and Six Sigma perspective. The course shows Lean as a management philosophy to eliminate waste, and Six Sigma as tools and ideas to reduce variation and improving quality.</td>
</tr>
<tr>
<td>GEB</td>
<td>6865</td>
<td>Business Problems Analysis</td>
<td>3</td>
<td>PR: ACG 6025; ACG 6075; FIN 6406; ECP 6702; ECO 6708; MAN 6055; MAR 6815; QMB 6305; QMB 6603; GEB 6445; MAN 6147.</td>
<td>This is a capstone class that is delivered using case method. Business cases can be written or life. The delivery of the class can include but not limited to book reports, discussions, debates and lecture.</td>
</tr>
<tr>
<td>GEB</td>
<td>6895</td>
<td>Integrated Business Applications</td>
<td>3-4</td>
<td>PR: ACG 6026, ACG 6005, MAN 6147, MAR 6815, ISM 6021, FIN 6406, QMB 6305, FIN 6466 and MAN 6726</td>
<td>Part I of advanced study of business decision-making processes under conditions of risk and uncertainty, including integrating analysis and policy formation at the general management level.</td>
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<tr>
<td>GEB</td>
<td>6896</td>
<td>Integrated Business Applications II</td>
<td>3</td>
<td>PR: GEB 6895.</td>
<td>Part II of advanced study of business decision-making processes under conditions of risk and uncertainty, including integrating analysis and policy formation at the general management level.</td>
</tr>
<tr>
<td>GEB</td>
<td>6898</td>
<td>MBA Capstone for Analytics, Compliance &amp; Cybersecurity</td>
<td>3</td>
<td>PR: FIN 6466, MAN 6726</td>
<td>An MBA capstone course that combines case discussions of real world situations in the areas of analytics, cybersecurity and risk management with a substantial individual project.</td>
</tr>
<tr>
<td>GEB</td>
<td>6930</td>
<td>Selected Topics</td>
<td>1-3</td>
<td></td>
<td>The content and organization of this course will vary depending on student demand and faculty interest.</td>
</tr>
<tr>
<td>GEB</td>
<td>7939</td>
<td>Executive Issues in Business</td>
<td>2-4</td>
<td></td>
<td>A research seminar for executives that explores contemporary issues in business. The specific theme of the seminar will be determined through consultations between the instructor and the students prior to the first class meeting.</td>
</tr>
<tr>
<td>GEB</td>
<td>7980</td>
<td>Dissertation</td>
<td>1-8</td>
<td>PR: GEB 7981</td>
<td>Research and writing of a dissertation on a business topic.</td>
</tr>
<tr>
<td>GEB</td>
<td>7981</td>
<td>Dissertation Preparation</td>
<td>4</td>
<td></td>
<td>Preparing a dissertation proposal on a business topic.</td>
</tr>
<tr>
<td>GEB</td>
<td>7982</td>
<td>Research and Writing Skills for Doctoral Students</td>
<td>3</td>
<td></td>
<td>A research course for executive students on searching and citing research literature, preparing submissions for publication and assessing the suitability of publication outlets. The course emphasizes the effective use of electronic library resources.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>GEO</td>
<td>6058</td>
<td>Geographic Literature and History</td>
<td>3</td>
<td></td>
<td>The origins and development of the discipline as revealed through an examination of the principal written sources. Special attention paid to leading personalities and modern periodicals.</td>
</tr>
<tr>
<td>GEO</td>
<td>6115</td>
<td>Advanced Field Techniques</td>
<td>3</td>
<td></td>
<td>Field examination of one region. Students will complete field work in human and physical geography in a selected area.</td>
</tr>
<tr>
<td>GEO</td>
<td>6116</td>
<td>Perspectives on Environmental Thought</td>
<td>3</td>
<td>PR: GEO 6058</td>
<td>Analysis of the evolution of the major schools of environmental thought from antiquity to present-day green analysis, deep ecology, ecofeminism, and post-modern ecology.</td>
</tr>
<tr>
<td>GEO</td>
<td>6119</td>
<td>Geographical Techniques and Methodology</td>
<td>3</td>
<td></td>
<td>Analytic study of a technique or investigation into an aspect of methodology.</td>
</tr>
<tr>
<td>GEO</td>
<td>6166</td>
<td>Multivariate Statistical Analysis</td>
<td>3</td>
<td>PR: GEO 3164C</td>
<td>Examination of advanced statistical approaches used by geographers. Descriptive, spatial and inferential statistics and multi-variate analysis are highlighted.</td>
</tr>
<tr>
<td>GEO</td>
<td>6209C</td>
<td>Physical Geography Seminar</td>
<td>3</td>
<td></td>
<td>Analytic study of one or more topics from physical geography. Selected problems may include hydrology, physiography, meteorology, climatology, soils, vegetation, etc.</td>
</tr>
<tr>
<td>GEO</td>
<td>6215</td>
<td>Geomorphology Seminar</td>
<td>3</td>
<td>PR: GEO 4372</td>
<td>An advanced examination of geomorphic processes and landforms with an emphasis placed on concepts related to the formation and evolution of landscapes on a variety of scales.</td>
</tr>
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<td>SUB</td>
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<tr>
<td>GEO</td>
<td>6217</td>
<td>Karst Geomorphology</td>
<td>3</td>
<td></td>
<td>An in-depth examination of the geomorphic aspects of karst landforms. The objectives, methods and results of karst geomorphic studies in which both field and laboratory analysis have been applied to geomorphic problems are reviewed.</td>
</tr>
<tr>
<td>GEO</td>
<td>6255</td>
<td>Weather, Climate, and Society</td>
<td>3</td>
<td></td>
<td>This course explores the societal impacts of weather as well as the human impact on weather and climate. Students lead and participate in discussions on topics such as weather hazards, extreme temperature and human physiology, historical civilization and extreme climate, economic value of forecasts, weather modification, urbanization and other land use change, anthropogenic aerosols, past and future climates.</td>
</tr>
<tr>
<td>GEO</td>
<td>6263</td>
<td>Soils Seminar</td>
<td>3</td>
<td>PR: GEO 4372</td>
<td>Examination of how earth systems influence soil formation and variation. Details analysis of soils climosequences, biosequences, toposequences, lithosequences, chronosequences, and anthrosequences.</td>
</tr>
<tr>
<td>GEO</td>
<td>6286</td>
<td>Advances in Water Resources</td>
<td>3</td>
<td></td>
<td>Water resources policies are viewed from theoretical and practical perspectives focusing on management strategies in different physical and human environments.</td>
</tr>
<tr>
<td>GEO</td>
<td>6288</td>
<td>Hydrological Systems</td>
<td>3</td>
<td>PR: GEO 4372</td>
<td>A systematic approach to hydrology using the drainage basin as the fundamental unit of analysis is used to explore form and process, while modeling stream flows.</td>
</tr>
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<tr>
<td>GEO</td>
<td>6345</td>
<td>Technological Hazards and Environmental Justice</td>
<td>3</td>
<td></td>
<td>Examination of theories, debates, methods, and models that improve our understanding of human vulnerability to technological hazards and risks, with emphasis on issues of fairness and equity in the distribution and impact of hazards.</td>
</tr>
<tr>
<td>GEO</td>
<td>6347</td>
<td>Natural Hazards</td>
<td>3</td>
<td>PR: GEO 4372</td>
<td>Analysis of natural hazards integrating principles of physical, social, economic, political, and technical forces that affect extreme geophysical events.</td>
</tr>
<tr>
<td>GEO</td>
<td>6428</td>
<td>Seminar in Advanced Human Geography</td>
<td>3</td>
<td></td>
<td>Analytic study of a problem selected from aspects of the human landscape (urban, political, economic, population, settlement).</td>
</tr>
<tr>
<td>GEO</td>
<td>6475</td>
<td>Political Geography Seminar</td>
<td>3</td>
<td>PR: GEO 4471</td>
<td>Advanced investigation of geopolitical issues including: the human construction of territoriality, ethnic relations, the making of nations and states, the geopolitics of localities, and environmental policy making.</td>
</tr>
<tr>
<td>GEO</td>
<td>6545</td>
<td>Economic Geography Seminar</td>
<td>3</td>
<td>PR: GEO 4502</td>
<td>An intensive examination of selected issues in economic geography including: regional development and decline; spatial labor market trends; business locational analysis; and comparative economic policy.</td>
</tr>
<tr>
<td>GEO</td>
<td>6605</td>
<td>Contemporary Urban Issues</td>
<td>3</td>
<td>PR: GEO 3602; GEO 4604</td>
<td>Advanced survey of urban issues such as: industrial restructuring and urban development, inner-city ethnic relations, the geopolitics of urban governance, and urban culture.</td>
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<tr>
<td>GEO</td>
<td>6627</td>
<td>Site Feasibility Analysis</td>
<td>3</td>
<td></td>
<td>A project-oriented geographic examination of urban real estate development and site feasibility practices. Hands-on course including concepts of real estate development patterns, urban growth, and site specific factors related to feasibility of specific developments.</td>
</tr>
<tr>
<td>GEO</td>
<td>6704</td>
<td>Advanced Transportation Geography</td>
<td>3</td>
<td>PR: GEO 4114; GEO 4700</td>
<td>Review of transportation issues and analysis, focusing on modeling and planning for flows of goods and people. Provides a hands-on approach to use of GIS for such analysis.</td>
</tr>
<tr>
<td>GEO</td>
<td>6908</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
<td>Independent study in which students must have a contract with an instructor.</td>
</tr>
<tr>
<td>GEO</td>
<td>6918</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
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</tr>
<tr>
<td>GEO</td>
<td>6944</td>
<td>Internship in Geography</td>
<td>3</td>
<td></td>
<td>The internship in Geography is designed to provide students the opportunity to work in an appropriate governmental agency to gain practical field experience.</td>
</tr>
<tr>
<td>GEO</td>
<td>6947</td>
<td>Directed Teaching</td>
<td>1-6</td>
<td></td>
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</tr>
<tr>
<td>GEO</td>
<td>6970</td>
<td>Geographic Research Design</td>
<td>3</td>
<td></td>
<td>This course stresses conducting geographic research within the scientific method. It includes both quantitative and qualitative research. Specific topics include sample design, data collection, oral presentations, written proposals and a thesis.</td>
</tr>
<tr>
<td>GEO</td>
<td>6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
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<tr>
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<td>TITLE</td>
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<tr>
<td>GEO</td>
<td>7021</td>
<td>Doctoral Dissertation Preparation</td>
<td>3</td>
<td></td>
<td>This course will assist students in developing dissertation topics; to think creatively about their topics; to draft a dissertation proposal and a dissertation outline. Students should register for either EVR or GEO 7921 depending on his/her subject area.</td>
</tr>
<tr>
<td>GEO</td>
<td>7606</td>
<td>Seminar in Urban Environments</td>
<td>3</td>
<td></td>
<td>This seminar will explore topics in the study of urban environments such as global restructuring, race and ethnic relations, and the geopolitics of urban policy, by way of readings, discussion, and research.</td>
</tr>
<tr>
<td>GEO</td>
<td>7980</td>
<td>Doctoral Dissertation Research</td>
<td>2-15</td>
<td></td>
<td>The dissertation is an original contribution to scholarship. The research is performed under the guidance of the major professor, which determines how many dissertation hours are completed (maximum 42 hours).</td>
</tr>
<tr>
<td>GER</td>
<td>5845</td>
<td>History of the German Language</td>
<td>3</td>
<td></td>
<td>A diachronic approach to the study of the German language. The course traces the history and development of the language from Indo-European through Germanic, Old, Middle, and New High German.</td>
</tr>
<tr>
<td>GER</td>
<td>6060</td>
<td>German for Reading</td>
<td>3</td>
<td></td>
<td>Designed to provide a reading ability in German that will support research in other disciplines.</td>
</tr>
<tr>
<td>GER</td>
<td>6908</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
<td>Independent study in which student must have a contract with an instructor.</td>
</tr>
<tr>
<td>GEW</td>
<td>5606</td>
<td>Faust</td>
<td>3</td>
<td></td>
<td>Sources, form, content, and literary significance of Urfaust and Faust.</td>
</tr>
</tbody>
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1067
<table>
<thead>
<tr>
<th>SUB</th>
<th>NUM</th>
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</thead>
<tbody>
<tr>
<td>GEW</td>
<td>5934</td>
<td>Selected Topics</td>
<td>1-3</td>
<td></td>
<td>Study of an author, movement or theme.</td>
</tr>
<tr>
<td>GEY</td>
<td>5476</td>
<td>Program Evaluation in an Aging Society</td>
<td>3</td>
<td></td>
<td>Students develop knowledge of the purposes of evaluation research and the approaches and methodologies necessary to evaluation aging services programs and organizations.</td>
</tr>
<tr>
<td>GEY</td>
<td>5501</td>
<td>Health Care Operations in Long Term Care</td>
<td>3</td>
<td></td>
<td>Addresses the health care operations of long term care facilities with a special emphasis on nursing homes and assisted living facilities. Specifics include leadership management of people resources physical plant and quality improvement.</td>
</tr>
<tr>
<td>GEY</td>
<td>5620</td>
<td>Sociological Aspects Of Aging</td>
<td>3</td>
<td></td>
<td>Examines, within a sociological frame of reference, the interrelationships between the aged (or aging) and the structure and function of the social system and its major institutionalized subsystems.</td>
</tr>
<tr>
<td>GEY</td>
<td>5630</td>
<td>Economics and Aging</td>
<td>3</td>
<td></td>
<td>Examines basic economic systems as they impact the aged. Emphasis is on applied aspects of economic planning, pensions, insurance, social security and other support systems.</td>
</tr>
<tr>
<td>GEY</td>
<td>5642</td>
<td>Perspectives on Death and Dying</td>
<td>3</td>
<td></td>
<td>Study of the various psychological, medical, legal, and religious problems caused by dying and death, and how individuals and groups have responded in the past and present.</td>
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<tr>
<td>GEY</td>
<td>6206</td>
<td>Family Caregiving in Aging and Chronic Illness</td>
<td>3</td>
<td></td>
<td>The course will address the mental and physical health consequences, cultural diversity issues, and stress process models of caregiving, as well as clinical and public policy interventions to assist family caregivers of adults with chronic illness.</td>
</tr>
<tr>
<td>GEY</td>
<td>6221</td>
<td>Ethical and Legal Issues in Aging</td>
<td>3</td>
<td></td>
<td>A consideration of major ethical and legal issues in aging and their implications for policies, priorities, and services.</td>
</tr>
<tr>
<td>GEY</td>
<td>6230</td>
<td>Principles of Health Care Risk Management and Patient Safety</td>
<td>3</td>
<td></td>
<td>This course provides an overview of the various aspects of health care risk management and how the risk varies by health care setting. Case studies and exercises provide students with &quot;real world&quot; situations they are likely to encounter.</td>
</tr>
<tr>
<td>GEY</td>
<td>6321</td>
<td>Gerontological Case Management</td>
<td>3</td>
<td></td>
<td>This course examines the function of case management in meeting the care needs of the older adult. Elements of the case management process as well as ethical and legal issues in case management are covered. Not repeatable; not restricted to majors.</td>
</tr>
<tr>
<td>GEY</td>
<td>6325</td>
<td>Social Policy and Planning for Gerontologists</td>
<td>3</td>
<td></td>
<td>This course is designed to provide an empirical and analytical base for understanding the major issues and trends involved in existing and proposed programs and services in the field of aging at local, state, and federal levels.</td>
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<tr>
<td>GEY</td>
<td>6362</td>
<td>Geriatric Interdisciplinary Team Training</td>
<td>3</td>
<td></td>
<td>This course addresses the importance of interdisciplinary teams in today’s health care and social service delivery systems for older adults. Issues include formation of teams, critical issues of aging, team care plans, and monitoring team functioning.</td>
</tr>
<tr>
<td>GEY</td>
<td>6402</td>
<td>Statistical Methods in Aging Research</td>
<td>3</td>
<td></td>
<td>The major goal of this course is to deliver fundamental quantitative research concepts that are useful in aging research. Other goals include hands-on exposure to secondary data analysis.</td>
</tr>
<tr>
<td>GEY</td>
<td>6403</td>
<td>Multivariate Statistical Analysis for Aging Research</td>
<td>3</td>
<td></td>
<td>This course will give students experience with many of today’s advanced statistical techniques. Primary emphasis will be on the description of these methods of analysis, situations in which their application is most appropriate, and hands-on experience.</td>
</tr>
<tr>
<td>GEY</td>
<td>6450</td>
<td>Gerontological Research and Planning</td>
<td>3</td>
<td></td>
<td>Social research and planning methods in the field of gerontology. Directed to the consumers of research findings-person whose positions call for the ability to interpret, evaluate, and apply the findings produced by others.</td>
</tr>
<tr>
<td>GEY</td>
<td>6461</td>
<td>Retirement and Long Term Care Housing for Elderly</td>
<td>3</td>
<td></td>
<td>This course will focus on population trends, housing and environment theory, need and availability of affordable housing with services, adapting homes for elders, and a number of age-related housing solutions. Not restricted to majors; not repeatable.</td>
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<tr>
<td>GEY</td>
<td>6500</td>
<td>Seminar in Principles of Administration</td>
<td>3</td>
<td></td>
<td>This course deals with management problems and practices in the administration of institutions in the field of aging. Consideration is given to federal and state legislation, the management of people, and fiscal management.</td>
</tr>
<tr>
<td>GEY</td>
<td>6600</td>
<td>Human Development and Aging</td>
<td>3</td>
<td></td>
<td>Normal aging, change and basic psychological processes will be examined from a human development perspective. Emphasis will be on middle aged and older adults in relation to Life Cycle Changes and Counseling Approaches.</td>
</tr>
<tr>
<td>GEY</td>
<td>6607</td>
<td>Alzheimer's Disease Management</td>
<td>3</td>
<td></td>
<td>This course will provide instruction on effective approaches for providing care to persons with Alzheimer’s disease and related disorders, successful behavior management, and operating a dementia program. Not restricted to majors; not repeatable.</td>
</tr>
<tr>
<td>GEY</td>
<td>6613</td>
<td>Physical Change and Aging</td>
<td>3</td>
<td></td>
<td>Common, normal and pathological physical changes associated with aging will be discussed as they affect behavior. Aspects of physical and mental illness and pharmacology with gerontological relevance will be surveyed.</td>
</tr>
<tr>
<td>GEY</td>
<td>6614</td>
<td>Aging and Mental Disorders</td>
<td>3</td>
<td></td>
<td>Examines mental disorders among older adults and special problems faced in geriatric assessment and intervention. Reviews DSM criteria and their application to older patients, including case studies of geriatric patients with complex comorbidities.</td>
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<tr>
<td>GEY</td>
<td>6616</td>
<td>Mental Health Assessment and Intervention with Older Adults</td>
<td>3</td>
<td>PR: GEY 6614</td>
<td>Designed to provide the mental health counselor with a basic understanding of evaluation principles and the application of assessment approaches to older adults.</td>
</tr>
<tr>
<td>GEY</td>
<td>6617</td>
<td>Gerontological Counseling Theories and Practice</td>
<td>3</td>
<td>PR: GEY 6614</td>
<td>Examination of mental health treatment modalities and approaches to counseling with older adults. Personality theories and their relationship to counseling will be included emphasizing the development of a treatment plan through the integration of assessment data.</td>
</tr>
<tr>
<td>GEY</td>
<td>6618</td>
<td>Gerontological Group and Family Counseling</td>
<td>3</td>
<td>PR: GEY 6614</td>
<td>An advanced course directed at clinical practice with older adults. Appropriate techniques and skills will be integrated with models of psychotherapy, counseling, and personality development. Primary focus will be on intervention with groups, families, and couples.</td>
</tr>
<tr>
<td>GEY</td>
<td>6626</td>
<td>Health, Ethnicity, and Aging</td>
<td>3</td>
<td></td>
<td>This course addresses aging among diverse racial and ethnic populations, cultural competency and health disparities inaccess to and utilization of services among persons from diverse racial and ethnic populations. Not restricted to majors; not repeatable.</td>
</tr>
<tr>
<td>GEY</td>
<td>6627</td>
<td>Women and Aging</td>
<td>3</td>
<td></td>
<td>The purpose of this course is to examine older women’s lives from a feminist perspective. Factors such as longer life expectancy and gender differences in health trajectories result in a disproportionate share of older women in the United States.</td>
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<tr>
<td>GEY</td>
<td>6643</td>
<td>End of Life Care for Dementia Patients</td>
<td>3</td>
<td></td>
<td>This course addresses progressive degenerative dementias: Alzheimer’s disease, dementia with Lewy bodies, vascular and fronto-temporal dementia, and will address treatment, medical, ethical and legal questions. Not restricted to majors. Not repeatable.</td>
</tr>
<tr>
<td>GEY</td>
<td>6646</td>
<td>Gerontological Issues and Concepts</td>
<td>3</td>
<td></td>
<td>This course presents the concepts, theories, and issues relevant to our aging society. Emphasis will be placed on generalized knowledge of the aging process, and implications for the individual, family, government, and society in general. Students will engage in spirited debate and gain important background that will prepare them for their other graduate work in Gerontology. Social Work, and related fields.</td>
</tr>
<tr>
<td>GEY</td>
<td>6901</td>
<td>Directed Reading</td>
<td>1-4</td>
<td></td>
<td>A reading program of selected topics under the supervision of a faculty member.</td>
</tr>
<tr>
<td>GEY</td>
<td>6910</td>
<td>Directed Research</td>
<td>1-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GEY</td>
<td>6934</td>
<td>Special Topics In Gerontology</td>
<td>3</td>
<td></td>
<td>Courses on topics such as preretirement, mental health, human services organization, and senior center administration.</td>
</tr>
<tr>
<td>GEY</td>
<td>6940</td>
<td>Field Placement</td>
<td>1-6</td>
<td></td>
<td>An internship in an agency or organization engaged in planning or administering programs for older people of in providing direct services for older people.</td>
</tr>
<tr>
<td>GEY</td>
<td>6941</td>
<td>Field Placement in Mental Health</td>
<td>1-6</td>
<td>PR: GEY 6616, GEY 6617 and GEY 6618</td>
<td>A highly structured supervised counseling experience providing mental health services to older adults.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>GEY</td>
<td>6971</td>
<td>Master’s Thesis</td>
<td>3-6</td>
<td></td>
<td>The Master’s Thesis for the MA in Gerontology is a research project designed to result in an original research product.</td>
</tr>
<tr>
<td>GEY</td>
<td>7404</td>
<td>Ph.D. Seminar in Grant Writing</td>
<td>3</td>
<td></td>
<td>This course is designed as a seminar for doctoral students pursuing a research career requiring outside funding for their research. Skills practiced include literature search, preparation of budgets, detail of research methods, and critique of proposals.</td>
</tr>
<tr>
<td>GEY</td>
<td>7602</td>
<td>Ph.D. Seminar in Health and Aging</td>
<td>3</td>
<td></td>
<td>This doctoral seminar focuses on issues of physical and functional health in older adults, including acute and chronic conditions. Specific content will be different each time. Repeatable twice for credit.</td>
</tr>
<tr>
<td>GEY</td>
<td>7604</td>
<td>Biomedical Aging</td>
<td>3</td>
<td></td>
<td>This course examines biomedical issues of aging, from the genetic to bodily systems levels. Emphasis is on cell structure, diseases of aging, cardiovascular, neurological, metabolic, and immune systems; diet/nutrition. Open to all majors; not repeatable.</td>
</tr>
<tr>
<td>GEY</td>
<td>7610</td>
<td>Psychological Issues of Aging: Interdisciplinary Perspective</td>
<td>3</td>
<td></td>
<td>This course provides an overview of theory &amp; research on individual human development and aging. Emphasis is on cognition, personality, psychopathology, stress and coping, care giving, and end-of-life issues. Open to all majors and not repeatable.</td>
</tr>
<tr>
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<tr>
<td>GEY</td>
<td>7611</td>
<td>Ph.D. Seminar in Mental Health</td>
<td>3</td>
<td></td>
<td>This doctoral seminar focuses on issues of mental health in older adults, including issues like depression, anxiety, and psychopathology. Specific content will vary. Repeatable twice for credit.</td>
</tr>
<tr>
<td>GEY</td>
<td>7622</td>
<td>Ph.D. Seminar in Policy and the Elderly</td>
<td>3</td>
<td></td>
<td>This course is designed to offer a comprehensive examination of the major public-policy issues generated by the health care needs of those ages 65 and older and the programs/institutions that have emerged to meet these needs.</td>
</tr>
<tr>
<td>GEY</td>
<td>7623</td>
<td>Social and Health Issues in Aging</td>
<td>3</td>
<td></td>
<td>This is a doctoral level class that addresses both social and health aspects of aging. Emphasis is on social and family context in aging, health policies, long term care, and racial and ethnic diversity. It is open to all majors and is not repeatable.</td>
</tr>
<tr>
<td>GEY</td>
<td>7649</td>
<td>Population Aging</td>
<td>3</td>
<td></td>
<td>PhD students in Aging Studies and others will develop an understanding of the causes/consequences of aging &amp; its effects on the populations of the U.S. and the world. Emphasis is on demographic, social, political, and economic processes. Not repeatable.</td>
</tr>
<tr>
<td>GEY</td>
<td>7651</td>
<td>Ph.D. Seminar in Cognition</td>
<td>3</td>
<td></td>
<td>This doctoral seminar focuses on issues of cognition in older adults, including learning and memory, and also addresses change and chronic conditions that affect them. Specific content will be different each time. Repeatable twice for credit.</td>
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<tr>
<td>GEY</td>
<td>7902</td>
<td>Directed Individual Study in Aging Studies</td>
<td>1-9</td>
<td></td>
<td>An advanced reading program of selected topics related to interdisciplinary avenues of inquiry under the supervision of an aging studies faculty member. A written contract describing the requirements must be signed by the student and faculty member prior to registration.</td>
</tr>
<tr>
<td>GEY</td>
<td>7911</td>
<td>Directed Research in Aging Studies</td>
<td>1-19</td>
<td></td>
<td>Research on selected topics in aging studies under the direct supervision of a member of the graduate faculty in aging studies.</td>
</tr>
<tr>
<td>GEY</td>
<td>7936</td>
<td>Proseminar in Aging Studies</td>
<td>1-10</td>
<td></td>
<td>Reading and discussion of current topics, books, articles, and papers in aging studies. Examination of theory and research issues in the field of gerontology. Students develop their dissertation research topics, preliminary review of literature, and present their dissertation research proposals.</td>
</tr>
<tr>
<td>GEY</td>
<td>7980</td>
<td>Dissertation and Doctoral</td>
<td>2-12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GIS</td>
<td>5049</td>
<td>GIS for Non-Majors</td>
<td>3</td>
<td>PR: GIS 5049</td>
<td>An introduction to the concepts underlying digital thematic mapping and geographical information systems (GIS) for non-geography majors and non-geography graduate students.</td>
</tr>
<tr>
<td>GIS</td>
<td>6038C</td>
<td>Remote Sensing</td>
<td>3</td>
<td>PR: GEO 4124C</td>
<td>Study of digital image processing techniques. Topics include filtering techniques, geometric and radiometric normalization, and classification algorithms with emphasis on developing.</td>
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<tr>
<td>GIS</td>
<td>6039</td>
<td>Remote Sensing Seminar</td>
<td>3</td>
<td>PR: GEO 5134C</td>
<td>Analytic study of selected topics in remote sensing. Discussions around topics include data acquisition, sensor systems, multispectral and radar image analysis, change detection, and integration of remote sensing with GIS.</td>
</tr>
<tr>
<td>GIS</td>
<td>6100</td>
<td>Advanced Geographic Information Systems</td>
<td>3</td>
<td></td>
<td>Spatial problem solving utilizing GIS mapping and statistical methods. The course is designed to give students hands-on experience in using computerized techniques for geographic analysis.</td>
</tr>
<tr>
<td>GIS</td>
<td>6112</td>
<td>Spatial Database Development</td>
<td>3</td>
<td>PR: GEO 6157</td>
<td>Development and management of spatial data for use in a Geographic Information System (GIS), including creating, editing, modifying and validating spatial data.</td>
</tr>
<tr>
<td>GIS</td>
<td>6306</td>
<td>Environmental Applications of Geographic Information Systems</td>
<td>3</td>
<td>PR: GEO 6157</td>
<td>Examination of GIS applications in agriculture, forestry, wildlife management, biodiversity conservation, environmental assessment, water resources, and pollution modeling. Use of advanced GIS analysis techniques relevant to the specific applications.</td>
</tr>
<tr>
<td>GIS</td>
<td>6307</td>
<td>GIS Seminar</td>
<td>3</td>
<td>PR: GIS 6100</td>
<td>Analytic study of selected topics in GIS. The course will familiarize students with case studies involving GIS applications in environmental studies, coastal modeling, and urban planning.</td>
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<tr>
<td>GIS</td>
<td>6355</td>
<td>Water Resources Applications of GIS</td>
<td>3</td>
<td>PR: GEO 6157</td>
<td>Examination of GIS applications in water resources, including watershed analysis, pollution modeling, and water resources modeling. Use of advanced GIS analysis techniques relevant to the specific applications.</td>
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<tr>
<td>GLY</td>
<td>5752</td>
<td>Geological Field Excursion</td>
<td>2</td>
<td></td>
<td>Lectures and 2-3 week field excursion to study regional geology, structure and lithogenesis of geologically complex terrain. Mapping and outcrop description techniques are emphasized. Destination of trip varies. Trip requires camping and vigorous physical activity. Lec.-field trip.</td>
</tr>
<tr>
<td>GLY</td>
<td>5865</td>
<td>Statistical Models in Geology</td>
<td>3</td>
<td>PR: STA 2023 or equivalent</td>
<td>Application of statistical methods to geological problems. Emphasis on sampling plans, nature of geologic distributions, and application of analyses of variance to solving geological problems. Lec.</td>
</tr>
<tr>
<td>GLY</td>
<td>5932</td>
<td>Selected Topics in Geology</td>
<td>1-4</td>
<td></td>
<td>Each topic is a course under the direction of a faculty member. All areas of geology included.</td>
</tr>
<tr>
<td>GLY</td>
<td>6075</td>
<td>Greenhouse-Icehouse Earth</td>
<td>3</td>
<td></td>
<td>This course is designed to investigate the differences between green- and icehouse climates through an examination of both the data employed to reconstruct past climates and the impact these changes have had on the Earth System.</td>
</tr>
<tr>
<td>GLY</td>
<td>6246</td>
<td>General Geochemistry</td>
<td>3</td>
<td>PR: One year college Chemistry</td>
<td>Age, formation and evolution of the earth with application of basic chemical concepts and processes that govern the distribution of elements in geologic environments.</td>
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<tr>
<td>GLY</td>
<td>6255</td>
<td>Tracer Geochemistry</td>
<td>3</td>
<td>PR: GLY 6246</td>
<td>The use of trace elements and isotopic ratios as tools for understanding geologic processes. The collection and interpretation of trace element/isotopic data. Lecture/Discussion/Lab.</td>
</tr>
<tr>
<td>GLY</td>
<td>6285C</td>
<td>Analytical Techniques in Geology</td>
<td>3</td>
<td>PR: One year college Chemistry, GLY 4310</td>
<td>Use and application of analytical methods including X-ray, atomic absorption, ICP/MS, TEM, SEM, and other geochemical techniques. Interpretation and statistical analysis of the data acquired. Lec/Lab.</td>
</tr>
<tr>
<td>GLY</td>
<td>6395C</td>
<td>Topics in Igneous and Metamorphic Petrology</td>
<td>2-4</td>
<td>PR: GLY 3311C or equivalent</td>
<td>Detailed study of selected igneous and/or metamorphic rock associations. Targeted sites will vary each semester. Modern methods of geochemical and mineralogical analysis (EPMA, ICP/DCP, XRD) will be employed. May be repeated up to 12 hrs. Lec/Lab.</td>
</tr>
<tr>
<td>GLY</td>
<td>6475C</td>
<td>Principles of Applied Geophysics</td>
<td>4</td>
<td>PR: One year of Physics</td>
<td>Elementary treatment of gravimetric, magnetic, electric, and seismic geophysical techniques as applied to resource exploration, site investigation, and mineral deposits. Lec/Lab. Field trips.</td>
</tr>
<tr>
<td>GLY</td>
<td>6492</td>
<td>Hydrogeology Internship Project</td>
<td>3</td>
<td></td>
<td>Internship project in applied hydrogeology. Required for hydrogeology-internship MS program (minimum 3 hours).</td>
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<tr>
<td>GLY</td>
<td>6557</td>
<td>Facies Models</td>
<td>3</td>
<td></td>
<td>Characterization of facies models for stratigraphic sequences representing terrestrial, transitional and marine sedimentary environments. Emphasis on textures, structures and composition of strata and their environmental interpretation in the rock record.</td>
</tr>
<tr>
<td>GLY</td>
<td>6573</td>
<td>Fluvial Hydrology and Geomorphology</td>
<td>3</td>
<td>PR: MAC 2311 or the equivalent.</td>
<td>The course covers the mechanics of open channel flows, primarily to understand the potential energy available to do work, and the geomorphic responses to work, including channel initiation, sediment transport, and channel adjustment.</td>
</tr>
<tr>
<td>GLY</td>
<td>6575C</td>
<td>Coastal Sedimentation</td>
<td>3</td>
<td>PR: GLY 4555 or equiv.</td>
<td>Study of modern coastal sedimentary environments with emphasis on beaches, inlets, deltas, estuaries, and marshes. Analysis of sedimentary process and resulting morphology of sediment bodies. Lec/Lab. Field trips.</td>
</tr>
<tr>
<td>GLY</td>
<td>6739</td>
<td>Selected Topics in Geology</td>
<td>1-4</td>
<td></td>
<td>Each topic is a course directed by a faculty member. All areas of geology are included.</td>
</tr>
<tr>
<td>GLY</td>
<td>6824</td>
<td>Ecohydrology</td>
<td>3</td>
<td>PR: MAC 2311 or the equivalent.</td>
<td>This course covers hydrological processes along the atmosphere-plant-soil continuum and the ways in which hydrological processes control ecological structure and function.</td>
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<tr>
<td>GLY</td>
<td>6827C</td>
<td>Advanced Hydrogeology</td>
<td>4</td>
<td>PR: GLY 4822, one year college calculus</td>
<td>Flow systems, analytical and numerical solutions to groundwater flow problems. Emphasis on the theoretical aspects of groundwater flow systems and their interaction with the geologic framework. Lec/Lab. Field trips.</td>
</tr>
<tr>
<td>GLY</td>
<td>6828</td>
<td>Ground-Water Geochemistry</td>
<td>3</td>
<td>PR: One year of college Chemistry, GLY 4822, G 6246</td>
<td>Chemical behavior of ground water. Includes interaction of water with aquifer materials, chemical effects of waste disposal, use of chemical tracers, and transport of hazardous chemicals. Methods of sampling and data interpretation are emphasized. Lec.</td>
</tr>
<tr>
<td>GLY</td>
<td>6836</td>
<td>Numerical Modeling of Hydrogeologic Systems</td>
<td>3</td>
<td>PR: GLY 6827C</td>
<td>An advanced graduate course in numerical modeling of hydrogeologic systems. Topics include flow and mass transport, modeling, model calibration, model assessment. Current public domain computer codes are used, including MODFLOW, MT3D, MODPATH and LICODE.</td>
</tr>
<tr>
<td>GLY</td>
<td>6905</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
<td>Independent study in which student must have a contract with an instructor.</td>
</tr>
<tr>
<td>GLY</td>
<td>6910</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td></td>
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<tr>
<td>GLY</td>
<td>6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GLY</td>
<td>7912</td>
<td>Directed Research</td>
<td>1-30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GLY</td>
<td>7980</td>
<td>Dissertation: Doctoral</td>
<td>2-19</td>
<td></td>
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</tr>
<tr>
<td>GMS</td>
<td>6000</td>
<td>Medical Science Success Skills</td>
<td>1-3</td>
<td></td>
<td>This course comprises a review of the material required for the biology and physics and mathematics and verbal sections of the MCAT exam.</td>
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<tr>
<td>GMS</td>
<td>6001</td>
<td>Foundation in Biomedical Sciences</td>
<td>4-8</td>
<td>PR:</td>
<td>A multidisciplinary course in the cellular, molecular, biochemical, and genetic basis of biomedical sciences, designed as a comprehensive first semester course for most incoming biomedical sciences graduate students.</td>
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<tr>
<td>GMS</td>
<td>6002</td>
<td>Success Skills in Biomedical Sciences</td>
<td>1</td>
<td>PR: GMS 6091</td>
<td>This course will introduce the beginning graduate student the tasks and skills necessary for success in the Biomedical Sciences PhD program, with a emphasis on ethical principles involved.</td>
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<tr>
<td>GMS</td>
<td>6004</td>
<td>Introduction to Medical Sciences</td>
<td>3-6</td>
<td>PR:</td>
<td>This course is based on medical cases hat students explore in small groups that are faculty facilitated. Each case is concluded with a series of traditional didactic lectures relevant to the case. A learning specialist will provide learning strategies.</td>
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<tr>
<td>GMS</td>
<td>6010</td>
<td>Personalized Medicine</td>
<td>3</td>
<td>PR: 1 yr. Biology; 1 yr. Chemistry.</td>
<td>The course is designed to introduce the various principles that influence the discipline of genomics and the application to personalized medicine which utilizes information on genes, proteins and the environment to prevent, diagnose and treat disease.</td>
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<tr>
<td>GMS</td>
<td>6012</td>
<td>Basic Medical Genetics</td>
<td>3</td>
<td>PR:</td>
<td>The course examines fundamental aspects of genetics critical to understanding the mechanisms and inheritance patterns of genetic diseases relevant to human health including clinical, biochemical and molecular genetics, cytogenetics and genetic counseling.</td>
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<tr>
<td>GMS</td>
<td>6020</td>
<td>Neuroscience</td>
<td>5-6</td>
<td></td>
<td>An introduction into basic structure and function of the central nervous system. Emphasis is on an integrated approach that focuses on several levels of organization from molecular to cellular, from neural systems to behavior.</td>
</tr>
<tr>
<td>GMS</td>
<td>6053</td>
<td>Cancer Prevention</td>
<td>3</td>
<td></td>
<td>Provide a broad understanding of the various sources of cancer and the array of potential prevention modalities and therapeutics.</td>
</tr>
<tr>
<td>GMS</td>
<td>6054</td>
<td>Cancer Biology</td>
<td>3</td>
<td></td>
<td>Designed to give a broad understanding and discussion of the biology of cancer cells and the changes in cell structure and function leading to malignancy and uncontrolled cell proliferation.</td>
</tr>
<tr>
<td>GMS</td>
<td>6055</td>
<td>Case Studies in Cancer Therapy</td>
<td>3</td>
<td>PR: GMS 6053 and GMS 6054</td>
<td>This course provides an in-depth discussion of selected patient case studies in integrative oncology and is designed to assist integration of the study of the basic principles and applications of integrative oncology to patient care.</td>
</tr>
<tr>
<td>GMS</td>
<td>6056</td>
<td>Targeted Cancer Therapies</td>
<td>3</td>
<td></td>
<td>This course is designed to focus on exploring targeted cancer therapies for a variety of specific forms of cancer together with the application of novel therapeutic regimes.</td>
</tr>
<tr>
<td>GMS</td>
<td>6058</td>
<td>Diet and Cancer</td>
<td>3</td>
<td></td>
<td>This course is designed to focus on the linkage between diet and dietary factors and cancer and to explore the role of nutritional interventions as part of novel therapies for modern approaches to cancer treatment.</td>
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<tr>
<td>GMS</td>
<td>6066</td>
<td>Molecular Medicine</td>
<td>11</td>
<td></td>
<td>A comprehensive introduction to molecular medicine with an emphasis on the integration of those aspects of biochemistry, cell biology and genetics that have immediate relevance to the understanding of various disease processes and their treatment.</td>
</tr>
<tr>
<td>GMS</td>
<td>6067</td>
<td>Current Topics in Molecular Medicine</td>
<td>1</td>
<td></td>
<td>A Journal Club in which graduate students and faculty present recent research publications of importance to molecular medicine.</td>
</tr>
<tr>
<td>GMS</td>
<td>6069</td>
<td>Translational Biotechnology</td>
<td>3</td>
<td></td>
<td>The course teaches how the results of biological, biomedical and bioengineering research can be translated into applicable procedures and products and enhances the information via site visits to local non-profit and for-profit biotech institutions.</td>
</tr>
<tr>
<td>GMS</td>
<td>6091</td>
<td>Responsible Conduct in Research</td>
<td>1</td>
<td></td>
<td>This course will introduce the beginning graduate to the principles of responsible conduct in research, and how decisions made on a daily basis in the life of a scientist depend on these core principles.</td>
</tr>
<tr>
<td>GMS</td>
<td>6092</td>
<td>Principles of Intellectual Property</td>
<td>3</td>
<td></td>
<td>This course focuses on the principles of intellectual property as related to protection of new technologies/products and will examine strategies using the legal structure of patents, copyrights, trademarks, and trade secrets. No restrictions or repeats.</td>
</tr>
<tr>
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<tr>
<td>GMS</td>
<td>6093</td>
<td>Clinical and Translational Mentored Research</td>
<td>1-12</td>
<td></td>
<td>Course facilitates Clinical and Translational research at USF. Restricted to majors. In class presentations by incoming and advanced students and professors with review and discussions to support students’ research efforts. Repeatable: Total max 12 cr.</td>
</tr>
<tr>
<td>GMS</td>
<td>6094</td>
<td>Biomedical Ethics</td>
<td>3</td>
<td></td>
<td>This course will focus on biomedical ethical issues in business, research, clinical care, and technology development in the Life Sciences and healthcare industries. There are no restrictions, may be taken for credit (3 credits) once.</td>
</tr>
<tr>
<td>GMS</td>
<td>6100</td>
<td>Medical Microbiology</td>
<td>3</td>
<td></td>
<td>Lecture, directed literature readings, and discussion form the basis to instruct graduate and advanced undergraduate students in Medical Microbiology. The course will now cover pathobiology and molecular biology of medically important bacteria.</td>
</tr>
<tr>
<td>GMS</td>
<td>6101</td>
<td>Molecular and Cellular Immunology</td>
<td>3-4</td>
<td>PR: Gen Biology, Organic Chem, Genetic(rec), Biochemistry(rec), Intro Immunology(rec)</td>
<td>Lecture, directed literature readings, and discussion form the basis to instruct graduate and advanced undergraduate students in development, function, regulation, pathobiology, and conduct of research in medically relevant immunity.</td>
</tr>
<tr>
<td>GMS</td>
<td>6103</td>
<td>Foundations in Medical Microbiology and Immunology</td>
<td>4</td>
<td>PR: GMS6001 or equivalent.</td>
<td>This course is designed to provide students with a basic understanding of the immune system and basic concepts in microbiology and infectious diseases using representative pathogens. This course is for doctoral and research-oriented master's students.</td>
</tr>
<tr>
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<tr>
<td>GMS</td>
<td>6104</td>
<td>Cellular Immunology</td>
<td>3</td>
<td></td>
<td>Current concepts of cellular interactions in the immune response.</td>
</tr>
<tr>
<td>GMS</td>
<td>6107</td>
<td>Advances in Virology</td>
<td>2</td>
<td></td>
<td>Lecture, directed literature readings, and discussion form the basis to instruct graduate and advanced undergraduate students in Medical Virology. The course will now cover pathobiology and molecular biology of medically important viruses.</td>
</tr>
<tr>
<td>GMS</td>
<td>6110</td>
<td>Microbial Pathogenesis and Host-Parasite Interactions</td>
<td>3</td>
<td></td>
<td>This course examines the basic concepts in microbial pathogenesis using select medically important microorganisms as examples. It studies the reciprocal interactions that take place between human host and microbial pathogen.</td>
</tr>
<tr>
<td>GMS</td>
<td>6111</td>
<td>Basic Medical Pathology</td>
<td>3</td>
<td></td>
<td>This lecture course focuses on disease processes and their causes.</td>
</tr>
<tr>
<td>GMS</td>
<td>6114</td>
<td>Vaccines And Applied Immunology</td>
<td>2</td>
<td></td>
<td>Lectures and discussion concerned with the immunological aspects of vaccine development against infectious agents and cancer including discussions on mechanisms, experimental approaches and development problems.</td>
</tr>
<tr>
<td>GMS</td>
<td>6115</td>
<td>Medical Parasitology and Mycology</td>
<td>3</td>
<td></td>
<td>This course provides students with a detailed understanding of medical parasitology and mycology using select medically important parasites and fungi to examine the multi-faceted adaptations of these microbial pathogens to infect the human host.</td>
</tr>
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<tr>
<td>GMS</td>
<td>6130</td>
<td>Molecular Biology of Tumor Viruses</td>
<td>2</td>
<td></td>
<td>This course is focused on tumor viruses which are involved in the pathogenesis of cancer and utilized in gene therapy as vectors. The lectures will cover current concepts of the field, specific viral genes and gene products involved in cancer, and molecular mechanisms by which viruses transform normal cells to cancer cells.</td>
</tr>
<tr>
<td>GMS</td>
<td>6141</td>
<td>Basic Medical Immunology and Microbiology</td>
<td>3</td>
<td>PR: 1 yr. Biology; 1 yr. Chemistry</td>
<td>The course focuses on the fundamental aspects of immunology and microbiology that are critical to understanding the nature of the immune response and identify the various microbiological agents that are relevant to human health and disease.</td>
</tr>
<tr>
<td>GMS</td>
<td>6142</td>
<td>Cancer Immunology</td>
<td>3</td>
<td></td>
<td>Provide a broad understanding of the role of immunity in cancer biology and the potential applications of immunological methods in cancer therapies.</td>
</tr>
<tr>
<td>GMS</td>
<td>6183</td>
<td>Clinical Research Methods</td>
<td>3</td>
<td>PR: General Biology (1 year), General Chemistry (1 year)</td>
<td>The course will provide a foundation for healthcare providers to pursue investigator-initiated clinical research. It is not restricted to majors or nonmajors and cannot be repeated for credit.</td>
</tr>
<tr>
<td>GMS</td>
<td>6194</td>
<td>Biotechnology Forum</td>
<td>1</td>
<td></td>
<td>The course aims to provide students with an overview about the applications of modern biotechnology in industrial settings. The seminars focus on the development of diagnostics therapies drugs and drug delivery systems 20 biotechnology students.</td>
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<tr>
<td>GMS</td>
<td>6200C</td>
<td>Biochemistry, Molecular and Cellular Biology</td>
<td>5</td>
<td></td>
<td>The overall objectives of GMS 6200 are to provide students with a solid foundation of biochemical principles and a fundamental understanding of structures and processes of living systems at the molecular and cellular levels.</td>
</tr>
<tr>
<td>GMS</td>
<td>6201</td>
<td>Basic Medical Biochemistry</td>
<td>3</td>
<td>PR: 1 year Biology; 1 year Chemistry.</td>
<td>The course examines fundamental aspects of biochemistry critical to understanding the chemical and cellular mechanisms relevant to health and disease including intermediary metabolism, enzymology and storage and transfer of genetic information.</td>
</tr>
<tr>
<td>GMS</td>
<td>6240</td>
<td>Metabolic Approaches to Pediatrics</td>
<td>3</td>
<td></td>
<td>Provides participants with a detailed understanding of the important linkage between nutrition, metabolism and the clinical management of both mothers and pediatric patients.</td>
</tr>
<tr>
<td>GMS</td>
<td>6310</td>
<td>Toxic Metals &amp; Functional Toxicology</td>
<td>3</td>
<td></td>
<td>Designed to give a broad understanding of the central role that various heavy metals, such as As, Hg &amp; Pb, and other toxins have in the progression of various pathological conditions.</td>
</tr>
<tr>
<td>GMS</td>
<td>6323</td>
<td>Pathology Case Studies 1</td>
<td>2</td>
<td></td>
<td>This course emphasizes principles of pathology, including cell injury, inflammation, immunopathology, neoplasia and congenital and environmental pathology, by focusing on the anatomical, pathophysiological and pathologies in the musculoskeletal system.</td>
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<tr>
<td>GMS</td>
<td>6324</td>
<td>Pathology Case Studies 2</td>
<td>2</td>
<td>2</td>
<td>This course emphasizes principles of pathology, including cell injury, inflammation, immunopathology, neoplasia and congenital and environmental pathology, by focusing on the anatomical, pathophysiological and pathologies in the gastrointestinal system.</td>
</tr>
<tr>
<td>GMS</td>
<td>6325</td>
<td>Pathology Case Studies 3</td>
<td>2</td>
<td>2</td>
<td>This course emphasizes the principles of pathology, including cell injury, inflammation, immunopathology, neoplasia and congenital and environmental pathology, by focusing on the anatomical, pathophysiological and pathologies in the neurological system.</td>
</tr>
<tr>
<td>GMS</td>
<td>6326</td>
<td>Pathology Case Studies 4</td>
<td>2</td>
<td>2</td>
<td>This course emphasizes the principles of pathology, including cell injury, inflammation, immunopathology, neoplasia and congenital and environmental pathology, by focusing on the anatomical, pathophysiological and pathologies in the reproductive system.</td>
</tr>
<tr>
<td>GMS</td>
<td>6331</td>
<td>Stem Cell Biology</td>
<td>3</td>
<td></td>
<td>Designed to give a broad understanding of the biology of stem cells and their potential role in the treatment of various pathological conditions.</td>
</tr>
<tr>
<td>GMS</td>
<td>6334</td>
<td>Pathobiology of Human Cancer</td>
<td>3</td>
<td></td>
<td>Using tissue-related oncology topics that complement molecular biology &amp; experimental therapeutics, this graduate course will provide the morphologic and biologic basis of human cancer. This course is not restricted and is repeatable for 3 credits.</td>
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<tr>
<td>GMS</td>
<td>6340</td>
<td>Laboratory Fundamentals and Adjunct Cancer Therapies</td>
<td>3</td>
<td></td>
<td>This course presents an extensive review of clinical laboratory fundamentals as part of the disease diagnosis process together with discussions of the therapies designed to reverse adverse cellular functions and adjunct therapies for cancer management.</td>
</tr>
<tr>
<td>GMS</td>
<td>6380</td>
<td>Medicine and Gender</td>
<td>3</td>
<td></td>
<td>This course covers biological differences between men and women in the central nervous system, cardiovascular system, and the immune system. Women’s health topics include gestational diabetes, obesity and breast feeding and men’s reproductive health.</td>
</tr>
<tr>
<td>GMS</td>
<td>6400C</td>
<td>Core Physiology</td>
<td>4-6</td>
<td></td>
<td>This course is designed to give the beginning graduate student an insight into the basic functions of the human body. This will be approached from molecular, cellular, organ system and total organism aspects.</td>
</tr>
<tr>
<td>GMS</td>
<td>6403</td>
<td>Endocrine Mechanisms</td>
<td>4</td>
<td></td>
<td>An examination of current concepts of endocrine and neuroendocrine systems. Emphasis will be placed on control at the organismal and organ system levels.</td>
</tr>
<tr>
<td>GMS</td>
<td>6404</td>
<td>Systems Neurophysiology</td>
<td>4</td>
<td></td>
<td>Considers current topics in systems neurophysiology including sensory processing, motor control, and learning. Literature in both invertebrate and vertebrate animal models and neural network simulations is considered.</td>
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<tr>
<td>GMS</td>
<td>6410</td>
<td>Cardiovascular Regulation</td>
<td>4</td>
<td>PR: GMS 6001, GMS 6440, GMS 6505.</td>
<td>The course involves discussions/advanced readings of current trends in many aspects of the cardiovascular system including cardiac function, vascular biology, and signaling.</td>
</tr>
<tr>
<td>GMS</td>
<td>6411</td>
<td>Metabolic Cardiology</td>
<td>3</td>
<td></td>
<td>Examines the interrelationship between metabolic dis-regulation and cardiovascular disease focusing on the interrelationship between diabetes and increased risk for cardiovascular events.</td>
</tr>
<tr>
<td>GMS</td>
<td>6418</td>
<td>Core Principles and the Musculoskeletal System</td>
<td>3-7</td>
<td></td>
<td>Emphasized in this course are those aspects of fundamental biochemistry, cell biology, and genetics, the anatomy of the musculoskeletal system, and the development of human behavior that have immediate relevance for clinical medicine.</td>
</tr>
<tr>
<td>GMS</td>
<td>6419</td>
<td>Excretory, Endocrine and Reproductive Systems</td>
<td>3-7</td>
<td>PR: GMS 6411.</td>
<td>Emphasis on aspects of the gastrointestinal, endocrine, renal and reproductive systems that have immediate relevance for clinical medicine. Restricted to MSMS students in the IMS concentration.</td>
</tr>
<tr>
<td>GMS</td>
<td>6431</td>
<td>Cell Physiology</td>
<td>4</td>
<td></td>
<td>Examine organelles and macromolecular complexes of eukaryotic cells with respect to structural and functional roles in major cellular activities. Emphasizes on experimental basis for factual knowledge in modern cell biology, discusses the validity of current concepts in relation to the regulation of cellular functions. Suitable for first and second year graduate students.</td>
</tr>
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<tr>
<td>GMS</td>
<td>6433</td>
<td>Membrane Physiology</td>
<td>4</td>
<td></td>
<td>Advanced readings and discussion of the molecular physiology of excitable membranes.</td>
</tr>
<tr>
<td>GMS</td>
<td>6440</td>
<td>Basic Medical Physiology</td>
<td>3</td>
<td>PR: 1 yr. Biology; 1 yr. Chemistry.</td>
<td>The course presents a concise introduction to the study of human physiology from a perspective of the function of various human organ systems with an emphasis on understanding important concepts and their correlation to the practice of clinical medicine.</td>
</tr>
<tr>
<td>GMS</td>
<td>6441</td>
<td>Clinical Approaches to Endocrinology</td>
<td>3</td>
<td></td>
<td>The course focuses on the function of the human endocrine system and examines factors influencing hormone function and physiological hormone balance. Clinical approaches to achieve hormone homeostasis are emphasized including hormone replacement therapy.</td>
</tr>
<tr>
<td>GMS</td>
<td>6442</td>
<td>Nutrition, Obesity and Metabolism</td>
<td>3</td>
<td></td>
<td>Designed to give a broad understanding and discussion of the links between human nutrition and obesity and the role of intermediary metabolism in weight management.</td>
</tr>
<tr>
<td>GMS</td>
<td>6443</td>
<td>Promoting Organizational Wellness</td>
<td>3</td>
<td></td>
<td>Designed to provide an introduction to methods to establish integrative weight loss, obesity and wellness programs at various types of institutions as an integral and effective support component for long term patient compliance in weight management.</td>
</tr>
<tr>
<td>GMS</td>
<td>6444</td>
<td>Co-Active Coaching</td>
<td>3</td>
<td></td>
<td>This course explores current developments in the co-active coaching model of behavior modification and how to establish sustainable patient relationships.</td>
</tr>
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<tr>
<td>GMS</td>
<td>6445</td>
<td>Integrative Lifestyle Medicine</td>
<td>3</td>
<td></td>
<td>This course explores the process of patient counseling in lifestyle medicine with topics that include nutritional depletions, the concept of foods as nutrients, vitamins, minerals and herbal therapies and their importance in patient treatments.</td>
</tr>
<tr>
<td>GMS</td>
<td>6446</td>
<td>Sports Medicine and Nutrition</td>
<td>3</td>
<td></td>
<td>Focuses on an introduction to the integration of nutritional principles into maintaining and enhancing the health and performance of athletes whether at the collegiate, high school, middle school, or professional level.</td>
</tr>
<tr>
<td>GMS</td>
<td>6447</td>
<td>Advanced Male Endocrinology</td>
<td>3</td>
<td></td>
<td>The course focuses on advanced endocrinology in the male patient including male sexuality, late-life hypogonadism, benign prostatic hyperplasia, lower urinary tract symptoms, prostate cancer and hormonal therapies and nutrition and the aging male.</td>
</tr>
<tr>
<td>GMS</td>
<td>6448</td>
<td>Advanced Endocrine Therapies</td>
<td>3</td>
<td></td>
<td>The course is designed to provide advanced discussion of female endocrinology and focuses on topics including estrogen metabolism, breast cancer and advanced therapies in dysmenorrhea, vulvodynia, cervical dysplasia, endometriosis, fibrocystic disease.</td>
</tr>
<tr>
<td>GMS</td>
<td>6451</td>
<td>Nutrition and Metabolism</td>
<td>3</td>
<td></td>
<td>The course provides a discussion of the experimental analysis of human nutrition and the methods used in detoxification of exogenous toxins together with a critical analysis of the roles of fatty acid and amino acid metabolism in organ homeostasis.</td>
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<tr>
<td>GMS</td>
<td>6452</td>
<td>Clinical Nutrition</td>
<td>3</td>
<td></td>
<td>A course that is designed to provide a thorough foundation in all aspects of human nutrition and which emphasizes the close relationship between nutrition and various chronic diseases and includes obesity, weight management and life-cycle nutrition.</td>
</tr>
<tr>
<td>GMS</td>
<td>6453</td>
<td>Functional Approach to Diabetes and Coronary Heart</td>
<td>3</td>
<td></td>
<td>The course examines specific aspects of diabetes and coronary heart disease critical to understanding factors that result in degraded cardiovascular tone and the cellular mechanisms that control carbohydrate metabolism and their role in various diseases.</td>
</tr>
<tr>
<td>GMS</td>
<td>6454</td>
<td>Functional Medicine and Infectious Disease</td>
<td>3</td>
<td></td>
<td>This course covers advanced human nutrition together with the utilization of various botanical supplements that have been applied to metabolic and nutritional medicine. A functional approach to infectious diseases will also be explored.</td>
</tr>
<tr>
<td>GMS</td>
<td>6455</td>
<td>Clinical Intensives in Metabolic and Nutri. Medicine</td>
<td>3</td>
<td></td>
<td>The course focuses on the applied aspects of metabolic and nutritional medicine, including extensive patient contact and mentoring from qualified clinical experts, to provide practical experience to improve the clinical skills of the practitioner.</td>
</tr>
<tr>
<td>GMS</td>
<td>6456</td>
<td>Integrated Bariatrics</td>
<td>3</td>
<td></td>
<td>Integrated Bariatrics is designed to provide a detailed understanding of the interplay between the factors that influence weight gain weight loss and obesity.</td>
</tr>
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<tr>
<td>GMS</td>
<td>6457</td>
<td>Integrative Weight Management</td>
<td>3</td>
<td></td>
<td>Detailed examination of the genetic, metabolic, nutritional and environmental factors associated with weight gain and obesity and appropriate therapies used to treat obesity.</td>
</tr>
<tr>
<td>GMS</td>
<td>6458</td>
<td>Metabolic Triads</td>
<td>3</td>
<td></td>
<td>Detailed understanding of the important aspects of the various organ and metabolic pathway interrelationships together with various disturbances that can result in a wide variety of pathophysiological diseases.</td>
</tr>
<tr>
<td>GMS</td>
<td>6461</td>
<td>Systems Physiology and Pharmacology</td>
<td>5</td>
<td></td>
<td>This course will serve as an introduction into human physiology and pharmacology, emphasizing systemic function. The course is not restricted to majors, and is not repeatable.</td>
</tr>
<tr>
<td>GMS</td>
<td>6480</td>
<td>Cardiovascular Disease</td>
<td>3</td>
<td></td>
<td>Provide a detailed understanding of the important physiological, nutritional and genetic aspects that influence the progression of cardiovascular disease coupled with an examination of novel therapeutic regimes.</td>
</tr>
<tr>
<td>GMS</td>
<td>6482</td>
<td>Cardiovascular Health</td>
<td>3</td>
<td></td>
<td>The course is designed to provide a detailed understanding of the important aspects of maintaining the integrity of cardiovascular function together with developing appropriate therapies to effectively treat various forms of cardiovascular disease.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>GMS</td>
<td>6505</td>
<td>Basic Medical Pharmacology</td>
<td>3</td>
<td>PR: 1 yr. Biology; 1 yr. Chemistry.</td>
<td>The course presents a concise introduction to human pharmacology, emphasizing an understanding of the pharmacology principles that govern interaction between drugs, xenobiotics and humans and the relationship to modern medical diagnostics and therapy.</td>
</tr>
<tr>
<td>GMS</td>
<td>6511</td>
<td>Current Literature in Pharmacology</td>
<td>1</td>
<td></td>
<td>This course is designed to help students develop skills in the analysis of pharmacological data through discussions of scientific literature and written critiques of departmental seminars. In addition, students will gain knowledge of ongoing research in selected areas of pharmacological interest.</td>
</tr>
<tr>
<td>GMS</td>
<td>6512</td>
<td>Ion Channel Pharmacology and Disease</td>
<td>3</td>
<td></td>
<td>This course is designed to familiarize students with the role of ion channels in the genesis of pathophysiological conditions and how these proteins may be targeted for therapeutic intervention.</td>
</tr>
<tr>
<td>GMS</td>
<td>6513</td>
<td>Principles of Pharmacology and Therapeutics</td>
<td>3</td>
<td></td>
<td>This course is designed to familiarize students with basic principles of pharmacology and therapeutics. Students will be exposed to classical concepts of pharmacology such as drug-receptor interactions as well as modern techniques such as gene therapy.</td>
</tr>
<tr>
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<tr>
<td>GMS</td>
<td>6514</td>
<td>Instructional Skills in Pharmacology</td>
<td>1</td>
<td></td>
<td>Students are given practical experience in current teaching techniques including an understanding the purpose of lecture, small groups and evaluation. There is direct faculty supervision and critique following direct classroom experience.</td>
</tr>
<tr>
<td>GMS</td>
<td>6541</td>
<td>Pharmacology for Health Professionals</td>
<td>4</td>
<td>CR: Physiology.</td>
<td>The basic principles of pharmacology (pharmacodynamics &amp; pharmacokinetics) will be presented along with major drug classes (analgesics, antibiotics, cardiovascular drugs, central nervous system drugs.</td>
</tr>
<tr>
<td>GMS</td>
<td>6550</td>
<td>Introduction to IV Therapies</td>
<td>3</td>
<td></td>
<td>Provides students with a basic understanding of the clinical implications of the application of intravenous therapy to treat various physiological conditions and for advanced nutritional.</td>
</tr>
<tr>
<td>GMS</td>
<td>6601</td>
<td>Methods of Electron Microscopy in Medical Research</td>
<td>3</td>
<td>PR: GMS 6608</td>
<td>This lecture and laboratory course deals with theoretical and technical issues regarding the use of the electron microscope in biomedical research.</td>
</tr>
<tr>
<td>GMS</td>
<td>6604</td>
<td>Human Embryology</td>
<td>3</td>
<td></td>
<td>This course deals with the structural and functional development of the human from conception to birth.</td>
</tr>
<tr>
<td>GMS</td>
<td>6605</td>
<td>Basic Medical Anatomy</td>
<td>3</td>
<td>PR: 1 year Biology; 1 year Chemistry.</td>
<td>The course focuses on a basic introduction to human anatomy and how anatomical concepts relate to the organization of the body at a macroscopic level for each organ and how each of the organs and organ systems function in their role in normal homeostasis.</td>
</tr>
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<tr>
<td>GMS</td>
<td>6608</td>
<td>Advanced Microscopic Anatomy</td>
<td>3-6</td>
<td></td>
<td>This lecture and laboratory course examines the human organism at the microscopic level, focusing on cellular morphology and the histological organization of tissues and organ systems.</td>
</tr>
<tr>
<td>GMS</td>
<td>6609</td>
<td>Advanced Human Gross Anatomy</td>
<td>6-12</td>
<td></td>
<td>This lecture and laboratory course focuses on the anatomical relationships between various structures that comprise the human body.</td>
</tr>
<tr>
<td>GMS</td>
<td>6610</td>
<td>Advanced Neuroanatomy</td>
<td>3-6</td>
<td></td>
<td>This lecture and laboratory course deals with the structure and function of the human nervous system. The course is organized using both regional and systemic approaches.</td>
</tr>
<tr>
<td>GMS</td>
<td>6611</td>
<td>Introduction to Anatomical Research</td>
<td>1-3</td>
<td></td>
<td>This course consists of scheduled rotations through the laboratory of at least three members of the anatomy department faculty.</td>
</tr>
<tr>
<td>GMS</td>
<td>6612</td>
<td>Supervised Teaching in Human Anatomy</td>
<td>1-3</td>
<td>GSM 6608, 6609, or 6610</td>
<td>This course deals with the philosophy and mechanics of teaching. The course also involves supervised, practical experience in the various aspects of teaching in both the class-room and laboratory.</td>
</tr>
<tr>
<td>GMS</td>
<td>6630</td>
<td>Basic Medical Histology</td>
<td>3</td>
<td>1 year Biology; 1 year Chemistry.</td>
<td>The course introduces the principles of histology, how they govern the structure and function of cell types and the organization of the tissues involved in organ architecture and function and how staining techniques identify cells at the molecular level.</td>
</tr>
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<tr>
<td>GMS</td>
<td>6671</td>
<td>A Brief History of Medical Sciences</td>
<td>2</td>
<td></td>
<td>This course is composed of five traditional didactic lectures, mini-presentations (10-15 min) by students on landmark advances in Anatomy and Pathology, and a submission of a brief paper based on these presentations.</td>
</tr>
<tr>
<td>GMS</td>
<td>6706</td>
<td>Basic Medical Neuroscience</td>
<td>3</td>
<td>PR: 1 year Biology; 1 year Chemistry.</td>
<td>The course focuses on the function of the human nervous system and examines nerve cell biology and how cells are organized into functional systems. Structure/function relationships are emphasized including examples of abnormal cell function in disease.</td>
</tr>
<tr>
<td>GMS</td>
<td>6707</td>
<td>Medical Neuroscience</td>
<td>3-7</td>
<td>PR: GMS 6418.</td>
<td>Emphasized in this course are those aspects of the nervous systems that have immediate relevance for clinical medicine. This course is restricted to students enrolled in the Masters of Science with a concentration in interdisciplinary medical sciences.</td>
</tr>
<tr>
<td>GMS</td>
<td>6708</td>
<td>Neuroimmunology</td>
<td>3</td>
<td></td>
<td>Designed to provide an in-depth review of topics related to immunology in the nervous system.</td>
</tr>
<tr>
<td>GMS</td>
<td>6710</td>
<td>Introduction to Behavioral Medicine</td>
<td>4</td>
<td>PR: GMS 6066.</td>
<td>Behavioral Medicine is the study of factors influencing normal human behavior such as human development, family dynamics and reaction to illness. This course will examine how illness causes changes in behavior and a basic introduction to psychopathology.</td>
</tr>
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<tr>
<td>GMS</td>
<td>6712</td>
<td>Approach Clinical And Behavioral Research Adolescent</td>
<td>3</td>
<td>PR: GENERAL BIOLOGY (1 YEAR), GENERAL CHEMISTRY (1 YEAR).</td>
<td>The course will address quantitative and qualitative research methods to study adolescent hiv/aids. The course is not restricted to majors or nonmajors and is not repeatable for credit.</td>
</tr>
<tr>
<td>GMS</td>
<td>6714</td>
<td>Nutrition Counseling</td>
<td>3</td>
<td></td>
<td>Focuses on the important linkage between lifestyle modification and appropriate nutritional activities to support optimum health and explores various motivational approaches to effect nutritional change as part of lifestyle change.</td>
</tr>
<tr>
<td>GMS</td>
<td>6715</td>
<td>Lifestyle Coaching</td>
<td>3</td>
<td></td>
<td>Focuses on the important facets of behavior change and how to encourage patients to alter lifestyle habits for a progressive approach to &quot;wellness&quot; using motivational approaches to effect these lifestyle modifications.</td>
</tr>
<tr>
<td>GMS</td>
<td>6716</td>
<td>Neuropsychiatry</td>
<td>3</td>
<td></td>
<td>Focuses on an introduction to the field of neuropsychiatry and its role in the evaluation and treatment of various mental disorders associated with the mind and nervous system.</td>
</tr>
<tr>
<td>GMS</td>
<td>6735</td>
<td>Neuropharmacology</td>
<td>3</td>
<td></td>
<td>This course will familiarize students with information on the biochemical basis of neural regulatory systems in the brain and the application of the latest approaches to the study of neurotransmitters and drug action in the nervous system.</td>
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<tr>
<td>GMS</td>
<td>6751</td>
<td>Integrated Clinical Neurobiology</td>
<td>3</td>
<td></td>
<td>The course introduces the principles of neurology and the role of neurotransmitters in cellular function and communication between cell types and focuses on gastrointestinal health in relationship to the immune system and neurotransmitter function.</td>
</tr>
<tr>
<td>GMS</td>
<td>6752</td>
<td>Autoimmune Diseases and Cognitive Function</td>
<td>3</td>
<td></td>
<td>Basic and clinical aspects of memory enhancement and memory loss are described together with the physiological changes that result from various autoimmune diseases and the critical roles of mitochondria in energy metabolism and oxidative stress.</td>
</tr>
<tr>
<td>GMS</td>
<td>6753</td>
<td>The Basics of Brain Fitness and Memory Management</td>
<td>3</td>
<td></td>
<td>Provides an in-depth discussion of the central roles that brain fitness and memory management contribute to the function of cognition and the various therapies applicable to treat cognitive decline.</td>
</tr>
<tr>
<td>GMS</td>
<td>6754</td>
<td>Memory Loss</td>
<td>3</td>
<td></td>
<td>The course explores the evaluation of memory loss and the differential diagnoses of a variety of disorders with varying degrees of cognitive decline or dementia together with the examination of medications that can be applied as disease-modifying agents.</td>
</tr>
<tr>
<td>GMS</td>
<td>6755</td>
<td>How the Brain Learns</td>
<td>3</td>
<td></td>
<td>This course is designed to provide participants with a detailed understanding of the important aspects of brain development and metabolism.</td>
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<tr>
<td>GMS</td>
<td>6756</td>
<td>Brain Fitness Therapies</td>
<td>3</td>
<td></td>
<td>This course is designed to provide a detailed understanding of the neuroanatomical underpinnings of disease and important facets of long-term memory impairments and how to develop effective therapies to treat declining memory fidelity and dementia.</td>
</tr>
<tr>
<td>GMS</td>
<td>6770</td>
<td>A Metabolic Approach to Pain Management</td>
<td>3</td>
<td></td>
<td>Provides an in-depth discussion of the central role that pain management contributes to the treatment of the chronic pain patient which has been identified as one of the top two reasons patients seek medical care.</td>
</tr>
<tr>
<td>GMS</td>
<td>6771</td>
<td>Aging and Neuroscience</td>
<td>3</td>
<td></td>
<td>An overview of the aging central nervous system (CNS): normal structure and function, age-related changes, effects of traumatic brain injury and neurodegenerative diseases, and current and future CNS therapies.</td>
</tr>
<tr>
<td>GMS</td>
<td>6772</td>
<td>The Spinal Cord: Development, Pathology and Therapy</td>
<td>3</td>
<td></td>
<td>The course is a series of lectures/discussions by Department and College of Medicine faculty on spinal cord anatomy, normal development, physiology and pathology. Current and future treatments for spinal cord injuries and diseases will also be discussed.</td>
</tr>
<tr>
<td>GMS</td>
<td>6773</td>
<td>Stem Cells and Brain Repair</td>
<td>3</td>
<td></td>
<td>This course will provide students with knowledge of basic issues in stem cell research today, with a focus on the treatment of brain injuries and disease. The class format is lectures and discussion of seminal articles in the field.</td>
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<td>SUB</td>
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<tr>
<td>GMS</td>
<td>6840</td>
<td>Cultural and Diversity Issues in Clinical Research</td>
<td>2</td>
<td></td>
<td>Promotes understanding of reasons for including the broadest populations possible in clinical research studies in terms of culture, race, ethnicity, gender, age, literacy, sexual orientation, socioeconomic status. Instructor permission, not repeatable.</td>
</tr>
<tr>
<td>GMS</td>
<td>6841</td>
<td>Fundamentals of Translational Research</td>
<td>1</td>
<td></td>
<td>Introduction to the interface between clinical and basic research. How to include basic research hypotheses in the design of clinical studies to advance knowledge in applying basic/clinical research to patient care. Instructor permission. Not repeatable.</td>
</tr>
<tr>
<td>GMS</td>
<td>6843</td>
<td>Scientific Communication</td>
<td>2</td>
<td></td>
<td>Course teaches principles to improve scientific communication. Provides practical experience on preparing abstracts, presenting research to professionals/the public and how to publish in peer-reviewed journals. Instructor permission. Not repeatable.</td>
</tr>
<tr>
<td>GMS</td>
<td>6844</td>
<td>Principles of Patient-Oriented Research</td>
<td>1</td>
<td></td>
<td>Introduction to the Scholars in Patient-Oriented Research (SPOR) Program. Assists in identifying important clinical and translational research questions, approaches, sources of support and regulatory issues. Instructor permission. Not repeatable.</td>
</tr>
<tr>
<td>GMS</td>
<td>6849</td>
<td>Approach Clinical and Behavioral Research Adolescent: Focus on HIV</td>
<td>3</td>
<td>PR: General Biology (1 year), General Chemistry (1 year).</td>
<td>The course will address quantitative and qualitative research methods to study adolescent HIV/AIDS. The course is not restricted to majors or nonmajors and is not repeatable for credit.</td>
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<tr>
<td>GMS</td>
<td>6870</td>
<td>Medical Ethics and Humanities: Tools &amp; Foundations</td>
<td>3</td>
<td></td>
<td>Terminology, historical perspectives, ethical principles and dilemmas, and case studies. Examination of aspects of the human journey and various voices or perspectives thorough fiction, essays, history, art, poetry, theater, and film.</td>
</tr>
<tr>
<td>GMS</td>
<td>6871</td>
<td>Health Sciences Ethics</td>
<td>2</td>
<td>PR: 1 yr. Biology; 1 yr. Chemistry.</td>
<td>The course examines fundamental ethical issues, such as informed consent, that are important components of the practice of the biomedical sciences and represent important considerations that must be addressed in both the basic and clinical sciences.</td>
</tr>
<tr>
<td>GMS</td>
<td>6873</td>
<td>Biomedical Ethics</td>
<td>3</td>
<td></td>
<td>This course will focus on biomedical ethical issues in business, research, clinical care, and technology development in the life sciences and healthcare industries. There are no restrictions, may be taken for credit (3 credits) once.</td>
</tr>
<tr>
<td>GMS</td>
<td>6875</td>
<td>Ethical and Regulatory Aspects of Clinical Research</td>
<td>2</td>
<td></td>
<td>This course addresses ethical and regulatory aspects of clinical research, specifically in relation to biomedical research that is patient-oriented. Instructor permission in required. The course is 2 credits and is not repeatable.</td>
</tr>
<tr>
<td>GMS</td>
<td>6890</td>
<td>Medicine and the Arts</td>
<td>3</td>
<td></td>
<td>Study opportunities in metropolitan cities in which students engage in one week of intensive study. (Medical Centers, Museums, Theatre)</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>GMS</td>
<td>6891</td>
<td>Medicine and the Movies</td>
<td>3</td>
<td></td>
<td>In-depth explorations of the ways in which film presents and illuminates ethical dilemmas/other topics in modern medicine. Students evaluate film stories critically so that exaggerations, distortions, and accuracies can be considered and discussed.</td>
</tr>
<tr>
<td>GMS</td>
<td>6902</td>
<td>Bioethics and Medical Humanities Independent Study</td>
<td>3</td>
<td></td>
<td>Develop with faculty advisor an individual project with the goal of in-depth study in the focus area.</td>
</tr>
<tr>
<td>GMS</td>
<td>6905</td>
<td>Grantmanship I</td>
<td>1</td>
<td></td>
<td>Introduction to basic skills for writing successful, peer-reviewed external grant proposals, especially to the NIH for patient-oriented research and mentored career development grants, for postdoctoral-level academic health research career development.</td>
</tr>
<tr>
<td>GMS</td>
<td>6906</td>
<td>Grantmanship II</td>
<td>1</td>
<td>PR: GMS 6905.</td>
<td>This course is the second in a three-course series to complete instruction in the skills and techniques necessary for writing successful NIH grant proposals whose primary focus is patient-oriented/translational career development or research grants.</td>
</tr>
<tr>
<td>GMS</td>
<td>6908</td>
<td>Medical Sciences Independent Study</td>
<td>1-3</td>
<td></td>
<td>Develop, in conjunction with a faculty advisor, an individual project with the goal of completing an in-depth study of a topic directly relevant to the student’s program of study in the medical sciences.</td>
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<td>SUB</td>
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<tr>
<td>GMS</td>
<td>6921</td>
<td>Building a Patient-Oriented Research Center</td>
<td>1</td>
<td></td>
<td>Introduction to the important characteristics of academic patient-oriented faculty in a colloquium format to encourage interactions and sharing of information between faculty and students. 2 semesters, 1 credit each semester=2 cr. Instructor permission.</td>
</tr>
<tr>
<td>GMS</td>
<td>6933</td>
<td>Case Studies Intellectual Property in Biotechnology</td>
<td>2</td>
<td></td>
<td>Securing intellectual property IP for scientific discoveries is of ultimate importance in a highly competitive economy. The course will discuss cases of intellectual property in biotechnology with respect to diagnostics, therapeutics and medical devices.</td>
</tr>
<tr>
<td>GMS</td>
<td>6940</td>
<td>Supervised Teaching in Molecular Medicine</td>
<td>1-3</td>
<td></td>
<td>To instruct student in teaching methods that are employed in training of medical students; acquaint student with evaluation procedures used to measure academic progress of medical students.</td>
</tr>
<tr>
<td>GMS</td>
<td>6941</td>
<td>Bioethics and Medical Humanities Internship</td>
<td>3</td>
<td></td>
<td>Supervised Field experience in related activities/organizations relating to bioethics and/or medical humanities.</td>
</tr>
<tr>
<td>GMS</td>
<td>6942</td>
<td>Laboratory Rotations in Biomedical Sciences</td>
<td>1-3</td>
<td></td>
<td>This course is designed to introduce the early-career Ph.D. student to the types of questions and techniques involved in biomedical research. The course can be taken for credit more than once.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>GMS</td>
<td>6943</td>
<td>Biotechnology Internship</td>
<td>3</td>
<td></td>
<td>The course teaches, hands-on, in companies and institutions, how the results of biological, biomedical and bioengineering research are translated into the development of drugs, devices, diagnostics, therapies, services as well as patents and licenses.</td>
</tr>
<tr>
<td>GMS</td>
<td>6950</td>
<td>Biomedical Science Communication and Instructional Skills</td>
<td>2</td>
<td></td>
<td>This course will train MS/Ph.D. students to teach &amp; communicate biomedical sciences while pursuing academic careers in universities and in medical/allied health schools, where teaching basic biomedical sciences is required.</td>
</tr>
<tr>
<td>GMS</td>
<td>7910</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
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<tr>
<td>GMS</td>
<td>7930</td>
<td>Selected Topics</td>
<td>1-3</td>
<td></td>
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<tr>
<td>GMS</td>
<td>7939</td>
<td>Graduate Seminar</td>
<td>1</td>
<td></td>
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<tr>
<td>GMS</td>
<td>7980</td>
<td>Dissertation: Doctoral</td>
<td>2-19</td>
<td>S/U</td>
<td></td>
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<tr>
<td>GRW</td>
<td>5905</td>
<td>Directed Reading</td>
<td>1-4</td>
<td></td>
<td>Study of an author, movement or theme.</td>
</tr>
<tr>
<td>GRW</td>
<td>5934</td>
<td>Selected Topics</td>
<td>1-4</td>
<td></td>
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<tr>
<td>HIM</td>
<td>6017</td>
<td>Legal Aspects of Health Information Management</td>
<td>3</td>
<td>PR: HIM 6118.</td>
<td>This course provides an in-depth discussion of selected law and regulatory issues that are applicable to the management of patient information in health informatics.</td>
</tr>
<tr>
<td>HIM</td>
<td>6018</td>
<td>e-Healthcare Ethics</td>
<td>2</td>
<td>PR: HIM 6118.</td>
<td>Examines selected ethical considerations that are significant components of health informatics and electronic medicine and often represent important considerations to be addressed during the delivery of healthcare using e-medicine models.</td>
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<tr>
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<tr>
<td>HIM</td>
<td>6114</td>
<td>Integrated Electronic Medical Records</td>
<td>3</td>
<td></td>
<td>Integrated electronic medical records is designed to provide an overview of the functions, limitations, opportunities and challenges presented by this very rapidly developing branch of information technology in the healthcare environment.</td>
</tr>
<tr>
<td>HIM</td>
<td>6118</td>
<td>Introduction to Health Informatics</td>
<td>3</td>
<td></td>
<td>Introduction to Health Informatics is designed to provide a discussion of the various facets of health informatics of interest to the healthcare professional.</td>
</tr>
<tr>
<td>HIM</td>
<td>6137</td>
<td>Pharmacy Informatics</td>
<td>3</td>
<td>PR: HIM 6118.</td>
<td>Provides a discussion of the various facets of health informatics of interest to the pharmacy professional, including the collection, storage, retrieval, communication and optimal use of pharmaceutical-related data, information and knowledge.</td>
</tr>
<tr>
<td>HIM</td>
<td>6320</td>
<td>Managerial Communication</td>
<td>3</td>
<td></td>
<td>Managerial Communication focuses on the centrality of communication to the delivery and management of healthcare and explores challenges faced by the diverse community of healthcare professions and their interactions.</td>
</tr>
<tr>
<td>HIM</td>
<td>6350</td>
<td>e-Medicine Business Models</td>
<td>3</td>
<td></td>
<td>E-Medicine Business Models is designed to highlight the centrality of &quot;business&quot; processes to the practice of medicine and the provision of healthcare.&quot;</td>
</tr>
<tr>
<td>HIM</td>
<td>6515</td>
<td>Leadership for Health Professionals</td>
<td>3</td>
<td></td>
<td>This course is designed to introduce the various principles of leadership that apply to the activities of health professionals in the conduct and progression of their professional activities.</td>
</tr>
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<td>SUB</td>
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<tr>
<td>HIM</td>
<td>6664</td>
<td>Healthcare Project Management</td>
<td>3</td>
<td></td>
<td>Healthcare Project Management is designed to provide a discussion of the</td>
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<td>various facets of initiating, planning, executing, monitoring, closing, and</td>
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<td></td>
<td>controlling projects in healthcare environments.</td>
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<tr>
<td>HIM</td>
<td>6667</td>
<td>Foundation in Management Information Systems</td>
<td>3</td>
<td></td>
<td>This course is designed to provide a discussion of the various facets of</td>
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<td>MIS including acquiring, storing and interpreting information of interest</td>
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<td>to the informaticist and healthcare professional.</td>
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<tr>
<td>HIM</td>
<td>6840</td>
<td>Case Studies in Health Information Management</td>
<td>3</td>
<td>PR: HIM 6118.</td>
<td>This course provides an in-depth discussion of selected case studies in</td>
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<td>health informatics management and is designed to assist integration of the</td>
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<td>study of the basic principles and applications of health informatics.</td>
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<tr>
<td>HIM</td>
<td>6908</td>
<td>Health Informatics Independent Study</td>
<td>1-3</td>
<td></td>
<td>Develop, in conjunction with a faculty advisor, an individual project with</td>
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<td>the goal of completing an in-depth study of a topic directly relevant to the</td>
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<td></td>
<td></td>
<td></td>
<td>student's program of study in health informatics.</td>
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<tr>
<td>HIM</td>
<td>6930</td>
<td>Selected Topics in Health Informatics</td>
<td>1-3</td>
<td></td>
<td>Topics for this course will be varied and based upon student and faculty</td>
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<td>interests and programmatic requirements.</td>
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<tr>
<td>HIM</td>
<td>6943</td>
<td>Health Informatics Internship</td>
<td>1-3</td>
<td>PR: HIM 6667.</td>
<td>The course involves the successful completion of an internship experience</td>
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<td>in an institution that provides insight into one or more aspects of health</td>
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<td></td>
<td>informatics.</td>
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<tr>
<td>HIS</td>
<td>6112</td>
<td>Analysis of Historical Knowledge</td>
<td>3</td>
<td></td>
<td>A study of history as a form of knowledge with emphasis on explanatory models and the relationships of social science theory to the problems of historical analysis.</td>
</tr>
<tr>
<td>HIS</td>
<td>6908</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
<td>Independent study in which students must have a contract with an instructor.</td>
</tr>
<tr>
<td>HIS</td>
<td>6914</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
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</tr>
<tr>
<td>HIS</td>
<td>6925</td>
<td>Colloquium in History</td>
<td>4</td>
<td></td>
<td>Readings and discussions organized around an in-depth examination of selected topics within the fields. Emphasis of the course is on the review of historiographical, methodological, and interpretative advances as they affect the topics under study.</td>
</tr>
<tr>
<td>HIS</td>
<td>6935</td>
<td>Graduate Reading Seminar in History</td>
<td>4</td>
<td></td>
<td>Introduce Graduate Students to a wide body of scholarship surrounding the topic of the course. Course topics and titles will vary.</td>
</tr>
<tr>
<td>HIS</td>
<td>6936</td>
<td>Graduate Writing Seminar in History</td>
<td>2-4</td>
<td></td>
<td>Designed for Master’s level students in their final year who are planning to write a Thesis or preparing a writing sample for their Ph.D. applications, and will train students in historical research practices.</td>
</tr>
<tr>
<td>HIS</td>
<td>6939</td>
<td>Seminar in History</td>
<td>3</td>
<td></td>
<td>Research in selected topics within the fields selected by the instructor.</td>
</tr>
<tr>
<td>HIS</td>
<td>6971</td>
<td>Thesis: Master’s</td>
<td>2-19</td>
<td></td>
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<td>SUB</td>
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<tr>
<td>HIS</td>
<td>7289</td>
<td>Ph.D. Seminar in Comparative Studies</td>
<td>3</td>
<td></td>
<td>Organized around a varying theme or methodology (sustainability, globalization, identity, e.g.), this course examines how historians, sociologists and political scientists employed the methodology throughout various regions and periods.</td>
</tr>
<tr>
<td>HIS</td>
<td>7937</td>
<td>Interdisciplinary Ph.D. Pro-Seminar</td>
<td>3</td>
<td></td>
<td>Varying topics in an interdisciplinary manner to introduce incoming Ph.D. students from the joint programs of History, Political Science, and Sociology to the relationships of research between disciplines.</td>
</tr>
<tr>
<td>HIS</td>
<td>7938</td>
<td>Ph.D. Capstone Seminar</td>
<td>3</td>
<td>PR: HIS 7289, HIS 7939</td>
<td>Synthesize the training that students have received as Historians and gain a better understanding of the research process as they compose a dissertation prospectus and prepare to write the dissertation.</td>
</tr>
<tr>
<td>HIS</td>
<td>7939</td>
<td>Selected Topics for Doctoral Students</td>
<td>3</td>
<td></td>
<td>Research in selected topics within the fields selected by the instructor. Restricted to Ph.D. students, instructor’s approval required.</td>
</tr>
<tr>
<td>HIS</td>
<td>7980</td>
<td>Ph.D. Dissertation</td>
<td>1-9</td>
<td>PR: HIS 7937, HIS 7289</td>
<td>Dissertation writing hours for advanced Ph.D. students in the final year of the program.</td>
</tr>
<tr>
<td>HSC</td>
<td>5036</td>
<td>Professional Foundations of Health Education</td>
<td>1</td>
<td></td>
<td>The study of the practice of health education in various settings, and selected historical, cultural, philosophical, professional, and ethical issues in the practice of education.</td>
</tr>
<tr>
<td>HSC</td>
<td>6055</td>
<td>Survival Analysis</td>
<td>3</td>
<td>PR: PHC 6051, PHC 6701</td>
<td>A study of statistical methods for analyzing censored life time data with applications in health sciences.</td>
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<tr>
<td>SUB</td>
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<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>HSC</td>
<td>6056</td>
<td>Survey Sampling Methods in Health Sciences</td>
<td>3</td>
<td>PR: PHC 6050, PHC 6701</td>
<td>An interdisciplinary overview of survey techniques with applications in health sciences. Discussions on questionnaire design, measurement error, data collection modes, data management, use of computer software and statistical analysis.</td>
</tr>
<tr>
<td>HSC</td>
<td>6552</td>
<td>Community-Based Prevention in Behavioral Health</td>
<td>3</td>
<td></td>
<td>This web-based course is a graduate course in Behavioral Health within the Department of Community and Family Health. It is designed to provide the graduate student with an overview and understanding of the significant issues and trends in community &amp; family behavioral health with an emphasis on behavioral health promotion and disease prevention. Major areas are: 1) overview of promotion and prevention in the United States; 2) systems delivery; 3) programs and Policies; 4) and selected at-risk populations.</td>
</tr>
<tr>
<td>HSC</td>
<td>6556</td>
<td>Pathobiology of Human Disease I</td>
<td>3</td>
<td></td>
<td>A basic study of broad pathobiological areas of biological injury, genetic and inborn errors of metabolism, and host-parasite relationships. In addition, the pathobiology of human disease is closely related to general biology in order to provide a strong foundation for the public health student.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>HSC</td>
<td>6557</td>
<td>Pathobiology of Human Disease II</td>
<td>3</td>
<td>PR: HSC 6556</td>
<td>Overview of the distinct pathogenesis and etiology and selected acute and chronic diseases and their preventive aspects and impacts on the health care system. Provides basic knowledge of disease and illness patterns and their relationship to health planning.</td>
</tr>
<tr>
<td>HSC</td>
<td>7009</td>
<td>Accreditation and Licensure of Health Care Organizations</td>
<td>3</td>
<td></td>
<td>This course will examine and discuss voluntary accreditation and governmental licensure: the principal formal methods of holding health care organizations accountable for the quality of service they provide. Emphasis is on current status and requirements of accrediting and licensing authorities.</td>
</tr>
<tr>
<td>HSC</td>
<td>7260</td>
<td>Professional Foundations II: Teaching Methods</td>
<td>1</td>
<td></td>
<td>Prepares public health students for teaching in the college and university setting. Overview of knowledge, strategies, and skills including but not limited to: learning styles, teaching methods, motivational strategies.</td>
</tr>
<tr>
<td>HSC</td>
<td>7267</td>
<td>Professional Foundations I: Becoming a Doctoral Student</td>
<td>1</td>
<td></td>
<td>This doctoral seminar is designed to introduce students to important concepts and skills related to doctoral study in Public Health.</td>
</tr>
<tr>
<td>HSC</td>
<td>7268</td>
<td>Professional Foundations III: Joining the Academy</td>
<td>2</td>
<td></td>
<td>Prepares the public health doctoral candidate with tools for career building.</td>
</tr>
<tr>
<td>HUM</td>
<td>6453</td>
<td>Studies in American Arts and Letters I</td>
<td>3</td>
<td></td>
<td>Study of selected works dealing with the development of cultural patterns on the western frontiers and their effects on aesthetic judgment. From 1790 to 1890.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
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<tr>
<td>HUM</td>
<td>6456</td>
<td>Studies in Latin American Arts and Letters</td>
<td>3</td>
<td></td>
<td>Analysis of selected Latin American works of art in their cultural context.</td>
</tr>
<tr>
<td>HUM</td>
<td>6465</td>
<td>Studies in American Arts and Letters II</td>
<td>3</td>
<td></td>
<td>Examples from the arts and letters of the U.S.; analyses of their relationships to the concepts of progress and aesthetic judgment. From 1890 to present.</td>
</tr>
<tr>
<td>HUM</td>
<td>6475</td>
<td>Studies in Contemporary Arts and Letters</td>
<td>3</td>
<td></td>
<td>Concentration on major artists and recent trends.</td>
</tr>
<tr>
<td>HUM</td>
<td>6493</td>
<td>Studies in Classical Arts and Letters</td>
<td>3</td>
<td></td>
<td>Examples from the arts and letters of ancient Greece and their relationships to Aegean myths, religions, and philosophies. Classical Greek influences on later cultures.</td>
</tr>
<tr>
<td>HUM</td>
<td>6494</td>
<td>Studies in Medieval Arts and Letters</td>
<td>3</td>
<td></td>
<td>Studies in medieval philosophies, visual arts, music, literature, and architecture and their interrelationships.</td>
</tr>
<tr>
<td>HUM</td>
<td>6496</td>
<td>Studies in Enlightenment Arts and Letters</td>
<td>3</td>
<td></td>
<td>Studies in painting, sculpture, music, literature, and architecture in relation to philosophical determinism and political absolutism.</td>
</tr>
<tr>
<td>HUM</td>
<td>6497</td>
<td>Studies in Nineteenth Century Arts and Letters</td>
<td>3</td>
<td></td>
<td>Examples from the arts and letters of the nineteenth century, their relationship to philosophical, social, and historical developments, and to the arts and letters of the twentieth century.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>HUM</td>
<td>6583</td>
<td>Global Cinema and New Media to 1960</td>
<td>3</td>
<td></td>
<td>Offers an advanced introduction to the first 65 years of international film history. This course explores aesthetic and narrative practices in various film genres, movements, and national cinemas.</td>
</tr>
<tr>
<td>HUM</td>
<td>6584</td>
<td>Global Cinema and New Media since 1960</td>
<td>3</td>
<td></td>
<td>Offers an advanced introduction to international film history after 1960. This course explores aesthetic and narrative practices in various film genres, movements, and national cinemas.</td>
</tr>
<tr>
<td>HUM</td>
<td>6585</td>
<td>Film and New Media Auteurs</td>
<td>3</td>
<td></td>
<td>Films studied will be organized around a director or a movement. Cinema will be treated as a collaborative medium best approached from an interdisciplinary perspective, integrating visual, narrative, dramatic, and musical analysis. Course repeatable up to 6 times (total of 18 hours).</td>
</tr>
<tr>
<td>HUM</td>
<td>6586</td>
<td>Film Theory</td>
<td>3</td>
<td></td>
<td>This course emphasizes methodological issues in the analysis of films as cultural texts. Theoretical approaches include formalism, structuralism, genre theory, feminist theory, psychoanalysis, Marxism, and queer theory.</td>
</tr>
<tr>
<td>HUM</td>
<td>6587</td>
<td>National Cinemas</td>
<td>3</td>
<td></td>
<td>Course will explore key films, filmmakers, and cinematic techniques and approaches of selected national cinema styles from around the globe.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>HUM</td>
<td>6588</td>
<td>Themes and Genres in Film and New Media</td>
<td>3</td>
<td></td>
<td>Courses in &quot;Themes and Genres&quot; will focus on specific film styles, genres, and approaches such as horror, avant-garde cinema, and documentary. Students will explore the complex relationships between the formal properties of specific cinematic genres/style.&quot;</td>
</tr>
<tr>
<td>HUM</td>
<td>6801</td>
<td>Theories and Methods of Cultural Studies</td>
<td>3</td>
<td></td>
<td>This course examines the relationship between the arts and society by introducing various approaches to the study of literature, art, and culture that are of contemporary relevance to graduate students in the liberal arts and humanities.</td>
</tr>
<tr>
<td>HUM</td>
<td>6814</td>
<td>Introduction to Graduate Study</td>
<td>3</td>
<td></td>
<td>An introduction to graduate study in humanities and cultural studies. This course introduces incoming graduate students to the research interests of the departmental faculty and the program emphases, including textual analysis and analytical writing.</td>
</tr>
<tr>
<td>HUM</td>
<td>6815</td>
<td>Research Seminar</td>
<td>3</td>
<td></td>
<td>A course emphasizing the practical aspects of research in the liberal arts including analyzing primary sources, assembling a bibliography, synthesizing secondary sources, and defining an argument. Topic varies.</td>
</tr>
<tr>
<td>HUM</td>
<td>6870</td>
<td>Teaching Practicum in Humanities</td>
<td>1-3</td>
<td></td>
<td>Required for Teaching Assistants of Humanities courses. Workshops, meetings, and individual conferences treat topics related to teaching interdisciplinary courses focusing on the critical study of literature, music, and the arts. Credits do not count toward the MLA degree.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>HUM</td>
<td>6909</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
<td>Independent study in which student must have a contract with an instructor.</td>
</tr>
<tr>
<td>HUM</td>
<td>6915</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HUM</td>
<td>6939</td>
<td>Selected Topics in Humanities</td>
<td>1-3</td>
<td></td>
<td>Each topic is a course of study in a subject not covered by a regular course.</td>
</tr>
<tr>
<td>HUM</td>
<td>6940</td>
<td>Internship in Humanities</td>
<td>1-3</td>
<td></td>
<td>A structured, out-of-class learning experience providing first-hand, practical training in Humanities-related professional careers in the community.</td>
</tr>
<tr>
<td>HUM</td>
<td>6971</td>
<td>Thesis: Masters</td>
<td>2-19</td>
<td></td>
<td>In consultation with an advisor, the student plans, organizes, and writes a thesis on a topic in interdisciplinary arts and ideas.</td>
</tr>
<tr>
<td>HUN</td>
<td>5265</td>
<td>Methods of Nutritional Assessment</td>
<td>1</td>
<td></td>
<td>Methodology, skills and tools in measurement of the nutritional status of healthy individuals in community and patients in hospitals. The objectives of nutritional assessment is to prevent malnutrition and promote nutritional health.</td>
</tr>
<tr>
<td>HUN</td>
<td>6804</td>
<td>Nutrition and Dietetics Research</td>
<td>3</td>
<td></td>
<td>This course teaches the investigative and analytical methods used in nutrition and dietetics related research. The course reviews research design, sampling techniques, data collection and processing, and interpretation of the results and ethics.</td>
</tr>
<tr>
<td>IDH</td>
<td>5956</td>
<td>Honors Project</td>
<td>3</td>
<td></td>
<td>Advanced Honors Project. Repeatable up to 12 hours.</td>
</tr>
<tr>
<td>IDH</td>
<td>5975</td>
<td>Honors Thesis</td>
<td>3</td>
<td></td>
<td>Advanced Honors Thesis. Repeatable up to 12 hours.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
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<td>HRS</td>
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<tr>
<td>IDS</td>
<td>5177</td>
<td>The Atelier, Its Management and History</td>
<td>3</td>
<td></td>
<td>This class will consider the history of printmaking and other forms of collaborative art production through the prism of the atelier and its management.</td>
</tr>
<tr>
<td>IDS</td>
<td>5178</td>
<td>Problems in Museum Studies</td>
<td>3</td>
<td></td>
<td>This class is designed as both an academic and theoretical course to introduce students to the museum profession and develop critical thinking skills required to solve problems in the rapidly changing typography of museums. Students will develop managerial and administrative skills as they meet with and discuss the job descriptions of curators, educators, collection managers, marketing professionals, exhibit designers, registrars, and fundraisers.</td>
</tr>
<tr>
<td>IDS</td>
<td>5921</td>
<td>Teaching Assistant Training</td>
<td>0</td>
<td></td>
<td>Instruction in course design, including delivery, methodology, policies, and teaching strategies and methods.</td>
</tr>
<tr>
<td>IDS</td>
<td>5922</td>
<td>Preparing for College Teaching</td>
<td>0</td>
<td></td>
<td>The focus is on teaching college classes, and doing it well. Best practices in a number of topics related to course design and delivery will be examined. The goal is to prepare you for college teaching.</td>
</tr>
<tr>
<td>IDS</td>
<td>6207</td>
<td>Renewable Transportation Fuels</td>
<td>3</td>
<td></td>
<td>The course will analyze the market status and prospects, the production technologies, the economics and finance, and the regulatory and environmental aspects of renewable transportation fuels with a focus on sustainable fuels from biomass and algae.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
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<tr>
<td>IDS</td>
<td>6208</td>
<td>Renewable Power Portfolio</td>
<td>3</td>
<td></td>
<td>The course will analyze the market status and growth potential of the portfolio of renewable power sources, the production technologies, the economics/financing, infrastructure integration and smart grid issues, and regulatory and environmental aspects.</td>
</tr>
<tr>
<td>IDS</td>
<td>6215</td>
<td>Seminar in Global Sustainability</td>
<td>3</td>
<td></td>
<td>The purpose of this interdisciplinary seminar in sustainability is to broaden student's knowledge and understanding of global determinants and potential solutions to sustainability issues.</td>
</tr>
<tr>
<td>IDS</td>
<td>6233</td>
<td>Concepts and Principles of Sustainability</td>
<td>3</td>
<td></td>
<td>This course discusses basic concepts and principles of sustainable development. It discusses systems thinking and different sustainability perspectives such as local/global and historical/future. Best practices will be analyzed through case studies.</td>
</tr>
<tr>
<td>IDS</td>
<td>6234</td>
<td>Systems Thinking: The Key to Sustainability</td>
<td>3</td>
<td></td>
<td>The course develops the critical system thinking skills to solve sustainability challenges. It covers quantitative system analysis techniques including environmental impact assessment, life-cycle assessment, cost-benefit analysis and decision analysis.</td>
</tr>
<tr>
<td>IDS</td>
<td>6235</td>
<td>Economics and Finance for Sustainability</td>
<td>3</td>
<td></td>
<td>The course provides sustainability practitioners an overview of how economics and finance enhance sustainability. The emphasis is on environmental economics and innovative finance; students learn how scarce natural resources can be optimally allocated.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
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<tr>
<td>IDS</td>
<td>6236</td>
<td>Sustainable Tourism Development: Principles &amp; Practices</td>
<td>3</td>
<td></td>
<td>Focuses on environmentally and socially responsible tourism strategies and innovations. Emphasizes establishing policies and management plans to identify and reduce the environmental impact created by tourism facilities and services.</td>
</tr>
<tr>
<td>IDS</td>
<td>6237</td>
<td>Ecotourism &amp; Sustainable Tourism Mgmt Coastal/Marine Habitat</td>
<td>3</td>
<td></td>
<td>Introduction to environmental management from technical and non-technical perspectives. The major topics covered will be water and air quality, environmental sustainability, collaboration, and building consensus.</td>
</tr>
<tr>
<td>IDS</td>
<td>6238</td>
<td>Communicating the Value of Sustainability</td>
<td>3</td>
<td></td>
<td>Provides 1) an understanding of the challenges of communicating about sustainability; 2) a theoretical framework for analyzing these challenges; and 3) practice at applying that knowledge to their writing.</td>
</tr>
<tr>
<td>IDS</td>
<td>6245</td>
<td>Sustainable Water Resource Management: Doing More with Less</td>
<td>3</td>
<td></td>
<td>This course provides an overview of the challenges and strategies for sustainable water resource management for coordinated planning, development and management of water resources. It will discuss technical, legal and institutional frameworks.</td>
</tr>
<tr>
<td>IDS</td>
<td>6246</td>
<td>Water Sensitive Urban Design for Sustainable Communities</td>
<td>3</td>
<td></td>
<td>Comprehensive introduction to Water Sensitive Urban Design an interdisciplinary approach that encompasses urban water management, management of ecosystem services and urban/landscape design.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
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<tr>
<td>IDS</td>
<td>6908</td>
<td>Directed Reading/Directed Independent Study</td>
<td>1-3</td>
<td></td>
<td>Individual study by students under the direction of a faculty member. Topics vary and are usually selected on an individual basis.</td>
</tr>
<tr>
<td>IDS</td>
<td>6918</td>
<td>Directed Independent Research</td>
<td>1-3</td>
<td></td>
<td>Research projects or certain aspects of research carried out by student(s) under the supervision of an instructor intended to help students acquire skills in applying research principles and obtaining practice in rigorous data collection and research.</td>
</tr>
<tr>
<td>IDS</td>
<td>6938</td>
<td>Special Topics/Seminars</td>
<td>1-6</td>
<td></td>
<td>Special topics related to sustainability.</td>
</tr>
<tr>
<td>IDS</td>
<td>6946</td>
<td>Sustainability Internship</td>
<td>6</td>
<td></td>
<td>The Sustainability Internship allows students to develop and practice skills related to global sustainability in developed and/or developing countries.</td>
</tr>
<tr>
<td>IDS</td>
<td>6948</td>
<td>Gallery and Museum Internship</td>
<td>2-6</td>
<td></td>
<td>The 6 credit hours internship program conducted in various area museums is a professional program designed to give students the opportunity to engage in a comprehensive study of the contemporary museum.</td>
</tr>
<tr>
<td>IDS</td>
<td>6951</td>
<td>Sustainability Project</td>
<td>3</td>
<td></td>
<td>This is the final project for the Master of Arts in Global Sustainability students.</td>
</tr>
<tr>
<td>INP</td>
<td>6057</td>
<td>Industrial Psychology</td>
<td>3</td>
<td></td>
<td>An introduction to the major areas of Industrial-Organization Psychology, including topics on selection and placement, training, criterion development and performance appraisal, job satisfaction and motivation, and organizational theory and structure.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>INP</td>
<td>6935</td>
<td>Topics in Industrial-Organizational Psychology</td>
<td>3</td>
<td></td>
<td>Courses on topics such as industrial psychology, evaluation of performance in industry, and human factors.</td>
</tr>
<tr>
<td>INP</td>
<td>7937</td>
<td>Graduate Seminar in Industrial-Organizational Psychology</td>
<td>1-3</td>
<td></td>
<td>Seminars on topics, such as industrial psychology, evaluation of performance in industry, and human factors.</td>
</tr>
<tr>
<td>INR</td>
<td>5012</td>
<td>Globalization</td>
<td>3</td>
<td></td>
<td>Examination of globalization’s impact on international relations, including literature from political science, anthropology, geography, sociology, and economics that impacts the study of the nation-state system and power. Open to majors and non-majors.</td>
</tr>
<tr>
<td>INR</td>
<td>5086</td>
<td>Issues in International Relations</td>
<td>3</td>
<td></td>
<td>Explores specific topics and provides the student with an opportunity for in-depth study of historical and contemporary problems in international politics.</td>
</tr>
<tr>
<td>INR</td>
<td>6007</td>
<td>Seminar in International Relations</td>
<td>3</td>
<td></td>
<td>Advanced study of international relations, including survey of basic literature, analysis of numerous theoretical and methodological approaches, and analysis of major issues.</td>
</tr>
<tr>
<td>INR</td>
<td>6036</td>
<td>Seminar in International Political Economy</td>
<td>3</td>
<td></td>
<td>Advanced study of the development and politics of the international economic system focusing on theoretical and empirical analysis of cooperation and conflict in trade, aid, and investment relationships.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
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<tr>
<td>INR</td>
<td>6107</td>
<td>American Foreign Policy</td>
<td>3</td>
<td></td>
<td>Objectives, formulation, and execution of foreign policy; critical issues and problems confronting the United States. Study of various conceptual, methodological, and theoretical approaches.</td>
</tr>
<tr>
<td>INR</td>
<td>6690</td>
<td>Research Seminar in Globalization</td>
<td>3</td>
<td>PR: INR 5012.</td>
<td>Examination and presentation of research from multiple disciplines that address a wide-range of issues related to globalization, including those that concern governance and human development. Seminar format. Open to majors and non-majors.</td>
</tr>
<tr>
<td>ISM</td>
<td>6021</td>
<td>Management Information Systems</td>
<td>2</td>
<td></td>
<td>An introduction to the fundamentals of information systems including an examination of information technology terminology and concepts, alternative methodologies for developing information systems, and the application and impact of information technology in contemporary organizations.</td>
</tr>
<tr>
<td>ISM</td>
<td>6056</td>
<td>Web Application Development</td>
<td>3</td>
<td></td>
<td>The course introduces students to developing web-based computer applications. The class also reinforces object-oriented concepts in computer programming.</td>
</tr>
<tr>
<td>ISM</td>
<td>6123</td>
<td>Systems Analysis and Design</td>
<td>3</td>
<td>PR: ISM 6021 or equiv.</td>
<td>This course includes the foundations and methodologies for analysis of existing systems; the design, development, and implementation of new systems.</td>
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<tr>
<td>ISM</td>
<td>6124</td>
<td>Advanced Systems Analysis and Design</td>
<td>3</td>
<td></td>
<td>This course covers advanced topics of information systems development. Students learn to manage and perform activities throughout the information systems development life cycle. State-of-the-art system development processes, methods, and tools are presented.</td>
</tr>
<tr>
<td>ISM</td>
<td>6136</td>
<td>Data Mining</td>
<td>3</td>
<td></td>
<td>This course is designed for the MS in Information Systems graduate student and interested MBA students. The course covers the rapidly evolving data mining techniques that are becoming critical for customer relationship management and other applications</td>
</tr>
<tr>
<td>ISM</td>
<td>6137</td>
<td>Statistical Data Mining</td>
<td>3</td>
<td></td>
<td>Development of statistical concepts and methods for mining large business databases.</td>
</tr>
<tr>
<td>ISM</td>
<td>6145</td>
<td>Seminar on Software Testing</td>
<td>3</td>
<td>PR: ISM 6124</td>
<td>This course will survey and analyze the best practices in industrial testing groups and explore new ideas for improving the testing process. Students gain practical experience with both functional (black box) and structural (clear box) testing methods.</td>
</tr>
<tr>
<td>ISM</td>
<td>6155</td>
<td>Enterprise Information Systems Management</td>
<td>3</td>
<td>PR: ISM 6124, ISM 6218.</td>
<td>Development of enterprise transaction processing applications using procedural or object oriented programming languages, relational database management, database sharing, CASE methodology and project management techniques. Students will work in groups on semester projects.</td>
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<tr>
<td>ISM</td>
<td>6156</td>
<td>Enterprise Resource Planning &amp; Business</td>
<td>3</td>
<td></td>
<td>This course introduces students to business processes management and</td>
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<td></td>
<td></td>
<td>Process Management</td>
<td></td>
<td></td>
<td>enterprise resource planning systems, and their use and implementation in</td>
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<td></td>
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<td>key functional areas of today’s global businesses.</td>
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<tr>
<td>ISM</td>
<td>6208</td>
<td>Data Warehousing</td>
<td>3</td>
<td>PR: ISM 6218, or two relational database courses</td>
<td>This course is designed for the MS graduate student and interested MBA</td>
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<td>students. The course covers the rapidly emerging data warehousing and</td>
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<td>data mining technologies that are likely to play a strategic role in</td>
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<td></td>
<td>business organizations.</td>
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<tr>
<td>ISM</td>
<td>6217</td>
<td>Database Administration</td>
<td>3</td>
<td></td>
<td>Advanced principles of Database Administration. Database Organization</td>
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<td></td>
<td>Models. Disaster Planning for Database Files.</td>
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<tr>
<td>ISM</td>
<td>6218</td>
<td>Advanced Database Management</td>
<td>3</td>
<td>PR: ISM 6217 or ISM 4212 or equivalent.</td>
<td>This course covers core business database technologies. Topics include</td>
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<td>database design, transaction processing, parallelism, and distributed</td>
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<td></td>
<td>databases. Emerging business intelligence technologies are covered. A</td>
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<td></td>
<td></td>
<td></td>
<td>database system is used for projects.</td>
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<tr>
<td>ISM</td>
<td>6225</td>
<td>Distributed Information Systems</td>
<td>3</td>
<td></td>
<td>This course will focus on telecommunications, networks, and distributed</td>
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<td>applications. All forms of communication will be covered. Students will</td>
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<td>gain exposure to network management systems, local area networks (LANs),</td>
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<td>and global networks, such as Internet.</td>
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<tr>
<td>ISM</td>
<td>6266</td>
<td>Software Architecture</td>
<td>3</td>
<td>PR: ISM 6124</td>
<td>Software architecture has emerged as an explicit field of study for software engineering practitioners and researchers. In this course, we will investigate the growing literature on software architecture and understand the application of software concepts to the development of information systems.</td>
</tr>
<tr>
<td>ISM</td>
<td>6305</td>
<td>Managing the Information System Function</td>
<td>3</td>
<td>PR: ISM 6021 or</td>
<td>An advanced study of the management of IT resources including managerial decision making and the impact of IT on business processes and society. Society issues include those such as intellectual property rights, privacy, and ethics.</td>
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<tr>
<td>ISM</td>
<td>6316</td>
<td>Project Management</td>
<td>3</td>
<td>PR: ISM 6021.</td>
<td>The objective of this course is to become familiar with fundamental issues for managing project management and to develop an understanding of the overall processes of dealing with competing demands in information technology environments.</td>
</tr>
<tr>
<td>ISM</td>
<td>6328</td>
<td>Information Security &amp; Risk Management</td>
<td>3</td>
<td></td>
<td>Introduction of frameworks to assess IT risk and implement IT general controls; development of technical skills to secure computer networks.</td>
</tr>
<tr>
<td>ISM</td>
<td>6436</td>
<td>Operations &amp; Supply Chain Processes</td>
<td>3</td>
<td>PR: Basic</td>
<td>Operations Processes is an overview of several aspects of Operations management, a discipline in business concerned with managing the transformation of inputs into outputs.</td>
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<td>Statistics.</td>
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<tr>
<td>ISM</td>
<td>6442</td>
<td>International Aspects of Information Science</td>
<td>3</td>
<td>PR: ISM 6021</td>
<td>Role of managers and information technology professionals in global business organizations and in deploying information systems to enable global operations.</td>
</tr>
<tr>
<td>ISM</td>
<td>6485</td>
<td>Electronic Commerce</td>
<td>3</td>
<td>PR: ISM 6021</td>
<td>This course is geared to a broad audience and will introduce information technology enablers that facilitate electronic commerce. The lectures, discussions and class presentations will also serve to understand the business landscape and business models.</td>
</tr>
<tr>
<td>ISM</td>
<td>6905</td>
<td>Independent Study</td>
<td>1-6</td>
<td></td>
<td>Independent Study as directed by designated faculty.</td>
</tr>
<tr>
<td>ISM</td>
<td>6930</td>
<td>Selected Topics in MIS</td>
<td>1-6</td>
<td></td>
<td>Selected topics in MIS.</td>
</tr>
<tr>
<td>ISM</td>
<td>6971</td>
<td>Thesis: Master's</td>
<td>2-6</td>
<td></td>
<td>Students may select the thesis option in order to complete the Master of Science in the Management Information Systems (MS/MIS) program. Faculty permission is required to register for MS Thesis credit. Six credits are the maximum number of credits allowed for MS Thesis credit.</td>
</tr>
<tr>
<td>ISM</td>
<td>7406</td>
<td>Business Analytics</td>
<td>3</td>
<td></td>
<td>A research course for executives that presents an overview of data analytics techniques as well as examples of analytics research in business. A variety of analytics technique including structured data, unstructured data and big data will be discussed.</td>
</tr>
<tr>
<td>ISM</td>
<td>7905</td>
<td>Independent Study</td>
<td>1-6</td>
<td></td>
<td>Independent study in which student must have a contract with an instructor.</td>
</tr>
<tr>
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<tr>
<td>ISM</td>
<td>7910</td>
<td>MIS Research Seminar I</td>
<td>3</td>
<td></td>
<td>Introduction to the MIS literature as it has developed over the past 30 years. Primary focus on the research literature. Other important writings will also be covered.</td>
</tr>
<tr>
<td>ISM</td>
<td>7911</td>
<td>MIS Research Seminar II</td>
<td>3</td>
<td>PR: ISM7910 ISM 7910</td>
<td>An examination of recently published empirical research in MIS and related disciplines, focusing on the development of a sound theoretical foundation for hypotheses, selection of appropriate design and statistical techniques, and evaluation of the results.</td>
</tr>
<tr>
<td>ISM</td>
<td>7912</td>
<td>Seminar on Behavioral IS Research</td>
<td>3</td>
<td>PR: ISM 7910</td>
<td>This course is team taught by IS/DS faculty with research interests in behavioral and organizational fields. The seminar structure of the course allows flexibility of current research topics and opportunities for significant student faculty interaction. Students will achieve a broad understanding of the research areas and methods associated with behavioral and organizational IS research.</td>
</tr>
<tr>
<td>ISM</td>
<td>7930</td>
<td>Selected Topics in MIS</td>
<td>1-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISM</td>
<td>7931</td>
<td>Directed Research</td>
<td>1-12</td>
<td></td>
<td>Directed research under faculty supervision.</td>
</tr>
<tr>
<td>ISM</td>
<td>7939</td>
<td>Executive Issues in MIS</td>
<td>2-4</td>
<td></td>
<td>A research seminar for executives that explores contemporary issues in Management Information Systems. The specific theme of the seminar will be determined through consultations between the instructor and the students prior to the first class meeting.</td>
</tr>
<tr>
<td>ISM</td>
<td>7980</td>
<td>Dissertation</td>
<td>2-21</td>
<td></td>
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<tr>
<td>ISS</td>
<td>6184</td>
<td>Development Ethics: Principles and Practice</td>
<td>3</td>
<td></td>
<td>Overviews the ethical problems of development, as well as presents the ways in which the problems of development may be investigated. Students are taught qualitative methodological techniques and apply these techniques in fieldwork projects. Open to all graduate students.</td>
</tr>
<tr>
<td>ISS</td>
<td>6900</td>
<td>Directed Reading</td>
<td>1-3</td>
<td></td>
<td>A supervised program of intensive reading of interdisciplinary materials of specific interest.</td>
</tr>
<tr>
<td>ISS</td>
<td>6910</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td>A supervised program of intensive reading of interdisciplinary materials of specific interest.</td>
</tr>
<tr>
<td>ITW</td>
<td>6910</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td>Selected topics in Italian literature.</td>
</tr>
<tr>
<td>JOU</td>
<td>5105</td>
<td>Newswriting and Editing</td>
<td>3</td>
<td></td>
<td>Introduction to the basics of gathering, writing, and editing the news, with an emphasis on practical assignments done under professional conditions and standards. Discussions, readings emphasize the larger context and implications of news.</td>
</tr>
<tr>
<td>JOU</td>
<td>5116</td>
<td>Explorations In Newswriting</td>
<td>3</td>
<td></td>
<td>Listed in catalog as jou 5305. Students work to develop writing styles, reporting on and creating stories about significant issues, events, and ideas. The course explores the notion that narrative style journalism can be accurate, thorough, fair, and compelling, effectively bringing readers into stories and giving them a bigger stake in the news. The focus is ongoing beyond traditional practices of reporting and writing news stories.</td>
</tr>
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<tr>
<td>JOU</td>
<td>5305</td>
<td>Explorations in Newswriting</td>
<td>3</td>
<td></td>
<td>Students work to develop writing styles, reporting on and creating stories about significant issues, events, and ideas. The course explores the notion that narrative-style journalism can be accurate, thorough, fair, and compelling, effectively bringing readers into stories and giving them a bigger stake in the news. The focus is ongoing beyond traditional practices of reporting and writing news stories.</td>
</tr>
<tr>
<td>JOU</td>
<td>5344</td>
<td>Multimedia Journalism</td>
<td>3</td>
<td></td>
<td>The course is designed to bring components of print, web and broadcast writing together to develop skills for and understanding of the multimedia environment. It is restricted to majors and not repeatable for credit.</td>
</tr>
<tr>
<td>JOU</td>
<td>6107</td>
<td>News Coverage of Public Life</td>
<td>3</td>
<td></td>
<td>Problems and methods of reporting urban affairs, including municipal government, and politics: city, county, and state. Research/analyses of current issues.</td>
</tr>
<tr>
<td>JOU</td>
<td>6122</td>
<td>Reporting: Methods and Perspectives</td>
<td>3</td>
<td></td>
<td>Instruction and practice in computer-assisted reporting, social science research, interviewing, data-document research, observational techniques, and other methods of news gathering.</td>
</tr>
<tr>
<td>JOU</td>
<td>6191</td>
<td>Seminar: Contemporary Issues in Journalism</td>
<td>3</td>
<td></td>
<td>A study of the role of the free press in a democratic society and its efforts to fulfill its social and ethical responsibilities by analyses and discussions of the problems which face the reporter, the editor, and the publisher.</td>
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<tr>
<td>JOU</td>
<td>6349</td>
<td>Advanced Multimedia Journalism</td>
<td>3</td>
<td>PR: JOU 5342.</td>
<td>Students learn what it means to work in a multimedia environment and will create a journalism project across multiple media platforms, including broadcast, print and the web. They will also explore the theoretical assumptions of the field.</td>
</tr>
<tr>
<td>JOU</td>
<td>6501</td>
<td>Media Management</td>
<td>3</td>
<td></td>
<td>The course provides students with a foundation in understanding the financial and economic environment of the mass media and the process of managing mass media enterprises in the new multimedia environment. It is not restricted nor repeatable for credit.</td>
</tr>
<tr>
<td>LAE</td>
<td>5462</td>
<td>Young Adult and World Literature for New Teachers</td>
<td>3</td>
<td></td>
<td>A study of the types of literature read by adolescents, including literature representative of other cultures, with emphasis upon the criteria for the choice of good books and knowledge of available books and teaching materials.</td>
</tr>
<tr>
<td>LAE</td>
<td>5862</td>
<td>Classroom Communication in English Education</td>
<td>3</td>
<td></td>
<td>Identifies characteristics of classroom communication environment; offers insights, info, instructional strategies designed to help you become effective classroom communication managers. Emphasis on role of media &amp; non-print texts in students’ lives.</td>
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<tbody>
<tr>
<td>LAE</td>
<td>5932</td>
<td>Selected Topics in the Teaching of English</td>
<td>3</td>
<td></td>
<td>Investigation of topics which are of special interest to the student and are related to the teaching of English in the secondary school. Topics will be selected by the student in accordance with his particular goals and will be approved by the student's graduate advisor.</td>
</tr>
<tr>
<td>LAE</td>
<td>6315</td>
<td>Composing Texts: Disciplinary Practices for Writers &amp; Writing</td>
<td>3</td>
<td></td>
<td>Examine writing as a multimodal, communicative practice embedded in social, cultural, and disciplinary contexts. Demonstrate strategies to facilitate K-12 students’ writing development as well as develop leadership skills to support writing teachers.</td>
</tr>
<tr>
<td>LAE</td>
<td>6317</td>
<td>Teaching Composition in Elem Classroom: Research into Practice</td>
<td>3</td>
<td>PR: LAE 6427</td>
<td>Identify traits of children’s written, visual, and media-based products, assess &amp; support children’s developmental progression of writing processes or strategies, &amp; demonstrate instructional strategies for teaching multimodal composing.</td>
</tr>
<tr>
<td>LAE</td>
<td>6325</td>
<td>Methods of Teaching Middle School Language Arts</td>
<td>4</td>
<td></td>
<td>Balanced literacy methods for integrating reading, writing, speaking, listening, viewing, and critical thinking activities into a literature-based program for middle school students. Note: This course has a field component of 36 hours.</td>
</tr>
<tr>
<td>LAE</td>
<td>6339</td>
<td>Methods of Teaching Secondary English Language Arts</td>
<td>4</td>
<td></td>
<td>Balanced literacy methods for integrating reading, writing, speaking, listening, viewing, and critical thinking activities into a literature-based program for secondary school students. Note: This course has a field component of 36 hours.</td>
</tr>
<tr>
<td>SUB</td>
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<td>HRS</td>
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<tr>
<td>LAE</td>
<td>6345</td>
<td>Teaching Written Composition</td>
<td>3</td>
<td></td>
<td>Techniques for motivating, guiding, correcting, and evaluating student writing.</td>
</tr>
<tr>
<td>LAE</td>
<td>6366</td>
<td>New Perspectives on the Teaching of Young Adult Literature in Middle &amp; Secondary Schools</td>
<td>3</td>
<td></td>
<td>The primary purpose of this course is to improve the quality of language arts instruction at the middle and secondary levels. To achieve this basic purpose, we will focus chiefly on adolescents' perception of and responses to literature and the implications for organization and presentation of literature curricula.</td>
</tr>
<tr>
<td>LAE</td>
<td>6374</td>
<td>Practice in Teaching Grammar</td>
<td>3</td>
<td></td>
<td>Demonstrates techniques incorporating instruction of essential elements of English grammar/mechanics into composition courses. Pedagogy is essential for teachers in secondary schools, community colleges, or advanced composition at the university level.</td>
</tr>
<tr>
<td>LAE</td>
<td>6375</td>
<td>Contemporary Composition Studies</td>
<td>3</td>
<td></td>
<td>Examines the important research and theory in contemporary position pedagogy.</td>
</tr>
<tr>
<td>LAE</td>
<td>6389</td>
<td>Practice in Teaching Literature</td>
<td>1-3</td>
<td></td>
<td>A course that allows the prospective college English teacher to experiment with teaching techniques that will determine the most effective ways to teach literature and teach college English teachers the variety and importance of literary techniques and their relevance to various subject matters.</td>
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<td>SUB</td>
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<tr>
<td>LAE</td>
<td>6415</td>
<td>Literature And The Learner</td>
<td>3</td>
<td></td>
<td>Nature, scope, and uses of literature for instructional, information, and recreational purposes and implications of current theory, significant research, and issues in literature study as they relate to the learner.</td>
</tr>
<tr>
<td>LAE</td>
<td>6427</td>
<td>Children's Literature: Teaching Literature Appreciation</td>
<td>3</td>
<td></td>
<td>Building on an appreciation for children’s literature, students learn how to select quality literature for children and demonstrate instructional strategies for developing children’s engagement with literary texts, etc.</td>
</tr>
<tr>
<td>LAE</td>
<td>6467</td>
<td>World Literature for Teachers</td>
<td>3</td>
<td></td>
<td>World literature encompasses more than Western European literature. This course is designed to emphasize, but is not limited to, the study of Eastern literature. The course is for English Education majors only.</td>
</tr>
<tr>
<td>LAE</td>
<td>6616</td>
<td>Trends in Language Arts Instruction</td>
<td>3</td>
<td>PR: LAE 4314 or equivalent</td>
<td>Significant concepts, emerging trends, research, and instructional techniques for implementation and utilization of language arts in all areas of the curriculum.</td>
</tr>
<tr>
<td>LAE</td>
<td>6637</td>
<td>Current Trends in Secondary English Education</td>
<td>3</td>
<td>PR: LAE 4335 or LAE 4642</td>
<td>Curricular patterns and instructional practices in secondary English.</td>
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<td>PREREQUISITES</td>
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<tr>
<td>LAE</td>
<td>6644</td>
<td>Current Teaching of the English Language and the Study</td>
<td>3</td>
<td></td>
<td>Applications of recent techniques of language study to classroom teaching</td>
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<tr>
<td></td>
<td></td>
<td>of Traditional Grammar</td>
<td></td>
<td></td>
<td>of English, especially in relation to the teaching of grammar. Presents</td>
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<td>an interactive approach to grammar instruction in which students learn</td>
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<td>the basic elements of English grammar and engaging classroom activities</td>
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<td>for teaching grammar in the schools. Fulfills the grammar course</td>
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<td></td>
<td>requirement for teacher certification in English.</td>
</tr>
<tr>
<td>LAE</td>
<td>6738</td>
<td>Teaching Reading in English Curriculum</td>
<td>3</td>
<td></td>
<td>Course is to improve the quality of reading instruction in mid &amp; sec</td>
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<td>English classes through the study of the reading process, research, &amp;</td>
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<td>evaluation related to sec reading, understand how research impacts</td>
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<td>instruction, process of educational reform.</td>
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<tr>
<td>LAE</td>
<td>6749</td>
<td>Composition and the Arts in Literacy Education</td>
<td>3</td>
<td></td>
<td>Students will critically examine research on composition and the arts.</td>
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<td>Students will evaluate instructional practices and design integrated</td>
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<td></td>
<td>language arts programs. Open to non-majors. Not repeatable for credit.</td>
</tr>
<tr>
<td>LAE</td>
<td>6793</td>
<td>Professional Leadership and Research in the Teaching</td>
<td>3</td>
<td>CR: LAE 6923.</td>
<td>Develop professional leadership of teachers of writing, demonstrate</td>
</tr>
<tr>
<td></td>
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<td>of Writing</td>
<td></td>
<td></td>
<td>research-based, classroom-based, writing strategies to their peers by</td>
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<td>linking research directly to instruction. Form support network for</td>
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<td></td>
<td>Teacher Consultants of the National Writing Proj.</td>
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<tr>
<td>LAE</td>
<td>6861</td>
<td>American and British Literature with Technology</td>
<td>3</td>
<td></td>
<td>A study of five sections of literature: 1) British Literature before Shakespeare, 2) British Literature after Shakespeare to 1740, 3) British Literature 1740-1900, 4) American Literature before 1900, and 5) Twentieth Century British and American Literature (1890 to the Present) while developing an individual’s skill with technology.</td>
</tr>
<tr>
<td>LAE</td>
<td>6906</td>
<td>Independent Study in English Education</td>
<td>1-6</td>
<td></td>
<td>This course permits a student to explore a topic of interest in depth under the direction and supervision of a faculty member.</td>
</tr>
<tr>
<td>LAE</td>
<td>6923</td>
<td>Teachers Writing: A Writing Workshop Approach to the Teaching of Writing</td>
<td>3</td>
<td>CR: LAE 6792.</td>
<td>Engage teachers as writers, knowing the best teachers of writing must write. Teachers write together, critically examine new writing strategies, establish a professional support network to serve as foundation for enhancement of their teaching of writing.</td>
</tr>
<tr>
<td>LAE</td>
<td>6947</td>
<td>Internship in Secondary Education for English</td>
<td>6</td>
<td></td>
<td>Students will work with a cooperating teacher and university supervisor to complete their internship requirements in a classroom setting assigned by the university.</td>
</tr>
<tr>
<td>LAE</td>
<td>6971</td>
<td>Thesis: Masters/Educational Specialist</td>
<td>2-19</td>
<td></td>
<td>None.</td>
</tr>
<tr>
<td>LAE</td>
<td>7376</td>
<td>Problems in Advanced English Instruction of Composition</td>
<td>3</td>
<td></td>
<td>Apprenticed, closely supervised study of and practice in teaching of college and university advanced composition. Student may elect to work with nonfiction, fiction, or poetry.</td>
</tr>
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<tr>
<td>LAE</td>
<td>7390</td>
<td>Problems in Advanced English Instruction and Scholarly Research</td>
<td>3</td>
<td></td>
<td>This course provides closely supervised training in upper-level college English instruction and experience with professional research. Experience in lecture, seminar discussion, examinations, evaluation, conferences, directing undergraduate research, course development, use of secondary materials, publication procedure, and collation.</td>
</tr>
<tr>
<td>LAE</td>
<td>7717</td>
<td>Theories And Patterns Of Advanced Language Arts Instruction</td>
<td>3</td>
<td>PR: LAE 6616 or equiv.</td>
<td>New research findings and theories relating to language patterns and contemporary programs for teaching language arts.</td>
</tr>
<tr>
<td>LAE</td>
<td>7718</td>
<td>Linguistic Foundations in Literacy</td>
<td>3</td>
<td></td>
<td>Examines the historical, theoretical, and applied aspects of the relationships between linguistics and literacy.</td>
</tr>
<tr>
<td>LAE</td>
<td>7735</td>
<td>Advanced Seminar in English Education</td>
<td>3-15</td>
<td></td>
<td>Doctoral seminar explores theories, perspectives and research related to the study of the English Language Arts. Topics vary by semester. Doctoral standing only.</td>
</tr>
<tr>
<td>LAE</td>
<td>7739</td>
<td>The Education of English Teachers</td>
<td>3</td>
<td></td>
<td>Introduces &amp; informs adv grad students about the conceptions of curriculum development related to the preparation of Eng teachers. Intended for those interested in careers in teacher educ or expect to influence the policies &amp; practices of teacher educ.</td>
</tr>
<tr>
<td>LAE</td>
<td>7745</td>
<td>Literary Theory and Research in Children’s Literature</td>
<td>3</td>
<td></td>
<td>Critical examination of literary theories that inform the interpretation, criticism, and reading of literature written for school-aged readers and to survey current research in the field of literature in education.</td>
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<td>SUB</td>
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<tr>
<td>LAE</td>
<td>7747</td>
<td>Literature Program Design</td>
<td>3</td>
<td>PR: EDF 6481, LAE 6415, or LAE 6336</td>
<td>Investigation and analysis of the research in literature instruction and the application of the findings to the development of literature programs.</td>
</tr>
<tr>
<td>LAE</td>
<td>7794</td>
<td>Survey of Research on Writing Development and Instruction</td>
<td>3</td>
<td></td>
<td>The purpose of this course is to survey, discuss, analyze, and critique seminal and current research on writing development and instruction in the context of school. Students will also engage in research on writing development or instruction.</td>
</tr>
<tr>
<td>LAE</td>
<td>7795</td>
<td>Research and Theory in the teaching of Writing</td>
<td>3</td>
<td></td>
<td>An in-depth study of the research and theory in the teaching of writing. Emphasis is on the historical perspectives, current theory, and specific research in the process writing movement.</td>
</tr>
<tr>
<td>LAE</td>
<td>7868</td>
<td>Symbolic Processes of Multimedia Literacies</td>
<td>3</td>
<td></td>
<td>Students will critically examine research in multimedia, multi-modal literacies and investigate the interplay among symbolic processes used to produce and consume media-based literacies. Open to non-majors. Not repeatable for credit.</td>
</tr>
<tr>
<td>LAE</td>
<td>7910</td>
<td>Directed Research in English Education</td>
<td>1-19</td>
<td></td>
<td>This course permits a doctoral student to conduct advanced research and to pursue specific areas of interest with a faculty member as supervisor. A contract is required with the faculty member. S/U.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>LAS</td>
<td>6913</td>
<td>Independent Study and Research in Latin American</td>
<td>1-9</td>
<td></td>
<td>This course will provide graduate students with an opportunity to engage in research and/or study abroad in Latin America &amp; the Caribbean, to earn credits towards their degree. Open to LAC majors and non majors. Repeatable up to 9 credits.</td>
</tr>
<tr>
<td>LAS</td>
<td>6936</td>
<td>Seminar in Latin American Studies I</td>
<td>3</td>
<td></td>
<td>This seminar introduces students to the general study of the region and peoples of Latin America and their emigrant populations in the United States. Repeatable as topic varies.</td>
</tr>
<tr>
<td>LAS</td>
<td>6971</td>
<td>Thesis in Latin America and Caribbean</td>
<td>1-12</td>
<td></td>
<td>This course will allow graduate students to earn credits while working on a thesis that is focused in Latin America &amp; the Caribbean. Open to all graduate majors. Repeatable.</td>
</tr>
<tr>
<td>LIN</td>
<td>5700</td>
<td>Applied Linguistics</td>
<td>3</td>
<td></td>
<td>Analysis of the phonological, morphonological, and syntactic features of English as a basis for linguistic application to problems of English language acquisition by non-native speakers.</td>
</tr>
<tr>
<td>LIN</td>
<td>6081</td>
<td>Introduction to Graduate Study in Linguistics</td>
<td>3</td>
<td></td>
<td>An introduction to the aims and methodologies of linguistics as a graduate discipline: The field of linguistics, its subdisciplines, and its relationship to adjacent arts and sciences; bibliographical resources; methods of research and research writing; and a brief survey of the historical development of linguistics and current issues in the field.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>LIN</td>
<td>6601</td>
<td>Sociolinguistics</td>
<td>3</td>
<td></td>
<td>Detailed analysis of the phenomenon of language variation with emphasis upon the research methodology of sociolinguistics and the implications of its findings for current linguistic theory.</td>
</tr>
<tr>
<td>LIN</td>
<td>6675</td>
<td>The Grammatical Structure of American English</td>
<td>3</td>
<td>PR: LIN 5700 or EQ.</td>
<td>Analysis and description of major morphological and syntactic structures of American English, with emphasis upon applied linguistics.</td>
</tr>
<tr>
<td>LIN</td>
<td>6720</td>
<td>Second Language Acquisition</td>
<td>3</td>
<td>PR: LIN 6715 or EQ.</td>
<td>Neurolinguistic, psycholinguistic, and sociolinguistic bases of second language acquisition by both children and adults.</td>
</tr>
<tr>
<td>LIN</td>
<td>6722</td>
<td>Writing Processes in Second Languages Acquisition</td>
<td>3</td>
<td>PR: LIN 6081, TSL5371, TSL 5371.</td>
<td>A survey of current theory and research in second language writing development and instruction, with emphasis upon second language writing in academic settings. May be taken as an elective by students in the Ph.D. program in Second Language Acquisition and Instructional Technology or the M.A. program in Applied Linguistics.</td>
</tr>
<tr>
<td>LIN</td>
<td>6726</td>
<td>Individual Differences in Second Language Acquisition</td>
<td>3</td>
<td></td>
<td>This course covers a variety of topics about individual differences in SLA including, but not limited to, motivation, anxiety, tolerance of ambiguity, and language aptitude.</td>
</tr>
<tr>
<td>LIN</td>
<td>6748</td>
<td>Contrastive Analysis</td>
<td>3</td>
<td></td>
<td>Comparison and contrast of the structures of American English with corresponding structures in selected foreign languages. EA and IA added for contrast with CA.</td>
</tr>
<tr>
<td>LIN</td>
<td>6908</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
<td>Independent study in which the student must have a contract with an instructor.</td>
</tr>
<tr>
<td>LIN</td>
<td>6910</td>
<td>Directed Research</td>
<td>1-10</td>
<td></td>
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<tr>
<td>SUB</td>
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<tr>
<td>LIN</td>
<td>6932</td>
<td>Selected Topics</td>
<td>1-4</td>
<td></td>
<td>Content will depend upon instructor’s interests and students' needs. Such topics and neurolinguistics, bilingualism, and discourse analysis may be taught.</td>
</tr>
<tr>
<td>LIN</td>
<td>7635</td>
<td>Professional Development</td>
<td>3</td>
<td></td>
<td>This course provides professional development opportunities in applied linguistics. Students will be mentored by a faculty member in an area of professional development determined by the student and faculty member.</td>
</tr>
<tr>
<td>LIN</td>
<td>7638</td>
<td>Qualitative Research Methods in Applied Linguistics</td>
<td>3</td>
<td></td>
<td>A comprehensive overview of four common approaches to conducting qualitative research in applied linguistics. Course focuses on both theoretical foundations and methodology.</td>
</tr>
<tr>
<td>LIN</td>
<td>7639</td>
<td>Quantitative Methods in Applied Linguistics</td>
<td>3</td>
<td></td>
<td>This course is intended to help you develop as applied linguistics scholars with regards to quantitative analyses using SPSS.</td>
</tr>
<tr>
<td>LIN</td>
<td>7931</td>
<td>Advanced Seminar in Applied Linguistics</td>
<td>3</td>
<td></td>
<td>This is an applied linguistics seminar course. By the end of the semester, you will have at your disposal the foundation of applied linguistics theory as well as in-depth knowledge of several applied linguistics topics.</td>
</tr>
<tr>
<td>LIS</td>
<td>5020</td>
<td>Foundations of Library and Information Science</td>
<td>3</td>
<td></td>
<td>Introduction to the study of library and information science, history; organization; specialized literature; outstanding leaders; current trends, issues, and problems; the place of the information agency in society with its contributions to that society.</td>
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<tr>
<td>LIS</td>
<td>5268</td>
<td>Microcomputer Applications Library and Information Centers</td>
<td>3</td>
<td></td>
<td>Microcomputer hardware and software for libraries and their application in library/information settings. Projects using major applications for budgets, databases, and telecommunications are undertaken.</td>
</tr>
<tr>
<td>LIS</td>
<td>5315</td>
<td>Instructional Graphics</td>
<td>3</td>
<td></td>
<td>Theoretical aspects, planning and production of instructional graphic material. The theory of graphic communications. Interpreting needs for instructional materials appropriate for given behavioral objectives.</td>
</tr>
<tr>
<td>LIS</td>
<td>5333</td>
<td>TV in Schools and Libraries</td>
<td>3</td>
<td></td>
<td>Small format video tape recordings and the utilization of open and closed broadcasts in schools and libraries.</td>
</tr>
<tr>
<td>LIS</td>
<td>5418</td>
<td>Health Informatics for Medical Librarians</td>
<td>3</td>
<td>CR: LIS 6475.; PR: LIS 5020 or LIS 6620</td>
<td>Introduction to the interdisciplinary field of medical informatics highlighting the underlying theories, and methods related to health information technology in support of decision-making, problem-solving, and other health information problems.</td>
</tr>
<tr>
<td>LIS</td>
<td>5566</td>
<td>Multicultural Literature for Children and Young Adults</td>
<td>3</td>
<td></td>
<td>Students will select and evaluate multicultural and special population materials for effective use in youth services and programs in public and school libraries.</td>
</tr>
<tr>
<td>LIS</td>
<td>5937</td>
<td>Selected Topics in Library Studies</td>
<td>1-4</td>
<td></td>
<td>Covers a variety of topics in such areas as collection development, reference services, technical services, and administration.</td>
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<tr>
<td>SUB</td>
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<td>LIS</td>
<td>6026</td>
<td>Introduction to Archives and Records Management</td>
<td>3</td>
<td>PR: LIS 6711</td>
<td>This introductory course teaches students the basic theories and methodologies of archives and</td>
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<td>records management. It serves as a foundation for other more advanced archival management</td>
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<td>courses, such as Web Archiving and Digital Curation.</td>
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<tr>
<td>LIS</td>
<td>6110</td>
<td>History of Libraries</td>
<td>3</td>
<td></td>
<td>Development of libraries as found from the earliest records to the great libraries of modern times,</td>
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<td></td>
<td>and the library as a social institution.</td>
</tr>
<tr>
<td>LIS</td>
<td>6111</td>
<td>History of Children's Literature</td>
<td>3</td>
<td></td>
<td>Historical bibliographical survey of imaginative and information literature for children.</td>
</tr>
<tr>
<td>LIS</td>
<td>6260</td>
<td>Information Science in Librarianship</td>
<td>3</td>
<td></td>
<td>Historical overview of the emergence of information science as a discipline. The fundamental</td>
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<td>concepts of information retrieval systems and subsystems, related information technologies,</td>
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<td>including indexing and abstracting, and their applications to the field of librarianship.</td>
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<tr>
<td>LIS</td>
<td>6271</td>
<td>Research Methods in Library and Information Science</td>
<td>3</td>
<td>PR: LIS 5020, LIS 6603, and LIS 6725 or LIS 6735.</td>
<td>Overview of present status of research in library and information science; introduction to research</td>
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<td>methods and their application to librarianship; designed to prepare students to evaluate and plan</td>
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<td></td>
<td>research studies relating to library and information science.</td>
</tr>
<tr>
<td>LIS</td>
<td>6303</td>
<td>Preparing Instructional Media</td>
<td>3</td>
<td></td>
<td>Fundamentals of preparing and using audiovisuals as they relate to the communication process.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>LIS</td>
<td>6316</td>
<td>Visualization of Knowledge</td>
<td>3</td>
<td>PR: LIS 6260</td>
<td>This course covers the perceptual basis of information visualization, major visualization methods, information retrieval system utilizing information visualization, and future trends and issues of information visualization in digital libraries.</td>
</tr>
<tr>
<td>LIS</td>
<td>6402</td>
<td>Advanced Library Administration</td>
<td>3</td>
<td></td>
<td>Applications of staff management principles to library situations. Includes staff roles in current and future operations, application of library performance measures to determine staff effectiveness; preparation of staff manuals; problems of special classes of library workers, such as volunteers and students.</td>
</tr>
<tr>
<td>LIS</td>
<td>6409</td>
<td>Introduction to Library Administration</td>
<td>3</td>
<td></td>
<td>Behavioral approach to libraries as organizations; administrative principles, theories, and problems of all types of libraries; methods of administration; use of case studies, role plays, and in-basket exercises.</td>
</tr>
<tr>
<td>LIS</td>
<td>6432</td>
<td>Seminar in Academic Libraries</td>
<td>3</td>
<td>PR: LIS 6409</td>
<td>Identification of problems and critical examination of methods in administrative areas of technical, student and teaching staff services, fiscal and legal responsibilities, staff organization and supervision in academic libraries.</td>
</tr>
<tr>
<td>LIS</td>
<td>6445</td>
<td>Seminar in Public Libraries</td>
<td>3</td>
<td>PR: LIS 6409</td>
<td>Critical examination of public and institutional library administration, services, resources, and facilities at the municipal, county, and regional levels. Role of state and federal governments in library development.</td>
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<td>LIS</td>
<td>6455</td>
<td>Organization and Administration of the School Media Center</td>
<td>3</td>
<td>PR: LIS 6409</td>
<td>Media quarters, facilities, collections, equipment, and services. Principles of organization and administration of media programs in elementary and secondary schools. Field trips to area media centers required.</td>
</tr>
<tr>
<td>LIS</td>
<td>6463</td>
<td>Library Networks and Systems</td>
<td>3</td>
<td></td>
<td>Development of library networks at the local, state, regional, and national levels with consideration of organization, administration, services, funding, and legislation.</td>
</tr>
<tr>
<td>LIS</td>
<td>6472</td>
<td>Seminar in Special Libraries</td>
<td>3</td>
<td>PR: LIS 6409</td>
<td>Identification of problems and critical examination of methods in administrative areas of technical and special service clientele; fiscal and legal responsibilities, staff organization, and services in special libraries.</td>
</tr>
<tr>
<td>LIS</td>
<td>6473</td>
<td>Law Librarianship</td>
<td>3</td>
<td>PR: LIS 6260, LIS 6409, LIS 6603, LIS 6735</td>
<td>All aspects of law librarianship, including administration, acquisition, organization, and use of information resources for persons in the law fields. Field trip may be required.</td>
</tr>
<tr>
<td>LIS</td>
<td>6475</td>
<td>Health Sciences Librarianship</td>
<td>3</td>
<td>PR: LIS 6260, LIS 6409, LIS 6603, LIS 6735</td>
<td>All aspects of health science librarianship, including administration, acquisition, organization, and use of information resources for persons in the health fields such as physicians, medical students, nursing students, allied health personnel and students, and researchers.</td>
</tr>
<tr>
<td>SUB</td>
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<td>LIS</td>
<td>6511</td>
<td>Collection Development and Maintenance</td>
<td>3</td>
<td>CPR: LIS 6271</td>
<td>Developmental approach to building library collections of both print and non-print materials. Emphasis upon evaluation, selection, and acquisition of library materials as they uphold the objectives of the institutions for which they are selected and acquired.</td>
</tr>
<tr>
<td>LIS</td>
<td>6514</td>
<td>Digital Libraries</td>
<td>3</td>
<td>PR: LIS 6260, LIS 6603</td>
<td>Survey of the field of digital libraries with an emphasis on the interplay of people, organizations, and technology. Experience in either planning or developing a digital library site.</td>
</tr>
<tr>
<td>LIS</td>
<td>6515</td>
<td>Web Archiving</td>
<td>3</td>
<td>PR: LIS 6711.</td>
<td>Introduces the background knowledge about the Web and web archiving related technical standards, and cover the whole process of web archiving, including selection, acquisition, organization and description, storage, access and preservation.</td>
</tr>
<tr>
<td>LIS</td>
<td>6523</td>
<td>Adult Services In Libraries</td>
<td>3</td>
<td></td>
<td>Traditional and innovative services for adults in public and other types of libraries, including those for special groups, such as the aging, handicapped and institutionalized.</td>
</tr>
<tr>
<td>LIS</td>
<td>6528</td>
<td>Storytelling</td>
<td>3</td>
<td>PR: LIS 6585</td>
<td>Building storytelling programs for school and public libraries or other educational institutions. Analysis of historical aspects, materials suitable for use and audience reaction.</td>
</tr>
<tr>
<td>LIS</td>
<td>6542</td>
<td>The Curriculum and Instructional Technology</td>
<td>3</td>
<td></td>
<td>Effective utilization of instructional materials as they relate to specific areas of curriculum in elementary and high school programs.</td>
</tr>
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<tr>
<td>LIS</td>
<td>6564</td>
<td>Materials For Children</td>
<td>3</td>
<td></td>
<td>Examination of materials for all institutions in which children are served: school media centers, public libraries, kindergartens, etc. Stress on selection aids, reviewing techniques, utilizations.</td>
</tr>
<tr>
<td>LIS</td>
<td>6565</td>
<td>Books and Related Materials for Young Adults</td>
<td>3</td>
<td></td>
<td>Young adult materials for use in secondary school libraries, young adult sections of public libraries, and other institutions serving youth. Equal emphasis upon (1) selection principles and bibliographical sources, as well as upon (2) utilization in terms of service to the young adult.</td>
</tr>
<tr>
<td>LIS</td>
<td>6603</td>
<td>Basic Information Sources and Services</td>
<td>3</td>
<td></td>
<td>An examination of the basic sources of information in the general library; of bibliographical control of all communication media, with emphasis on those tools of most value to general reference services.</td>
</tr>
<tr>
<td>LIS</td>
<td>6609C</td>
<td>Advanced Information Retrieval</td>
<td>3</td>
<td>PR: LIS 6260, LIS 6603</td>
<td>Principles of online searching and characteristics of machine-readable bibliographic data bases. Includes two credit hours of laboratory providing hands-on research experience.</td>
</tr>
<tr>
<td>LIS</td>
<td>6610</td>
<td>Information Sources and Services in the Humanities</td>
<td>3</td>
<td>PR: LIS 6603</td>
<td>Consideration of the bibliographical and reference materials in the humanities with training and practice in their use for solving problems in the reference service.</td>
</tr>
<tr>
<td>LIS</td>
<td>6620</td>
<td>Information Sources and Services in the Social Sciences</td>
<td>3</td>
<td>PR: LIS 6603</td>
<td>Consideration of the bibliographical and reference materials in the social sciences with training and practice in their use for solving problems in reference service.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>LIS</td>
<td>6624</td>
<td>Information Sources and Services in Business and Law</td>
<td>3</td>
<td>PR: LIS 6603</td>
<td>Consideration of representative reference sources in business and law with training and practice in their use for solving information problems in academic, public, and special libraries.</td>
</tr>
<tr>
<td>LIS</td>
<td>6630</td>
<td>Information Sources and Services in Science and Technology</td>
<td>3</td>
<td>PR: LIS 6603</td>
<td>Study of representative reference sources in pure and applied sciences with equal attention given to typical problems encountered in scientific and technological reference service.</td>
</tr>
<tr>
<td>LIS</td>
<td>6661</td>
<td>Government Documents</td>
<td>3</td>
<td></td>
<td>The nature of state, federal, United Nations, and international documents, their reference and research value; the techniques of acquisition, organization, and reference use.</td>
</tr>
<tr>
<td>LIS</td>
<td>6670</td>
<td>Advanced Cyber Intelligence</td>
<td>3</td>
<td>PR: LIS 6709</td>
<td>This course builds on the foundations of Cyber Intelligence (LIS 6703) and focuses on applying intelligence analytic methods to plan, collect, process, analyze, produce and disseminate cyber intelligence products.</td>
</tr>
<tr>
<td>LIS</td>
<td>6700</td>
<td>Information Strategy and Decision-Making</td>
<td>3</td>
<td></td>
<td>This course builds on the idea that understanding strategy is a foundation for making information meaningful. Student will learn strategic concepts, tools, and tradecraft and how to apply them to improve decision making.</td>
</tr>
<tr>
<td>LIS</td>
<td>6702</td>
<td>Advanced Intelligence Analytic Methods</td>
<td>3</td>
<td></td>
<td>This course is designed to help the student select and apply complex, structured techniques and methods used to support intelligence analysis.</td>
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<tr>
<td>LIS</td>
<td>6703</td>
<td>Core Concepts in Intelligence</td>
<td>3</td>
<td></td>
<td>Introduces intelligence theory, explores the organization and functions of the U.S. Intelligence Community, its interaction with national security policymakers, key issues about its workings, and the challenges it faces in defining its future role.</td>
</tr>
<tr>
<td>LIS</td>
<td>6709</td>
<td>Cyber Intelligence</td>
<td>3</td>
<td></td>
<td>This course reviews the main actors, targets, threats, and other troublesome activities in cyberspace. It builds a foundation for understanding how cyber intelligence and counterintelligence can support enterprise and national cybersecurity.</td>
</tr>
<tr>
<td>LIS</td>
<td>6711</td>
<td>Organization of Knowledge I</td>
<td>3</td>
<td></td>
<td>Principles of the organization of knowledge emphasizing descriptive cataloging, including the MARC format, the use of LCSH and the Library of Congress classification, and searching the OCLC Online Union Catalog.</td>
</tr>
<tr>
<td>LIS</td>
<td>6712</td>
<td>Organization of Knowledge II</td>
<td>3</td>
<td>PR: LIS 6711</td>
<td>Introduction to the practice in using selected schedules of Library of Congress Classification System and the Library of Congress Subject Heading List; changing policies and procedures in cataloging and an introduction to the use of the MARC format for inputting cataloging data into machine readable files.</td>
</tr>
<tr>
<td>LIS</td>
<td>6724</td>
<td>Classification and Cataloging of Non-Book Materials</td>
<td>3</td>
<td>PR: LIS 6735</td>
<td>Principles and practices in cataloging and organizing non-book materials.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
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<tr>
<td>LIS</td>
<td>6726C</td>
<td>Indexing and Abstracting</td>
<td>3</td>
<td>PR: LIS 6711 or LIS 6735</td>
<td>Principles and procedures for indexing and abstracting products of human knowledge in various formats, including vocabulary control, thesaurus construction, classification, and coding in manual, automated, and intelligent systems.</td>
</tr>
<tr>
<td>LIS</td>
<td>6735</td>
<td>Technical Services in Small Libraries</td>
<td>3</td>
<td></td>
<td>Covers aspects of technical services including acquisitions, cataloging, and circulation systems as they relate to school media centers, small public libraries, and information centers. Automation is emphasized in all aspects of the course.</td>
</tr>
<tr>
<td>LIS</td>
<td>6773</td>
<td>Digital Curation</td>
<td>3</td>
<td>PR: LIS 6711, LIS 5937.</td>
<td>Covers the management of current and archival electronic records, including the creation and implementation of electronic record-keeping systems, the appraisal, processing and preservation of electronic records.</td>
</tr>
<tr>
<td>LIS</td>
<td>6906</td>
<td>Independent Study</td>
<td>1-4</td>
<td></td>
<td>Supervised experience in an approved cooperating library. Includes practice work, seminar sessions and individual conferences, a progress report, and a final report on the field experience.</td>
</tr>
<tr>
<td>LIS</td>
<td>6946</td>
<td>Supervised Field Work</td>
<td>3</td>
<td></td>
<td>Supervised experience in an approved cooperating library. Includes practice work, seminar sessions and individual conferences, a progress report, and a final report on the field experience.</td>
</tr>
<tr>
<td>LIS</td>
<td>6949</td>
<td>Practicum in Archives and Special Collections</td>
<td>2-6</td>
<td>CR: LIS 6603, LIS 6409, LIS 6271, LIS 6511.; PR: LIS 5937, LIS 6711, LIS 6724.</td>
<td>Students gain hands-on practice in processing, cataloging and digitizing archives, rare books and other kinds of special collections. Students will be supervised by an archivist/ special collections librarian and a faculty member. Permission required.</td>
</tr>
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<tr>
<td>LIT</td>
<td>6096</td>
<td>Studies in Contemporary Literature</td>
<td>3</td>
<td></td>
<td>Drama, poetry, fiction, and literary criticism; authors to be studied include Ionesco, Thomas, Miller, T. Williams, Beckett, Camus, Burgess, Morrison, and Walker.</td>
</tr>
<tr>
<td>LIT</td>
<td>6105</td>
<td>Studies in Continental Literature</td>
<td>3</td>
<td></td>
<td>General areas include the Renaissance, the Enlightenment, the Novel in Europe, the Romantic Movement on the Continent, and Classical Comedy.</td>
</tr>
<tr>
<td>LIT</td>
<td>6236</td>
<td>Studies in Postcolonial Literatures</td>
<td>3</td>
<td></td>
<td>Study of literature from colonies of Europe. Major concerns include identity, struggles against colonialism and neo-colonialism, modernization, education, the changing status of women, and issues of language and literary genre.</td>
</tr>
<tr>
<td>LIT</td>
<td>6934</td>
<td>Selected Topics in English Studies</td>
<td>1-6</td>
<td></td>
<td>Current topics offered on a rotating basis include The Nature of Tragedy; The Nature of Comedy and Satire; and the Nature of Myth, Allegory, and Symbolism; the Epic; Utopian Literature. Other topics will be added in accordance with student demand and instructor interest.</td>
</tr>
<tr>
<td>LNW</td>
<td>5900</td>
<td>Directed Reading</td>
<td>1-4</td>
<td></td>
<td>Study of an author, movement, or theme.</td>
</tr>
<tr>
<td>LNW</td>
<td>5934</td>
<td>Selected Topics</td>
<td>4</td>
<td></td>
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<tr>
<td>MAA</td>
<td>5306</td>
<td>Real Analysis I</td>
<td>3</td>
<td>PR: MAA 4211.</td>
<td>Riemann-Stieltjes integrals, uniform convergence, Fourier series, Lebesgue measure and integration on R.</td>
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<tr>
<td>MAA</td>
<td>5405</td>
<td>Applied Complex Analysis</td>
<td>3</td>
<td></td>
<td>Complex numbers, analytic and harmonic functions. Series. Contour integrals, residue theory. Conformal mappings. (A survey course emphasizing techniques and applications.)</td>
</tr>
<tr>
<td>MAA</td>
<td>6406</td>
<td>Complex Analysis I</td>
<td>3</td>
<td>PR: MAA 5405</td>
<td>Linear transformations, analytic functions, conformal mapping, Cauchy's theorem and applications, power series, partial fractions and factorization, elementary Riemann surfaces, Riemann mapping theorem.</td>
</tr>
<tr>
<td>MAA</td>
<td>6407</td>
<td>Complex Analysis II</td>
<td>3</td>
<td>PR: MAA 6406</td>
<td>Topics in: conformal mappings, normal families, Picard's theorem, univalent functions, extremal properties, elliptic functions, approximation theory, Riemann surfaces.</td>
</tr>
<tr>
<td>MAA</td>
<td>6506</td>
<td>Functional Analysis I</td>
<td>3</td>
<td>PR: MAA 5307, MAS 5107</td>
<td>Normed linear spaces and topological vector spaces; open mapping, closed graph, and Hahn-Banach Theorem, UB principle, compact operators, dual spaces.</td>
</tr>
<tr>
<td>MAA</td>
<td>6507</td>
<td>Functional Analysis II</td>
<td>3</td>
<td>PR: MAA 6506</td>
<td>Hilbert spaces, spectral theory, and other topics.</td>
</tr>
<tr>
<td>MAA</td>
<td>6616</td>
<td>Abstract Integration</td>
<td>3</td>
<td>PR: MAA 5307</td>
<td>Measure as abstract integration; Riesz representation theorem, Fubini’s Theorem, Radon-Nikodym Theorem, LP spaces.</td>
</tr>
<tr>
<td>MAD</td>
<td>5101</td>
<td>LISP: Programming With Algebraic Applications</td>
<td>3</td>
<td>PR: MHF 5306 or MAD 6510 or MAS 5311</td>
<td>Programming in LISP, functional languages, foundations of Lambda Calculus and algebraic applications (theorem proving and game playing).</td>
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<tr>
<td>MAD</td>
<td>5305</td>
<td>Graph Theory</td>
<td>3</td>
<td>PR: MAS 3105</td>
<td>Brief introduction to classical graph theory (4-color theorem, etc.), directed graphs, connected digraphs, condensations, incidence matrices, Polya’s Theorem, networks.</td>
</tr>
<tr>
<td>MAD</td>
<td>6206</td>
<td>Combinatorics I</td>
<td>3</td>
<td>PR: MAS 3105 and MAS 4301</td>
<td>Elementary counting principles, distributions, sets, multisets, partitions of sets and integers, generating functions and recurrences, graphical methods, probabilistic methods.</td>
</tr>
<tr>
<td>MAD</td>
<td>6207</td>
<td>Combinatorics II</td>
<td>3</td>
<td>PR: MAS 5311 and MAD 6206</td>
<td>Combinatorics of finite sets: posets, hypergraphs and external problems, matroids, block designs, Mobius inversion for partially ordered sets, Polya’s enumeration theory.</td>
</tr>
<tr>
<td>MAD</td>
<td>6510</td>
<td>Analysis of Algorithms</td>
<td>4</td>
<td>PR: MAS 4301</td>
<td>Mathematical theory of algorithms for information processing, including time and space requirements of algorithms, construction of optimal algorithms.</td>
</tr>
<tr>
<td>MAD</td>
<td>6616</td>
<td>Algebraic Automata Theory</td>
<td>3</td>
<td>PR: MAS 4301</td>
<td>Deterministic and non-deterministic finite automata, Mealy and Moore machines, push-down automata, Turing machines, regular languages, context free languages, halting problem, and universal Turing machines.</td>
</tr>
<tr>
<td>MAD</td>
<td>6617</td>
<td>Algebraic Coding Theory</td>
<td>3</td>
<td>PR: MAS 5311</td>
<td>Linear block codes over an arbitrary finite field: Hamming, Golay, BCH, quadratic residue, Reed-Muller, and MDS codes, the MacWilliams identity, bounds on minimum distance, and relationship to design theory.</td>
</tr>
<tr>
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<tr>
<td>MAE</td>
<td>6115</td>
<td>Current Trends in Elementary Mathematics Education</td>
<td>3</td>
<td>PR: MAE 4310 or equiv.</td>
<td>Philosophy, content, and process of mathematics instruction in elementary school programs.</td>
</tr>
<tr>
<td>MAE</td>
<td>6117</td>
<td>Teaching Elementary Math</td>
<td>3</td>
<td></td>
<td>This course provides for the development of knowledge and skills necessary to prepare students as teachers of mathematics in elementary classes as recommended by the National Council of Teachers of Mathematics in its guidelines for teachers.</td>
</tr>
<tr>
<td>MAE</td>
<td>6126</td>
<td>Current Trends in Middle Grades Mathematics</td>
<td>3</td>
<td>PR: MAE 6356.</td>
<td>This course examines current trends and issues in middle grades mathematics. It familiarizes teachers with new developments in this field with a focus on curriculum issues and issues arising from state, national, and international assessments.</td>
</tr>
<tr>
<td>MAE</td>
<td>6127</td>
<td>Probability and Statistics for Middle Grades Teachers</td>
<td>3</td>
<td></td>
<td>This course examines probability and statistics topics for middle grades mathematics teachers. Topics include data collection and display, measures of central tendency and variability, probabilities, and sampling procedures.</td>
</tr>
<tr>
<td>MAE</td>
<td>6137</td>
<td>Topics in Teaching Probability and Statistics</td>
<td>3</td>
<td></td>
<td>This course examines issues related to teaching probability and statistics in secondary schools.</td>
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<tr>
<td>MAE</td>
<td>6315</td>
<td>Algebraic Thinking for Elementary Teachers</td>
<td>3</td>
<td></td>
<td>This course is designed to enhance the algebra content knowledge of elementary teachers and to consider how algebraic experiences and informal algebraic concepts can be introduced into the elementary curriculum.</td>
</tr>
<tr>
<td>MAE</td>
<td>6316</td>
<td>Geometry and Measurement for Elementary Teachers</td>
<td>3</td>
<td></td>
<td>This course is designed to enhance the geometric content knowledge of elementary teachers and to consider how geometric experiences and concepts can be introduced into the elementary curriculum.</td>
</tr>
<tr>
<td>MAE</td>
<td>6324</td>
<td>Advanced Math Topics - Middle Grades Teachers</td>
<td>3</td>
<td>PR: MAE 6127, MAE 6328, MAE 6329, and MAE 6325.</td>
<td>This course examines advanced functions topics, basic concepts of trigonometry, and the foundations of calculus. Teachers experience instructional approaches appropriate for use in middle grades classrooms.</td>
</tr>
<tr>
<td>MAE</td>
<td>6325</td>
<td>Number Theory for Middle Grades Teachers</td>
<td>3</td>
<td></td>
<td>This course examines in number theory concepts appropriate for middle grades mathematics teachers, including historical connections. Teachers experience instructional approaches appropriate for use in middle grades classrooms.</td>
</tr>
<tr>
<td>MAE</td>
<td>6328</td>
<td>Algebra for Middle Grades Teachers</td>
<td>3</td>
<td>PR: MAE 6127, MAE 6328, MAE 6329, and MAE 6325.</td>
<td>This course examines in algebra content appropriate for middle grades mathematics teachers, including the use of technology to study algebra. Teachers experience instructional approaches appropriate for use in middle grades algebra classrooms.</td>
</tr>
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<tr>
<td>MAE</td>
<td>6329</td>
<td>Geometry and Measurement for Middle Grades Teachers</td>
<td>3</td>
<td></td>
<td>This course examines in geometry content appropriate for middle grades mathematics teachers, including the use of technology to study geometry. Teachers experience instructional approaches appropriate for use in middle grades classrooms.</td>
</tr>
<tr>
<td>MAE</td>
<td>6334</td>
<td>Problem Solving for Elementary Teachers</td>
<td>3</td>
<td></td>
<td>This course analyzes problem-solving strategies of elementary teachers and their students.</td>
</tr>
<tr>
<td>MAE</td>
<td>6336</td>
<td>Topics in Teaching Calculus</td>
<td>3</td>
<td></td>
<td>This course examines issues related to teaching calculus in secondary schools.</td>
</tr>
<tr>
<td>MAE</td>
<td>6337</td>
<td>Topics in Teaching Algebra</td>
<td>1-4</td>
<td></td>
<td>Topics in algebra, philosophy, new trends, and methods of teaching secondary school algebra.</td>
</tr>
<tr>
<td>MAE</td>
<td>6338</td>
<td>Topics in Teaching Geometry</td>
<td>1-4</td>
<td></td>
<td>Topics in geometry, philosophy, new trends, and methods of teaching secondary school geometry.</td>
</tr>
<tr>
<td>MAE</td>
<td>6356</td>
<td>Teaching of Pre-Secondary School Mathematics</td>
<td>3</td>
<td>PR: 12 hours of mathematics</td>
<td>Development of strategies and materials for teaching mathematical concepts and skills appropriate to pre-secondary school years.</td>
</tr>
<tr>
<td>MAE</td>
<td>6362</td>
<td>Senior High Mathematics Methods</td>
<td>3</td>
<td></td>
<td>This course is designed to prepare teachers for a successful induction to teaching mathematics in the high schools of today. It is designed to bridge the perceived gap between theory and practice.</td>
</tr>
<tr>
<td>MAE</td>
<td>6370</td>
<td>Mathematics for High School Teachers</td>
<td>3</td>
<td></td>
<td>This course examines high school mathematics from an advanced perspective and makes connections between college level mathematics and the mathematics of the secondary school.</td>
</tr>
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<tr>
<td>MAE</td>
<td>6643</td>
<td>Communication Skills in Mathematics</td>
<td>3</td>
<td></td>
<td>This course examines issues related to communicating in mathematics, including reading, writing, speaking, and listening. It satisfies the reading in the content area mandate for certification.</td>
</tr>
<tr>
<td>MAE</td>
<td>6899</td>
<td>Internship Seminar in Mathematics Education</td>
<td>1-3</td>
<td>CR: MAE 6947</td>
<td>This seminar accompanies the graduate internship in mathematics education and provides teacher candidates an opportunity to interact with peers and university faculty regarding classroom experiences.</td>
</tr>
<tr>
<td>MAE</td>
<td>6906</td>
<td>Independent Study in Mathematics Education</td>
<td>1-6</td>
<td></td>
<td>This course permits a student to explore a topic of interest in depth under the direction and supervision of a faculty member.</td>
</tr>
<tr>
<td>MAE</td>
<td>6945</td>
<td>Practicum in Mathematics Education</td>
<td>3</td>
<td></td>
<td>This practicum provides individuals in the MAT program in mathematics education with early field experiences in mathematics classrooms at the middle or high school levels, depending on the program of study.</td>
</tr>
<tr>
<td>MAE</td>
<td>6947</td>
<td>Internship in Secondary Education for Mathematics</td>
<td>6</td>
<td></td>
<td>Students will work with a cooperating teacher and university supervisor to complete their internship requirements in a classroom setting assigned by the university.</td>
</tr>
<tr>
<td>MAE</td>
<td>6971</td>
<td>Thesis: Masters/Educational Specialist</td>
<td>2-19</td>
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<tr>
<td>MAE</td>
<td>7138</td>
<td>Assessment in Mathematics Education</td>
<td>3</td>
<td></td>
<td>This course discusses issues related to assessment in mathematics education at all levels, including state, national, and international assessments. It also discusses issues related to rubrics and alternative assessments in mathematics.</td>
</tr>
<tr>
<td>MAE</td>
<td>7146</td>
<td>Curriculum History/Research Mathematics Education</td>
<td>3</td>
<td></td>
<td>This course surveys curriculum history in mathematics education, discusses current research on mathematics education curricula, and explores issues related to conducting research on curriculum in this field.</td>
</tr>
<tr>
<td>MAE</td>
<td>7655</td>
<td>Technology Issues in Mathematics Education</td>
<td>3</td>
<td></td>
<td>This course focuses on issues surrounding the use of technology in mathematics education. It examines perspectives and research about technology in mathematics education and their implications for technology instruction in school mathematics programs.</td>
</tr>
<tr>
<td>MAE</td>
<td>7794</td>
<td>Preparing Teachers of Mathematics, K-12</td>
<td>3</td>
<td></td>
<td>This course focuses on analyzing and examining the research in mathematics teaching and teacher education as it relates to the initial preparation of teachers of mathematics and to the professional development of practicing teachers of mathematics.</td>
</tr>
<tr>
<td>MAE</td>
<td>7796</td>
<td>Research Issues in Mathematics Education</td>
<td>3</td>
<td></td>
<td>This course focuses on current research in mathematics education and its implications for instruction in school mathematics programs, particularly its impact on mathematics curricula, learning, and instruction.</td>
</tr>
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<tr>
<td>MAE</td>
<td>7910</td>
<td>Directed Research in Mathematics Education</td>
<td>1-19</td>
<td></td>
<td>This course permits a doctoral student to conduct advanced research and to pursue specific areas of interest with a faculty member as supervisor. A contract is required with the faculty member. S/U.</td>
</tr>
<tr>
<td>MAE</td>
<td>7945</td>
<td>Practicum in Mathematics Education</td>
<td>3</td>
<td></td>
<td>This practicum provides doctoral students in mathematics education an opportunity to engage in professional experiences in teaching or research that are individualized to meet future academic needs and goals.</td>
</tr>
<tr>
<td>MAE</td>
<td>7980</td>
<td>Dissertation</td>
<td>2-30</td>
<td></td>
<td>An examination of the theory and practice of management, including the study of goals and means, the functions of management, and the administrative process in general.</td>
</tr>
<tr>
<td>MAN</td>
<td>6055</td>
<td>Organizational Behavior and Leadership</td>
<td>2-3</td>
<td></td>
<td>Examines the perspective required of the manager/leader/facilitator in light of personal, organizational, and societal needs judged by standards of effectiveness and ethicalness.</td>
</tr>
<tr>
<td>MAN</td>
<td>6107</td>
<td>Leading Sustainable Enterprise: Goals and Processes</td>
<td>2-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAN</td>
<td>6116</td>
<td>Diversity and Organizational Justice</td>
<td>3</td>
<td></td>
<td>Course deals with questions, dimensions of style and structure, problems and paradigms of solutions that have come out of management experience of a changing workforce during the past twenty years. Emerging styles of leadership among people of diverse cultural backgrounds will be explored as solutions, not as problems.</td>
</tr>
<tr>
<td>MAN</td>
<td>6140</td>
<td>Decision Making &amp; Problem Solving</td>
<td>3</td>
<td></td>
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<tr>
<td>MAN</td>
<td>6145</td>
<td>Managing Creative Projects</td>
<td>3</td>
<td></td>
<td>Interdisciplinary overview of how organizations can harness innovation through creative projects. It covers foundations of creativity and innovation, techniques to support creativity in teams, and establish a culture of innovation.</td>
</tr>
<tr>
<td>MAN</td>
<td>6147</td>
<td>Leadership/Management Concepts</td>
<td>2</td>
<td></td>
<td>Provides a foundation for the study of processes of leadership in organization and society. Presents an overview of various concepts of leadership, such as the personal values of leaders and leadership organization.</td>
</tr>
<tr>
<td>MAN</td>
<td>6149</td>
<td>Leadership and Teams</td>
<td>3</td>
<td></td>
<td>Exploration, analysis and applications of Leadership theory, research concepts and skills in teams and organizations. Course provides insights into opportunities and challenges faced by leaders as they seek to adapt themselves and their organizations to the global business environment.</td>
</tr>
<tr>
<td>MAN</td>
<td>6165</td>
<td>Principles of Collaboration</td>
<td>3</td>
<td></td>
<td>This course approaches collaboration from multiple perspectives. Students will learn underlying theories of teams and collaboration, as well as techniques for leadership, interpersonal communications, virtual collaboration, and collaboration engineering.</td>
</tr>
<tr>
<td>MAN</td>
<td>6204</td>
<td>Organization Design and Structure</td>
<td>3</td>
<td></td>
<td>Systematic study of architecture, design and management approaches that influence the effectiveness of public and private organizations, including theory, environment, technology, culture, behavior control and work design.</td>
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<td>MAN</td>
<td>6256</td>
<td>Politics and Control in Organizations</td>
<td>3</td>
<td></td>
<td>Course explores politics and control at the individual, small group, and organizational levels. Students will also explore the power relationships between organizations and the larger political/economic systems of which they are a part and with which they interact.</td>
</tr>
<tr>
<td>MAN</td>
<td>6289</td>
<td>Organizational Change and Development</td>
<td>3</td>
<td>PR: MAN 6055</td>
<td>A combination laboratory-field course requiring the integration of behavioral science theories, tools, concepts, and techniques learned in the lab to an OB application in a &quot;real&quot; organization.</td>
</tr>
<tr>
<td>MAN</td>
<td>6305</td>
<td>Human Resource Management</td>
<td>3</td>
<td></td>
<td>Course focuses on the complex decision-making processes involved in the management of human resources within an organizational system geared to meeting both individual needs and organizational objectives.</td>
</tr>
<tr>
<td>MAN</td>
<td>6347</td>
<td>People Analytics</td>
<td>3</td>
<td></td>
<td>People drive organization and it is now possible to track performance in great detail. This course provides an overview of people analytics opportunities in today’s organizations as well as methods to address in a data-driven manner.</td>
</tr>
<tr>
<td>MAN</td>
<td>6435</td>
<td>Contract Management</td>
<td>3</td>
<td></td>
<td>This course strengthens the student’s ability to participate in goods and services acquisition and contract administration. Students will be introduced to the different contracting models including Private, Federal, and state, local and education (SLED).</td>
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<tr>
<td>MAN</td>
<td>6448</td>
<td>Negotiating Agreement and Resolving Conflict</td>
<td>3</td>
<td></td>
<td>Provide the student with an overview of conflict resolution within/between organizations. Includes negotiation, mediation, arbitration, peer review, and other alternatives to litigation; internal dispute resolution, dispute system design/implementation.</td>
</tr>
<tr>
<td>MAN</td>
<td>6518</td>
<td>Sustainable Production Systems</td>
<td>3</td>
<td></td>
<td>Examine production processes dedicated to sustainable organizational performance through elimination of waste and reduction in resources consumed.</td>
</tr>
<tr>
<td>MAN</td>
<td>6596</td>
<td>Supply Chain Management</td>
<td>3</td>
<td></td>
<td>Overview of key supply chain processes and functions, including logistics, marketing, finance, operations, and procurement, and the implications of supply chain management for creating value for customers and other supply chain members.</td>
</tr>
<tr>
<td>MAN</td>
<td>6599</td>
<td>Logistics Systems and Analytics</td>
<td>3</td>
<td>PR: QMB 6603</td>
<td>Introduction to software tools and decision support models which are frequently used in the design and operation of integrated supply chains.</td>
</tr>
<tr>
<td>MAN</td>
<td>6601</td>
<td>International Management</td>
<td>3</td>
<td></td>
<td>A study of the characteristics of the international and multinational company, environmental constraints, personnel and labor relations factors, and strategic planning and policies.</td>
</tr>
<tr>
<td>MAN</td>
<td>6607</td>
<td>Managing International Cultural Differences</td>
<td>3</td>
<td></td>
<td>Examines the effects of culture and nationality on business practices in selected regions and countries and suggests ways to build synergistic solutions from multicultural differences.</td>
</tr>
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<tr>
<td>MAN</td>
<td>6726</td>
<td>Strategic Business Analysis</td>
<td>2</td>
<td></td>
<td>Examines techniques to creatively vision and analyze the future to prepare individuals and organizations for future opportunities and threats. Designed to familiarize students with techniques for analyzing the future, critical issues, how the future will impact them as individuals.</td>
</tr>
<tr>
<td>MAN</td>
<td>6746</td>
<td>Designing Sustainable Enterprise</td>
<td>3</td>
<td></td>
<td>Examines an analytical framework for organizations to build more sustainable economies, societies, and natural environments.</td>
</tr>
<tr>
<td>MAN</td>
<td>6748</td>
<td>Assessing Sustainable Performance of Organizations</td>
<td>3</td>
<td></td>
<td>The course helps students to conceptualize a sustainable organization and use that as a benchmark to analyze the performance of organizations aspiring for long-term survival and growth.</td>
</tr>
<tr>
<td>MAN</td>
<td>6774</td>
<td>Executive Leadership</td>
<td>3</td>
<td></td>
<td>This course is designed for graduate students who are or aspire to be top executives in triple bottom line organizations. The underlying assumption of this course is the mission of executive leaders is to achieve high commitment and high performance.</td>
</tr>
<tr>
<td>MAN</td>
<td>6905</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
<td>Independent study in which student must have a contract with an instructor.</td>
</tr>
<tr>
<td>MAN</td>
<td>6911</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
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<tr>
<td>MAN</td>
<td>6930</td>
<td>Selected Topics</td>
<td>1-4</td>
<td></td>
<td>Designed to be taken either under general guidance of faculty member on some facet of management not offered in a regular course or with regularly scheduled graduate courses for more in-depth study.</td>
</tr>
<tr>
<td>MAN</td>
<td>6950</td>
<td>Capstone Experience in Leading Organizations</td>
<td>3</td>
<td></td>
<td>Student team assessment exercise of real organization leading to evaluate report and presentation demonstrating skills required in program.</td>
</tr>
<tr>
<td>MAN</td>
<td>7298</td>
<td>Creativity and Innovation</td>
<td>2-4</td>
<td></td>
<td>This course addresses the theory, research, and practice of innovation stimulation and management. Critically reviews research on creativity stimulation, product/service design, commercialization, etc. Participants conduct and report a major project.</td>
</tr>
<tr>
<td>MAN</td>
<td>7939</td>
<td>Executive Issues in Management</td>
<td>2-4</td>
<td></td>
<td>A research seminar for executives that explores contemporary issues in management. The specific theme of the seminar will be determined through consultations between the instructor and the students prior to the first class meeting.</td>
</tr>
<tr>
<td>MAN</td>
<td>7980</td>
<td>Dissertation</td>
<td>2-21</td>
<td></td>
<td></td>
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<tr>
<td>MAP</td>
<td>5317</td>
<td>Ordinary Differential Equations II</td>
<td>3</td>
<td>PR: MAP 5316 and MAA 5307</td>
<td>Topics selected from fixed point theory, comparison theory, oscillation theory, Poincare-Bendixson Theory, Lyapunov functions, eigenfunction expansions.</td>
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<tr>
<td>MAP</td>
<td>5345</td>
<td>Applied Partial Differential Equations</td>
<td>3</td>
<td>PR: MAP 5407</td>
<td>Separation of variables, the heat equation, wave equation, Laplace's equation, classification, Green's functions with emphasis on applications.</td>
</tr>
<tr>
<td>MAP</td>
<td>6205</td>
<td>Control Theory and Optimization</td>
<td>3</td>
<td>PR: MAA 5307 and MAP 5316</td>
<td>Projection theorems and minimum norm problems, convex analysis, duality principle, constrained optimization, finite dimensional linear systems, controllability, optimal control and pontryagin maximum principle</td>
</tr>
<tr>
<td>MAP</td>
<td>6356</td>
<td>Partial Differential Equations</td>
<td>3</td>
<td>PR: MAP 5345 and MAA 5307</td>
<td>Advanced topics from: elliptic boundary value problems, semigroup theory, Sobolev spaces, degree theory, regularity, evolution equations</td>
</tr>
<tr>
<td>MAR</td>
<td>6158</td>
<td>International Marketing Management</td>
<td>3</td>
<td>PR: MAR 6815</td>
<td>A study of marketing management activities from the perspective of firms doing business across national boundaries. Emphasis is upon aspects of marketing which are unique to international business and problem-solving within an international context.</td>
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<tr>
<td>MAR</td>
<td>6216</td>
<td>Logistics and Physical Distribution Management</td>
<td>3</td>
<td>PR: MAR 6815</td>
<td>A study of managerial methods focusing on the establishment and control of optimum customer service levels in the areas of inventory, transportation, fixed facility location, material handling, and information. Component parts of each system are analyzed quantitatively. Reading, lecture, and case analysis.</td>
</tr>
<tr>
<td>MAR</td>
<td>6336</td>
<td>Promotional Management</td>
<td>3</td>
<td>PR: MAR 6815</td>
<td>Management of the promotional function as part of the total marketing program. Includes a study of relevant buyer behavior concepts, resources and budgets, media, creative aspects, and effectiveness measurements as they relate to the management tasks of developing, implementing, and evaluating promotional strategy.</td>
</tr>
<tr>
<td>MAR</td>
<td>6406</td>
<td>Sales Management</td>
<td>3</td>
<td>PR: MAR 6815</td>
<td>A study of the sales function of the firm approached from the perspective of the sales manager. Emphasis is placed upon the development of the student's problem-solving, decision-making, and analytical skills.</td>
</tr>
<tr>
<td>MAR</td>
<td>6646</td>
<td>Research for Marketing Managers</td>
<td>3</td>
<td>PR: MAR 6815, QMB 6305, ISM 6021</td>
<td>A study of marketing research methods and information systems and their relationship to marketing decision-making. Topics include value and cost of information, sample design, questionnaire design, statistical analysis, and report presentation. Lecture, reading, case analysis, and project.</td>
</tr>
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<tr>
<td>MAR</td>
<td>6815</td>
<td>Marketing Management</td>
<td>2-3</td>
<td></td>
<td>Analysis of operational and strategic planning problems confronting marketing managers. Topics include buyer behavior, market segmentation, information systems, product selection and development, pricing, distribution, promotion, and sales force management.</td>
</tr>
<tr>
<td>MAR</td>
<td>6816</td>
<td>Marketing Strategy</td>
<td>3</td>
<td>PR: MAR 6815</td>
<td>A study of strategic marketing planning and problem-solving processes as practiced by the modern market-oriented firm. The course is designed to develop marketing problem-solving, decision-making, and planning skills through the extensive use of case analysis.</td>
</tr>
<tr>
<td>MAR</td>
<td>6907</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
<td>Must have a contract with an instructor.</td>
</tr>
<tr>
<td>MAR</td>
<td>6916</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAR</td>
<td>6936</td>
<td>Selected Topics in Marketing</td>
<td>1-4</td>
<td></td>
<td>The content and organization of this course will vary according to the interests of the faculty and students involved in any given term.</td>
</tr>
<tr>
<td>MAR</td>
<td>7555</td>
<td>Consumer Behavior Theory</td>
<td>3</td>
<td></td>
<td>This course investigates the interrelationships and applications of behavioral science theories, concepts and methodologies to problems of understanding group as well as individual behavior in the market place.</td>
</tr>
<tr>
<td>MAR</td>
<td>7635</td>
<td>Advanced Marketing Research: Design and Technique</td>
<td>3</td>
<td>PR: QMB 7565, QMB 7566</td>
<td>An intensive study of the theoretical, conceptual, and methodological issues in survey and experimental marketing research. A review and expansion of advanced marketing data analysis methods.</td>
</tr>
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<td>SUB</td>
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<tr>
<td>MAR</td>
<td>7667</td>
<td>Marketing Models and Strategy Applications</td>
<td>3</td>
<td></td>
<td>A model-building approach to the management of marketing. Includes models developed to aid in the design, implementation, and evaluation of corporate marketing strategies; information systems and marketing audits; and the interrelationships of economic, quantitative, and behavioral disciplines that provide the structure and tools necessary to develop and implement marketing decision support systems.</td>
</tr>
<tr>
<td>MAR</td>
<td>7787</td>
<td>Marketing Theory and Thought</td>
<td>3</td>
<td></td>
<td>An intensive study of marketing concepts and theories from 1900 to present. Emphasis is placed on the development of theory, as well as predictions of future theoretical developments.</td>
</tr>
<tr>
<td>MAR</td>
<td>7910</td>
<td>Independent Study in Marketing</td>
<td>1-12</td>
<td></td>
<td>This course permits a doctoral student to pursue research in a specific area under the direct supervision of a faculty member.</td>
</tr>
<tr>
<td>MAR</td>
<td>7931</td>
<td>Seminar on Selected Marketing Topics</td>
<td>3</td>
<td></td>
<td>Intensive study of the theoretical, conceptual, and methodological issues and problems which impact managerial applications in selected topic areas, such as marketing channels, distribution/logistics, environmental or (social) nonprofit marketing, consumer behavior, advertising/media research, or international marketing.</td>
</tr>
<tr>
<td>MAR</td>
<td>7939</td>
<td>Executive Issues in Marketing</td>
<td>2-4</td>
<td></td>
<td>A research seminar for executives that explores contemporary issues in marketing. The specific theme of the seminar will be determined through consultations between the instructor and the students prior to the first class meeting.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>MAR</td>
<td>7980</td>
<td>Dissertation</td>
<td>2-21</td>
<td></td>
<td>Directed research.</td>
</tr>
<tr>
<td>MAS</td>
<td>5215</td>
<td>Number Theory</td>
<td>3</td>
<td>PR: MAS 3105 and MAS 4301</td>
<td>Fundamental theorem of arithmetic, modular arithmetic, Chinese remainder theorem, Mersenne primes, perfect numbers, Euler-Fermat theorem, pseudo primes, primitive roots, law of quadratic reciprocity, factorization and primality testing algorithms.</td>
</tr>
<tr>
<td>MAS</td>
<td>5311</td>
<td>Algebra I</td>
<td>3</td>
<td>PR: MAS 3105 and MAS 4301</td>
<td>Group theory: Sylow theorems; classification of groups of small order. Ring theory: ideals, quotient rings, polynomial rings, Euclidean domains, principal ideal domains and unique factorization.</td>
</tr>
<tr>
<td>MAS</td>
<td>5312</td>
<td>Algebra II</td>
<td>3</td>
<td>PR: MAS 5311</td>
<td>Continuation of MAS 5311. Finitely generated modules over a principal ideal domain, basic field theory, finite fields, Galois theory.</td>
</tr>
<tr>
<td>MAT</td>
<td>5932</td>
<td>Selected Topics</td>
<td>1-4</td>
<td></td>
<td>Each course covers a single topic outside the usual curriculum.</td>
</tr>
<tr>
<td>MAT</td>
<td>6908</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
<td>Independent study in which student must have a contract with an instructor.</td>
</tr>
<tr>
<td>MAT</td>
<td>6911</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td>Each course covers a single topic outside the usual curriculum.</td>
</tr>
<tr>
<td>MAT</td>
<td>6932</td>
<td>Selected Topics</td>
<td>1-4</td>
<td></td>
<td>Each course covers a single topic outside the usual curriculum.</td>
</tr>
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<tr>
<td>MAT</td>
<td>6939</td>
<td>Graduate Seminar</td>
<td>1-4</td>
<td></td>
<td>Direction of this seminar is by a faculty member. Students are required to</td>
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<td></td>
<td></td>
<td>present research papers from the literature.</td>
</tr>
<tr>
<td>MAT</td>
<td>6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAT</td>
<td>7912</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAT</td>
<td>7980</td>
<td>Dissertation: Doctoral</td>
<td>2-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MCB</td>
<td>5206</td>
<td>Public Health and Pathogenic Microbiology</td>
<td>3</td>
<td>PR: MCB 3020</td>
<td>A comprehensive survey of pathogenic microbes responsible for disease in</td>
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<td>man and other animals and the impact of these infectious agents on the</td>
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<td>public health. These pathogens will be studied with respect to their</td>
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<td>morphology, cultivation, mechanisms of pathogenicity, laboratory diagnosis,</td>
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<td></td>
<td></td>
<td>and epidemiology.</td>
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<tr>
<td>MCB</td>
<td>5208</td>
<td>Cellular Microbiology</td>
<td>3</td>
<td>PR: PCB 3023 ; MCB 3033</td>
<td>Cellular Microbiology is a lecture-based and literature-based course on</td>
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<td>the interactions between mammalian cells and microbial pathogens and/or</td>
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<td>their toxins, with a special emphasis on bacteria.</td>
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<tr>
<td>MCB</td>
<td>5655</td>
<td>Applied and Environmental Microbiology</td>
<td>3</td>
<td>PR: MCB 3020</td>
<td>A Study of the applications of microbiology to the food/beverage industry,</td>
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<td>agriculture, public health and bioremediation. This course is a</td>
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<td></td>
<td>microbiology elective and has a mandatory field trip.</td>
</tr>
<tr>
<td>MCB</td>
<td>5815</td>
<td>Medical Mycology</td>
<td>3</td>
<td>PR: MCB 3020</td>
<td>A modern biological survey of the medically important fungi (yeasts and</td>
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<td></td>
<td>molds) important to microbiologists and environmental scientists.</td>
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<tr>
<td>MCB</td>
<td>6433</td>
<td>Clinical Correlations in Molecular Medicine</td>
<td>3</td>
<td>PR: GMS 6001 or GMS 6200.</td>
<td>The course concentrates on molecular medicine and focuses on several disease conditions that provide an in-depth understanding of how changes in cellular structure/function and metabolic pathway regulation can result in diseases and their therapy.</td>
</tr>
<tr>
<td>MCB</td>
<td>6919</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
<td>Independent study in which student must have a contract with an instructor.</td>
</tr>
<tr>
<td>MCB</td>
<td>6930</td>
<td>Graduate Microbiology Seminar</td>
<td>1</td>
<td></td>
<td>A critical examination and discussion of current literature of microbiology.</td>
</tr>
<tr>
<td>MCB</td>
<td>6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td></td>
<td>Two-course sequence covering: predicate calculus and classical model theory; transfinite set theory and the system ZFC; recursion theory and decidability.</td>
</tr>
<tr>
<td>MHF</td>
<td>5306</td>
<td>Mathematical Logic and Foundations I</td>
<td>3</td>
<td>PR: MAS 4301</td>
<td>A study of the history and development of mathematics and its cultural impact from the formation of number systems to the Renaissance.</td>
</tr>
<tr>
<td>MHF</td>
<td>5402</td>
<td>The Early History of Mathematics</td>
<td>3</td>
<td>PR: MAC 2312</td>
<td>Traces the development of mathematical ideas in Western culture. Special emphasis is placed on those concepts which led to the Calculus. This course is open to majors and non-majors alike.</td>
</tr>
<tr>
<td>MHF</td>
<td>5405</td>
<td>History of Modern Mathematics</td>
<td>3</td>
<td>PR: MAC 2313.</td>
<td>Continuation of MHF 5306.</td>
</tr>
<tr>
<td>MHF</td>
<td>6307</td>
<td>Mathematical Logic And Foundations II</td>
<td>3</td>
<td>PR: MHF 5306</td>
<td></td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
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<tr>
<td>MHS</td>
<td>5020</td>
<td>Foundations of Mental Health Counseling</td>
<td>3</td>
<td></td>
<td>A skill-building course on the utilization of one’s self in mental health counseling relationships. Includes study of the origin, history, professional functions and current issues in the discipline of mental health counseling.</td>
</tr>
<tr>
<td>MHS</td>
<td>5480</td>
<td>Human Growth and Development</td>
<td>3</td>
<td></td>
<td>Human development theory as applied in psychotherapy and case management rehabilitation, mental health, and addiction settings.</td>
</tr>
<tr>
<td>MHS</td>
<td>5721</td>
<td>BRIDGE Proseminar I</td>
<td>2</td>
<td></td>
<td>This course is designed to provide students with the necessary skills for successfully applying for and transitioning into a graduate training program in the social and behavioral sciences.</td>
</tr>
<tr>
<td>MHS</td>
<td>5722</td>
<td>BRIDGE Pro Seminar II</td>
<td>2</td>
<td></td>
<td>Provide students with the skills for successfully transitioning to a graduate program in behavioral and social sciences. It will also provide knowledge that can be applied to the mentored research project being conducted as part of the BRIDGE certificate.</td>
</tr>
<tr>
<td>MHS</td>
<td>5745</td>
<td>Applied Qualitative Research Methods</td>
<td>3</td>
<td></td>
<td>This course is designed to provide students with an understanding of applied qualitative research methods and to assist them where appropriate in applying these methods to their mentored research projects being conducted as part of the BRIDGE certification.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>MHS</td>
<td>5746</td>
<td>Applied Quantitative Research Methods</td>
<td>3</td>
<td></td>
<td>Reviews quantitative research methods while focusing on the application of such concepts in real research contexts preparing students to understand the nature assumptions processes and ethical application of quantitative methodology.</td>
</tr>
<tr>
<td>MHS</td>
<td>5889</td>
<td>BRIDGE Community Field Experience</td>
<td>2</td>
<td></td>
<td>Provide students with the skills for successfully transitioning to a graduate program in behavioral and social sciences It will also provide knowledge that can be applied to the mentored research project being conducted as part of the BRIDGE certificate.</td>
</tr>
<tr>
<td>MHS</td>
<td>5905</td>
<td>Directed Studies</td>
<td>1-4</td>
<td></td>
<td>Independent studies on a selected topic.</td>
</tr>
<tr>
<td>MHS</td>
<td>6006</td>
<td>Trends and Principles of the Counseling Profession</td>
<td>4</td>
<td></td>
<td>A study of trends in the counseling profession, its philosophical framework, its scope and functions, its organizations and administration. Introduction to basic skills needed in the counseling relationship.</td>
</tr>
<tr>
<td>MHS</td>
<td>6065</td>
<td>Issues and Trends in Developmental Disabilities</td>
<td>3</td>
<td></td>
<td>This interdisciplinary Disability Studies course provides students with a background in the history of disabilities and an overview of the impact of and latest trends in disabilities across the life span.</td>
</tr>
<tr>
<td>MHS</td>
<td>6066</td>
<td>Sys., Serv. and Supports for Children and Adolescents with DD</td>
<td>3</td>
<td></td>
<td>This course provides students with the tools and understanding needed to evaluate service systems for children and adolescents with developmental disabilities. Lessons address services, systems of care, and policies affecting services.</td>
</tr>
<tr>
<td>SUB</td>
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<td>TITLE</td>
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<td>PREREQUISITES</td>
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<tr>
<td>MHS</td>
<td>6067</td>
<td>EBP in Beh. Hlth for Children &amp; Adolescents with Dev. Disabil.</td>
<td>3</td>
<td>PR: MHS 6065.</td>
<td>This course introduces students to a variety of evidence-based behavioral health practices for children and adolescents with developmental disabilities. Lessons address identification and evaluation of evidence-based practices, research, and ethics.</td>
</tr>
<tr>
<td>MHS</td>
<td>6068</td>
<td>Community-Based Beh Health Interven for Cult Diverse Youth</td>
<td>3</td>
<td></td>
<td>This course focuses on behavioral health issues and interventions for culturally diverse youth. Topics include youth and family strengths and needs, research and intervention approaches, and relevant policies at global, national, and local levels.</td>
</tr>
<tr>
<td>MHS</td>
<td>6069</td>
<td>Child &amp; Adolescent Behavioral Health</td>
<td>3</td>
<td></td>
<td>Provides an introduction to a variety of topics relevant to child and adolescent behavioral health, including its history, settings for service provision, and various factors that shape best practice approaches to meet the needs of youth and families.</td>
</tr>
<tr>
<td>MHS</td>
<td>6070</td>
<td>Study of Mental Disorders for Counselors</td>
<td>4</td>
<td>PR: MHS 6006</td>
<td>The purposes of this course are to familiarize the students with the study of mental disorders, learn the most current system of classification of mental disorders, and discuss evidence-based biological and sociocultural treatments for mental disorders.</td>
</tr>
<tr>
<td>MHS</td>
<td>6072</td>
<td>Epidemiology and Prevention in Children’s Mental Health</td>
<td>3</td>
<td></td>
<td>Provides introduction to epidemiological research methods in children’s mental health; prepares professionals to critically evaluate research literature and to design studies to better affect children’s mental health. Unrestricted. Nonrepeatable.</td>
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<tr>
<td>SUB</td>
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<tr>
<td>MHS</td>
<td>6073</td>
<td>Child and Adolescent Psychopathology and Resilience</td>
<td>3</td>
<td></td>
<td>Students will gain basic knowledge about psychological disorders necessary to assess/treat/serve children, adolescents, and their families. Factors that promote resilience and build competencies will be explored. Unrestricted. Nonrepeatable.</td>
</tr>
<tr>
<td>MHS</td>
<td>6095</td>
<td>Family-Centered Interdisciplinary Practice: SOC</td>
<td>3</td>
<td></td>
<td>Provides an overview of a SOC approach to children’s mental health; prepares professionals to work in respectful partnership with families/youth and to participate in interdisciplinary teams serving children and their families. Unrestricted. Nonrepeatable.</td>
</tr>
<tr>
<td>MHS</td>
<td>6096</td>
<td>Program Development and Implementation in Children’s Mental Health</td>
<td>3</td>
<td></td>
<td>Course introduces students to the science of implementation and key frameworks, theories, strategies; includes critical elements, influences, stages applied to carry out successful implementation of initiatives. Unrestricted. Nonrepeatable</td>
</tr>
<tr>
<td>MHS</td>
<td>6097</td>
<td>Financing of Children’s Mental Health Services</td>
<td>3</td>
<td></td>
<td>Addresses theoretical, evaluative, political issues regarding financing of children’s mental health services; will further students’ critical thinking about financing strategies/structures that support effective systems of care. Unrestricted/nonrepeatable.</td>
</tr>
<tr>
<td>MHS</td>
<td>6098</td>
<td>Leadership within Systems of Care</td>
<td>3</td>
<td></td>
<td>Introduces students to various theories of leadership and empirical evidence linking leadership competencies to organizational and community success in children’s mental health, emphasizing real-world challenges and solutions. Unrestricted. Nonrepeatable.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>MHS</td>
<td>6200</td>
<td>Assessment and Appraisal Procedures</td>
<td>4</td>
<td>PR: MHS 6006</td>
<td>The study of statistical concepts, assessment instruments and procedures relevant to school and community counseling with an emphasis on standardized test data and the use of an individual case study approach.</td>
</tr>
<tr>
<td>MHS</td>
<td>6201</td>
<td>Applied Behavior Analysis in Complex Community Environments</td>
<td>3</td>
<td></td>
<td>Prepares students to recognize factors that may affect the application of behavior analysis principles within and across community settings and to design intervention plans that fit given characteristics of the social and physical context of these home, school and other community settings.</td>
</tr>
<tr>
<td>MHS</td>
<td>6311</td>
<td>Online Services in Counseling and Helping Professions</td>
<td>3</td>
<td></td>
<td>To provide students in helping professions with basic and advanced knowledge and skills associated with the provision of online services in counseling and related helping professions. Also to provide training on how to evaluate and design such services.</td>
</tr>
<tr>
<td>MHS</td>
<td>6340</td>
<td>Career Development</td>
<td>4</td>
<td>PR: MHS 6006</td>
<td>Study of the information service in guidance as it relates to life style and career development. Theories dealing with career planning. Application of educational, vocational, and personal-social information resources to lifelong human development.</td>
</tr>
<tr>
<td>MHS</td>
<td>6341</td>
<td>Career Program Design and Evaluation</td>
<td>3</td>
<td>PR: MHS 6006</td>
<td>Study of the various components of designing, implementing, managing and evaluating effective career programs.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>MHS</td>
<td>6400</td>
<td>Counseling Theories and Practices</td>
<td>4</td>
<td>PR: EDF 6354 and MHS 6006.</td>
<td>This course is the study of the nature of the counseling process with emphasis on major theoretical approaches and related personality theories, development of basic counseling skills and supervised practice.</td>
</tr>
<tr>
<td>MHS</td>
<td>6409</td>
<td>Evidence Based Practices in Behavioral &amp; Community Sciences</td>
<td>3</td>
<td></td>
<td>Explores and applies strategies used to judge and identify evidence-based practices in assessment, intervention, and therapeutic practices in behavioral health and related areas.</td>
</tr>
<tr>
<td>MHS</td>
<td>6410</td>
<td>Intensive Individualize Positive Behavior Support</td>
<td>3</td>
<td></td>
<td>Provides class participants with knowledge and skills necessary to develop, implement, and evaluate the impact of positive behavior support at an individual level including functional behavior assessment and behavior support in various settings.</td>
</tr>
<tr>
<td>MHS</td>
<td>6418</td>
<td>School Counselor Accountability and Curriculum</td>
<td>3</td>
<td>PR: MHS 6006.</td>
<td>This course prepares school counselors to assume their role and responsibilities in meeting the demands of school reform. Students compile instructional guidance units, using evidence-based content and strategies, to facilitate K-12 student development.</td>
</tr>
<tr>
<td>MHS</td>
<td>6420</td>
<td>Multicultural Counseling with Diverse Populations</td>
<td>3</td>
<td>PR: MHS 6400.</td>
<td>Counseling strategies applied to diverse populations including the use of school and community resources. Each student will select a specific population group for supervised research.</td>
</tr>
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<tr>
<td>MHS</td>
<td>6421</td>
<td>Counseling Children</td>
<td>4</td>
<td>PR: EDF 6354 and MHS 6006.</td>
<td>Nature of the counseling process with an emphasis on major theoretical approaches, supervised practice, and application. Focus on work with elementary age children and consultations with parents, teachers and other professionals.</td>
</tr>
<tr>
<td>MHS</td>
<td>6431</td>
<td>Family Therapy &amp; Techniques</td>
<td>4</td>
<td>PR: MHS 6430.</td>
<td>This course concentrates on the theory and application of intervention techniques to family systems. Structured experiences include interviewing, assessing, making therapeutic interventions, observing family interaction, and developing basic aspects in treating families.</td>
</tr>
<tr>
<td>MHS</td>
<td>6437</td>
<td>Family Perspectives on Behavioral Health Disparities</td>
<td>3</td>
<td>PR: MHS 6420 or RCS 6440.</td>
<td>Examines behavioral health disparities from a family systems perspective, with consideration of how they are influenced by historical context, generations, immigration, social and physical environmental factors, discrimination, and group heterogeneity.</td>
</tr>
<tr>
<td>MHS</td>
<td>6450</td>
<td>Counseling Substance Abuse in School and Community</td>
<td>4</td>
<td>PR: MHS 6400.</td>
<td>This course prepares counselors to work with substance abuse issues, including prevention, in schools and community out-patient settings. Includes counseling and program approaches found to be effective in addressing substance abuse.</td>
</tr>
<tr>
<td>MHS</td>
<td>6470</td>
<td>Human Sexuality Issues for Counselors</td>
<td>4</td>
<td>PR: MHS 6400.</td>
<td>Emphases include exploration of various dimensions of human sexuality; dynamics of major individual and societal sexuality issues; theoretical approaches to counseling related to sexuality issues.</td>
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<tr>
<td>MHS</td>
<td>6494</td>
<td>Women's Mental Health</td>
<td>3</td>
<td></td>
<td>This course focuses on women’s mental health and substance use disorders through a detailed examination of the interaction of trauma, mental health, and substance use disorders that affect the lives of women across the life span.</td>
</tr>
<tr>
<td>MHS</td>
<td>6508</td>
<td>Wraparound Interventions and the System of Care</td>
<td>3</td>
<td></td>
<td>Explores the wraparound philosophy and focuses on developing supportive community structures for the delivery of wraparound services. Research, evaluation, and methodology in wraparound interventions are addressed. Unrestricted/nonrepeatable.</td>
</tr>
<tr>
<td>MHS</td>
<td>6509</td>
<td>Group Counseling Theories and Practices</td>
<td>4</td>
<td>PR: MHS 6400.</td>
<td>An experiential study of group structure, group dynamics, methodology, and leadership models applicable to counseling clients in school and community settings. Includes skill building through supervised practice.</td>
</tr>
<tr>
<td>MHS</td>
<td>6601</td>
<td>Consultation for the Counseling Profession</td>
<td>3</td>
<td>PR: MHS 6400 and MHS 6006.</td>
<td>A study of consultation theory and practice as used by counselors working in schools and mental health facilities, particularly with educators, other professionals, and parents, individually and in groups.</td>
</tr>
<tr>
<td>MHS</td>
<td>6605</td>
<td>Addressing Behavior Challenges in Young Children</td>
<td>3</td>
<td></td>
<td>Focuses on the application of promotion, prevention, and intervention framework to promote the social development of young children and address behavioral issues through the Pyramid Model within early childhood and intervention programs/systems.</td>
</tr>
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<tr>
<td>MHS</td>
<td>6607</td>
<td>Behavior Consultation and Collaborative Systems Change</td>
<td>3</td>
<td>PR: MHS 6608 OR MHS 6605 OR MHS 6410</td>
<td>This course provides participants with the knowledge and skills necessary to develop, implement, and evaluate the impact of behavior consultation across a multi-tiered system of support.</td>
</tr>
<tr>
<td>MHS</td>
<td>6608</td>
<td>Schoolwide Positive Behavior Support</td>
<td>3</td>
<td></td>
<td>Provides class participants with the knowledge and skills necessary to develop, implement, and evaluate the systemic impact of positive behavior support on the behavioral needs of all students from Pre-K to 12, including those with disabilities.</td>
</tr>
<tr>
<td>MHS</td>
<td>6620</td>
<td>Counseling in Community Setting</td>
<td>3</td>
<td></td>
<td>Study of community counseling within the context of health and human service systems including treatment modalities, administration, and fiscal considerations.</td>
</tr>
<tr>
<td>MHS</td>
<td>6626</td>
<td>Applied Leadership in Child and Adolescent Behavioral Health</td>
<td>3</td>
<td></td>
<td>This course will develop student understanding of organizational leadership concepts, theory, and practice. It will focus on opportunities, challenges, and tools for leaders in public and private child and adolescent behavioral health organizations.</td>
</tr>
<tr>
<td>MHS</td>
<td>6645</td>
<td>Mental Health Informatics</td>
<td>3</td>
<td></td>
<td>This course examines how information technologies and knowledge management affect access to mental health and impact policy. Current applications include the management of mental health databases and the development of behavioral telehealth programs.</td>
</tr>
<tr>
<td>MHS</td>
<td>6700</td>
<td>Legal and Ethical Issues in the Counseling Profession</td>
<td>3</td>
<td>PR: MHS 6006.</td>
<td>Study of legal, ethical and related issues affecting the role and responsibilities of counselors in schools and mental health facilities.</td>
</tr>
<tr>
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<tr>
<td>MHS</td>
<td>6706</td>
<td>Child and Adolescent Behavioral Health Policy</td>
<td>3</td>
<td></td>
<td>This course focuses on critical policy issues affecting child and adolescent behavioral health services in the U.S. Historical, legislative and policy making issues will be discussed, and U.S. policies will be examined within an inclusive global context.</td>
</tr>
<tr>
<td>MHS</td>
<td>6742</td>
<td>Community Based Research &amp; Evaluation in Behavioral Sciences</td>
<td>3</td>
<td></td>
<td>The study of community-based participatory research &amp; evaluation (CBPRE) in behavioral sciences; critical issues in research design, ethics, &amp; use of CBPRE to promote social change &amp; public policy within a behavioral health context.</td>
</tr>
<tr>
<td>MHS</td>
<td>6800</td>
<td>Practicum in Counseling Adolescents and Adults</td>
<td>4</td>
<td>PR: MHS 6400.</td>
<td>Supervised counseling for integration and application of knowledge and skills gained in didactic study.</td>
</tr>
<tr>
<td>MHS</td>
<td>6885</td>
<td>Internship in Community Agency Counseling</td>
<td>3-6</td>
<td></td>
<td>Field experience involving one semester of full-time participation in the counseling and related activities of a public or private agency providing mental health services to the community.</td>
</tr>
<tr>
<td>MHS</td>
<td>6887</td>
<td>Internship in Career and College Counseling</td>
<td>3-6</td>
<td>CR: MHS 6601.; PR: MHS 6800, MHS 6006, MHS 6200, MHS 6340, MHS 6341, MHS 6400, MHS 6420, MHS 6700, EDF 6481</td>
<td>Field experience (1 semester full-time or 2 semesters of part time participation) in career and/or college counseling and related activities of a public or private career center or college center/site/agency. It is restricted to counseling students.</td>
</tr>
<tr>
<td>MHS</td>
<td>6900</td>
<td>Special Topics in Planning, Evaluation and Accountability</td>
<td>1-3</td>
<td></td>
<td>This course will address selected special topics. Prerequisite is at least three credits in research and evaluation courses at the graduate level.</td>
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<tr>
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<tr>
<td>MHS</td>
<td>6901</td>
<td>Independent Studies in Mental Health Studies</td>
<td>1-4</td>
<td></td>
<td>Students conduct independent study in an area related to behavioral health under the guidance of a faculty member. Open to all majors/repeatable for a maximum of 4 credits.</td>
</tr>
<tr>
<td>MHS</td>
<td>6905</td>
<td>Individual Study</td>
<td>1-4</td>
<td></td>
<td>Independent study, research, and experience relating to professional counseling under the supervision of a member of the Counselor Education faculty.</td>
</tr>
<tr>
<td>MHS</td>
<td>6906</td>
<td>Independent Study in Behavior Analysis Applications in Community Settings</td>
<td>1-6</td>
<td></td>
<td>Independent study in behavior analysis provides students opportunities to focus on special areas of study under a contractual agreement with a faculty member.</td>
</tr>
<tr>
<td>MHS</td>
<td>6915</td>
<td>Directed Research in Behavioral and Social Sciences</td>
<td>1-6</td>
<td></td>
<td>Students work directly with a faculty mentor in a one-on-one research experience in the area of behavioral and social sciences research and design, conduct, and disseminate an independently designed and conducted research project.</td>
</tr>
<tr>
<td>MHS</td>
<td>6930</td>
<td>Seminar In Guidance</td>
<td>1-4</td>
<td>CPR: MHS 6006</td>
<td>Significant issues in the field of guidance; will document student's effectiveness in providing effective programs that contribute to the academic missions of the school. Repeat up to 4 hours.</td>
</tr>
<tr>
<td>MHS</td>
<td>6938</td>
<td>Applied Behavior Analysis in Community Settings</td>
<td>1-4</td>
<td></td>
<td>Addresses selected topics in behavior analysis applications in complex community environments through lecture, class discussion, and supervised special projects.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>MHS</td>
<td>6940</td>
<td>Practicum in Behavior Analysis in Community Settings</td>
<td>2-4</td>
<td></td>
<td>Supervised field work in the application of behavior analysis to children, adults and/or their families in complex community environments, including home, school, employment and neighborhood settings.</td>
</tr>
<tr>
<td>MHS</td>
<td>6941</td>
<td>Applied Field Experience Seminar</td>
<td>3-6</td>
<td></td>
<td>The Applied Field Experience Seminar provides students with an opportunity to integrate, synthesize, and apply knowledge gained through MS coursework through a field experience relevant to each student’s area of specialization and interest.</td>
</tr>
<tr>
<td>MHS</td>
<td>6942</td>
<td>Practicum:EBP &amp; Service Delivery for Child.&amp; Adol. with DD</td>
<td>3</td>
<td>PR: MHS 6065, MHS 6066.</td>
<td>This practicum allows students to apply, integrate, and synthesize knowledge about evidence-based practices being used in behavioral health settings that provide services to children and adolescents with developmental disabilities.</td>
</tr>
<tr>
<td>MHS</td>
<td>6945</td>
<td>Leadership Prac in Agen Serv Chil &amp; Adol with Dev Disabilities</td>
<td>3</td>
<td>PR: MHS 6066.</td>
<td>This practicum is designed to provide students with experience in policy, leadership, and administration in an agency that serves children and adolescents with a developmental disability.</td>
</tr>
<tr>
<td>MHS</td>
<td>6970</td>
<td>Thesis: Masters/Educational Specialist</td>
<td>2-19</td>
<td></td>
<td>The Thesis credits will provide students the opportunity to conduct independent applied behavior analysis single subject experimental design studies, or special research projects related to applications in community settings.</td>
</tr>
<tr>
<td>MHS</td>
<td>6971</td>
<td>Thesis in Applied Behavior Analysis</td>
<td>2-6</td>
<td></td>
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<tr>
<td>SUB</td>
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<td>TITLE</td>
<td>HRS</td>
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<tr>
<td>MHS</td>
<td>6972</td>
<td>Thesis in Child and Adolescent Behavioral Health</td>
<td>2-6</td>
<td></td>
<td>The purpose of the thesis in child and adolescent behavioral health is to provide an opportunity for students to incorporate knowledge gained in the degree program to a culminating work.</td>
</tr>
<tr>
<td>MHS</td>
<td>7401</td>
<td>Advanced Counseling: Theories and Practicum</td>
<td>4</td>
<td></td>
<td>Advanced study of major counseling theories and their application in therapeutic work with individual clients and with groups in a variety of settings. Supervised practice in individual and group counseling with emphasis on integration of theory and practice.</td>
</tr>
<tr>
<td>MHS</td>
<td>7610</td>
<td>Supervision: Theories and Practicum</td>
<td>4</td>
<td></td>
<td>Theory and methodology of consultation; the role of the counseling professional as consultant and as a supervisor of counselor trainees and counseling practitioners. Practice learning experiences in consulting and supervision under faculty direction.</td>
</tr>
<tr>
<td>MHS</td>
<td>7707</td>
<td>Interdis Approaches to Policy &amp; System Change in Behav Health</td>
<td>3</td>
<td></td>
<td>Introduce students to theory, methods, and philosophy of policy and systems change. Contemporary policy issues in behavioral health are analyzed as well as their impact on national, state, local, &amp; community systems change and practice.</td>
</tr>
<tr>
<td>MHS</td>
<td>7720</td>
<td>Proseminar in Behavioral &amp; Community Sciences</td>
<td>3</td>
<td></td>
<td>Reading, discussion, and application of topics related to professional development of doctoral students: teaching at the college level, dissertation selection and literature review processes, developing research agenda, and building professional skills.</td>
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<tr>
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<tr>
<td>MHS</td>
<td>7740</td>
<td>Survey Course in Planning, Evaluation and Accountability</td>
<td>3</td>
<td></td>
<td>This introductory course is designed to provide a comprehensive overview of planning, evaluation and accountability methods within a systems context. Emphasis is placed on a broad range of quantitative and qualitative methods.</td>
</tr>
<tr>
<td>MHS</td>
<td>7747</td>
<td>Measurement Issues in Behvrl Hlth Svcs Res/Eval</td>
<td>3</td>
<td>PR: NGR 7974</td>
<td>This course will examine the development, selection, and use of individual, program, and systems-level process and outcome measures used in behavioral health services research. The course will examine both quantitative and qualitative measurement issues.</td>
</tr>
<tr>
<td>MHS</td>
<td>7748</td>
<td>Statistical Applications in Translational Research and Evaluation</td>
<td>3</td>
<td></td>
<td>The course covers the basic applications of statistical concepts and techniques essential to translational research and evaluation in child and adolescent behavioral health.</td>
</tr>
<tr>
<td>MHS</td>
<td>7749</td>
<td>Applications in Dissemination and Implementation Science</td>
<td>3</td>
<td>PR: MHS 7748, PHC 6728</td>
<td>This course covers competencies in the application of translational science necessary to understand, evaluate, and conduct your own dissemination and implementation research in child and adolescent behavioral health.</td>
</tr>
<tr>
<td>MHS</td>
<td>7930</td>
<td>Advanced Seminar in Counselor Education</td>
<td>2</td>
<td></td>
<td>Seminar for advanced graduate students in counselor education. Issues and trends in professional counseling will be addressed.</td>
</tr>
<tr>
<td>MHS</td>
<td>7980</td>
<td>Dissertation</td>
<td>2-30</td>
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<td>TITLE</td>
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<tr>
<td>MMC</td>
<td>6206</td>
<td>Mass Communications Ethics</td>
<td>3</td>
<td></td>
<td>An introduction to fundamental ethical principles and an application of those principles to a variety of situations in journalism, broadcasting, advertising, and public relations.</td>
</tr>
<tr>
<td>MMC</td>
<td>6306</td>
<td>International Communications Seminar</td>
<td>3</td>
<td></td>
<td>Mass communications as national and international systems; flow of the news, international news communications networks; satellite communications; overseas activities of American media interest; international propaganda; communication and national development; international media organizations and their activities.</td>
</tr>
<tr>
<td>MMC</td>
<td>6400</td>
<td>Mass Communication Theory</td>
<td>3</td>
<td></td>
<td>The study of mass communication theories, structures, influences, and their relationships to institutions in American society.</td>
</tr>
<tr>
<td>MMC</td>
<td>6415</td>
<td>Strategic Communication Media</td>
<td>3</td>
<td>PR: PUR 5505.</td>
<td>This concepts course emphasizes strategic thinking in media planning for communication campaigns. Students learn the process of critically evaluating media, purchasing media outlets, scheduling media weight and evaluating media impact. Nonrestricted.</td>
</tr>
<tr>
<td>MMC</td>
<td>6418</td>
<td>Strategic Message Design</td>
<td>3</td>
<td></td>
<td>This seminar covers the development of strategic messages for particular audiences to accomplish communication objectives. Topics are research, planning, persuasion, message strategies, and message evaluation. Unrestricted and not repeatable for credit.</td>
</tr>
<tr>
<td>SUB</td>
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<td>HRS</td>
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<tr>
<td>MMC</td>
<td>6421</td>
<td>Research Methods in Mass Communications</td>
<td>3</td>
<td></td>
<td>The theory and practice of quantitative, historical, and critical research methods, and their applications to the study of mass communications. Emphasis in quantitative methods on experimental and survey research, statistical analysis, and evaluation of data.</td>
</tr>
<tr>
<td>MMC</td>
<td>6447</td>
<td>Quantitative Research Methods in Mass Communications</td>
<td>3</td>
<td></td>
<td>Examination of the process and techniques involved in quantitative data collection and analysis for mass communication purposes.</td>
</tr>
<tr>
<td>MMC</td>
<td>6448</td>
<td>Qualitative Research Methods in Mass Communications</td>
<td>3</td>
<td></td>
<td>Examination of qualitative research methods in mass communications with emphasis on interviewing, observational methods, and data interpretation.</td>
</tr>
<tr>
<td>MMC</td>
<td>6607</td>
<td>Public Opinion and the Mass Media</td>
<td>3</td>
<td></td>
<td>The influence of public opinion on private and public institutions in a democratic society and the role of the mass media in opinion formation. The nature of persuasion in establishing or modifying public opinion, and perspectives on the social responsibilities of communications.</td>
</tr>
<tr>
<td>MMC</td>
<td>6612</td>
<td>Seminar: Law and the Mass Media</td>
<td>3</td>
<td></td>
<td>Interrelationships of the media and government at the judicial, executive, and legislative levels. Focus is on legal limitations and privileges of the media; theory and philosophy of the First Amendment; research procedures in court and administrative agency documents.</td>
</tr>
<tr>
<td>SUB</td>
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<td>PREREQUISITES</td>
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<tr>
<td>MMC</td>
<td>6900</td>
<td>Directed Reading in Mass Communications</td>
<td>1-3</td>
<td></td>
<td>Readings in specialized areas of mass communications as agreed to by the instructor and the student by contract.</td>
</tr>
<tr>
<td>MMC</td>
<td>6910</td>
<td>Individual Research in Mass Communications</td>
<td>1-3</td>
<td></td>
<td>Independent study in which the student must have a contract with the instructor to study an area not covered by other courses in the graduate curriculum.</td>
</tr>
<tr>
<td>MMC</td>
<td>6920</td>
<td>Introductory Mass Communications Seminar</td>
<td>3</td>
<td></td>
<td>Introduction to the aims and methodologies of graduate study in mass communications, its development and relationship to the arts and sciences, and the relationship of the scholarly aspects of media studies to professional media practice; bibliographical resources, and overview of research methods and scholarly style.</td>
</tr>
<tr>
<td>MMC</td>
<td>6936</td>
<td>Selected Topics in Mass Communications</td>
<td>3</td>
<td></td>
<td>Courses designed to meet current, specific topics of interest to students and instructors.</td>
</tr>
<tr>
<td>MMC</td>
<td>6945</td>
<td>Professional Practicum</td>
<td>1-3</td>
<td></td>
<td>Practicum will consist of placement with a media-related organization selected by the student and approved and supervised by the graduate advisor.</td>
</tr>
<tr>
<td>MMC</td>
<td>6950</td>
<td>Applied Research Project</td>
<td>3</td>
<td></td>
<td>Completion of a major applied communication research project under supervision. Topic will be selected according to student's needs and interests.</td>
</tr>
<tr>
<td>MMC</td>
<td>6971</td>
<td>Thesis: Master's</td>
<td>2-3</td>
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<table>
<thead>
<tr>
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<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>MTG</td>
<td>5317</td>
<td>Topology II</td>
<td>3</td>
<td>PR: MTG 5316.</td>
<td>The fundamental group; elements of homotopy theory and homology theory.</td>
</tr>
<tr>
<td>MUC</td>
<td>5625</td>
<td>Jazz Composition</td>
<td>2</td>
<td></td>
<td>Private instruction in original composition.</td>
</tr>
<tr>
<td>MUC</td>
<td>6251</td>
<td>Composition</td>
<td>4</td>
<td></td>
<td>Private instruction in original composition. Required of composition majors.</td>
</tr>
<tr>
<td>MUC</td>
<td>6448</td>
<td>Electronic Music: Computer Music Research</td>
<td>3</td>
<td>PR: MUC 6445</td>
<td>For advanced students already experienced in Electronic Music, this class focuses on creative and research techniques in Computer Music, with special emphasis in multimedia collaboration across disciplines.</td>
</tr>
<tr>
<td>MUC</td>
<td>6626</td>
<td>Jazz Composition</td>
<td>4</td>
<td></td>
<td>Private instruction in original composition.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>MUC</td>
<td>6930</td>
<td>Seminar In Jazz Compositional Styles</td>
<td>2</td>
<td></td>
<td>A seminar study of the major compositional figures in jazz. Oriented toward the continuing development of students' own writing ability.</td>
</tr>
<tr>
<td>MUE</td>
<td>6080</td>
<td>Foundations And Principles Of Music Education</td>
<td>3</td>
<td></td>
<td>Investigation of historical, philosophical, and psychological foundations of music education.</td>
</tr>
<tr>
<td>MUE</td>
<td>6097</td>
<td>Music, Medicine, and Myths</td>
<td>2</td>
<td></td>
<td>The course focuses on integration of the body, mind, and emotion in music learning and performing; causes, prevention, and treatment of music-related injury; rehabilitation and effective management of performance anxiety.</td>
</tr>
<tr>
<td>MUE</td>
<td>6116</td>
<td>Advanced Techniques and Research in K-12 General Music</td>
<td>3</td>
<td></td>
<td>This course focuses on teaching and learning processes in general music education K-12. Students examine research and best practices in the field with the aim of improving their own skills in developing comprehensive musicianship in students.</td>
</tr>
<tr>
<td>MUE</td>
<td>6336</td>
<td>Advanced Techniques and Research in Vocal/Choral Music Education</td>
<td>3</td>
<td></td>
<td>Course provides for graduate students in music education the opportunity to examine current research related to the teaching of secondary school vocal music, evaluate curricula, music materials, and teaching methods that will enable them to develop a vocal music program that emphasizes musical sensitivity.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
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<tr>
<td>MUE</td>
<td>6347</td>
<td>Advanced Techniques and Research in Instrumental Music Education</td>
<td>3</td>
<td></td>
<td>This course focuses upon teaching and learning processes in instrumental music, and the stimulation of student thought regarding the variety of roles a music teacher may assume to assist students to become musically literate and aesthetically sensitive.</td>
</tr>
<tr>
<td>MUE</td>
<td>6428</td>
<td>Learner-Centered Approaches in Music Education I</td>
<td>3</td>
<td></td>
<td>This course is the introductory experience for the Master of Arts in Music Education degree program at the University of South Florida.</td>
</tr>
<tr>
<td>MUE</td>
<td>6429</td>
<td>Learner-Centered Approaches in Music Education II</td>
<td>3</td>
<td>PR: MUE 6789</td>
<td>This course serves as the culminating experience for the Master of Arts in Music Education degree program at the University of South Florida.</td>
</tr>
<tr>
<td>MUE</td>
<td>6648</td>
<td>Techniques and Research in Alternate Music Education Methods</td>
<td>3</td>
<td>PR: MUS 6520</td>
<td>An examination on new and innovative models of music instruction including (but not limited to): composition courses; high school general music formats; general arts structures; and, alternative performing ensembles.</td>
</tr>
<tr>
<td>MUE</td>
<td>6694</td>
<td>Multimedia Methods in Music Education</td>
<td>3</td>
<td></td>
<td>Examines recent improvements in multimedia and suggest methods by which these might form the basis for non-traditional music curriculums for k-12 schools.</td>
</tr>
<tr>
<td>MUE</td>
<td>6785</td>
<td>Research Design and Methods in Music Education</td>
<td>3</td>
<td>PR: MUE 6428</td>
<td>An overview of research traditions and the common research approaches used by music education researchers. Students learn about different types of research through various modules and reading and discussion.</td>
</tr>
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<tr>
<td>MUE</td>
<td>6787</td>
<td>Literature Review in Music Education</td>
<td>3</td>
<td>PR: MUE 6785</td>
<td>This course is designed to assist the student in developing research skills focused upon the development of a literature review in music education.</td>
</tr>
<tr>
<td>MUE</td>
<td>6788</td>
<td>Research Data Collection in Music Education</td>
<td>3</td>
<td>PR: MUE 6785</td>
<td>This course is designed to assist the student in developing research skills focused upon data collection and analysis of data in music education.</td>
</tr>
<tr>
<td>MUE</td>
<td>6789</td>
<td>Research Report Writing in Music Education</td>
<td>3</td>
<td>PR: MUE 6785</td>
<td>This course is designed to guide students in writing up their research report after analyzing their data.</td>
</tr>
<tr>
<td>MUE</td>
<td>6906</td>
<td>Independent Study: Music Education</td>
<td>1-6</td>
<td></td>
<td>Independent study in which students must have a contract with an instructor.</td>
</tr>
<tr>
<td>MUE</td>
<td>6942</td>
<td>Graduate Internship in Music Education</td>
<td>6</td>
<td></td>
<td>This course is designed to provide the student teaching experience for music education graduate students pursuing an MA - Plan II, leading to certification.</td>
</tr>
<tr>
<td>MUE</td>
<td>6971</td>
<td>Thesis: Masters/Eds</td>
<td>2-19</td>
<td></td>
<td>This course is designed to provide students with a comprehensive overview of traditional and contemporary approaches to the measurement, evaluation, and assessment of musical abilities, activities, and experiences.</td>
</tr>
<tr>
<td>MUE</td>
<td>7746</td>
<td>Measurement and Evaluation in Music</td>
<td>3</td>
<td></td>
<td>This course is designed to acquaint students with foundations, methods, and applications of qualitative research in education and music education.</td>
</tr>
<tr>
<td>MUE</td>
<td>7786</td>
<td>Qualitative Methods of Music Education</td>
<td>3</td>
<td></td>
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<tr>
<td>MUE</td>
<td>7815</td>
<td>Social Psychology of Music</td>
<td>3</td>
<td>PR: graduate level educational psychology course</td>
<td>A critical examination of current findings regarding the phenomena of the psychology of musical behaviors including the investigation of musical acoustics, the measurement of musical abilities, and a comparative study of theories of learning related to musical learning.</td>
</tr>
<tr>
<td>MUE</td>
<td>7816</td>
<td>Music Cognition</td>
<td>3</td>
<td></td>
<td>Interdisciplinary approach to music perception, performance, and cognition. Discussion of neuroanatomy, auditory physiology, cognitive psychology, music perception, and music understanding, and their applications to music teaching and learning.</td>
</tr>
<tr>
<td>MUE</td>
<td>7835</td>
<td>Philosophical and Historical Issues in Music Education</td>
<td>3</td>
<td></td>
<td>A course design to investigate the nature of philosophical issues as they pertain to music education theory and practice.</td>
</tr>
<tr>
<td>MUE</td>
<td>7855</td>
<td>International Perspectives in Music Education</td>
<td>2</td>
<td></td>
<td>A critical examination of music education in various nations from social, cultural, political, and philosophical perspectives.</td>
</tr>
<tr>
<td>MUE</td>
<td>7937</td>
<td>Special Topics in Music Education</td>
<td>2-3</td>
<td></td>
<td>This course will provide an opportunity to examine selected topics in the research of choral, instrumental, general, and alternative music instruction models.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>MUE</td>
<td>7939</td>
<td>Center for Music Education Research Seminar</td>
<td>1-2</td>
<td></td>
<td>Examination of theory and research in music education. Current research in music teaching and learning presented by faculty and guest. Students develop their dissertation topics, preliminary review of literature, and present their research proposals. May be repeated 4 times for up to 6 credits. S/U Grading</td>
</tr>
<tr>
<td>MUE</td>
<td>7980</td>
<td>Dissertation</td>
<td>2-19</td>
<td></td>
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</tr>
<tr>
<td>MUE</td>
<td>7990</td>
<td>Seminar on Music in Higher Education</td>
<td>2</td>
<td></td>
<td>The course will examine issues germane to the ways and contexts (liberal arts college, land grant college, research university, conservatory) in which music functions as a discipline in American higher education. It will trace its roots from the medieval European university (in the quadrivium) to the present. It also will speak to a range of contemporary issues, including but not limited to rank, promotion, tenure, creative activities as a research endeavor, accreditation, curricular innovation, etc.</td>
</tr>
<tr>
<td>MUG</td>
<td>6205</td>
<td>Advanced Choral Conducting</td>
<td>2</td>
<td></td>
<td>Combination of private study and laboratory experiences designed to teach conducting technique and rehearsal skills while encouraging leadership qualities in the choral conductor.</td>
</tr>
<tr>
<td>MUG</td>
<td>6307</td>
<td>Advanced Wind Conducting I</td>
<td>2</td>
<td></td>
<td>Combination of lecture, seminar, laboratory and individual instruction experiences designed to provide development of advanced conducting skills.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>MUG</td>
<td>6308</td>
<td>Advanced Wind Conducting II</td>
<td>2</td>
<td>PR: MUG 6307</td>
<td>Continued development of graduate-level conducting students in advanced wind conducting techniques, including score study and rehearsal techniques.</td>
</tr>
<tr>
<td>MUG</td>
<td>6309</td>
<td>Advanced Orchestral Conducting I</td>
<td>2</td>
<td></td>
<td>Introduction to graduate-level advanced orchestral conducting techniques, including score study and rehearsal techniques, with an emphasis on classroom applications.</td>
</tr>
<tr>
<td>MUG</td>
<td>6315</td>
<td>Advanced Orchestral Conducting II</td>
<td>2</td>
<td>PR: MUG 6309</td>
<td>Continued development of graduate-level conducting students in advanced orchestral conducting techniques, including score study and rehearsal techniques.</td>
</tr>
<tr>
<td>MUG</td>
<td>6930</td>
<td>Advanced Choral Techniques</td>
<td>3</td>
<td></td>
<td>Study designed to provide rehearsal techniques, methods, and resources for the choral conductor. When possible, the choral faculty will present this course in a team-teaching fashion.</td>
</tr>
<tr>
<td>MUH</td>
<td>6057</td>
<td>Intercultural Music In The 20th And 21st Centuries</td>
<td>3</td>
<td></td>
<td>An in-depth investigation of composers born after c. 1880, from all parts of the world, who have attempted to integrate elements from two or more cultures into their compositions.</td>
</tr>
<tr>
<td>MUL</td>
<td>6375</td>
<td>Twentieth Century Music Literature</td>
<td>3</td>
<td></td>
<td>A study of the literature, compositional techniques, and music philosophies of the major 20th century composers from Debussy to the present.</td>
</tr>
<tr>
<td>MUL</td>
<td>6410</td>
<td>Keyboard Repertory I</td>
<td>2</td>
<td></td>
<td>A study of style, history, and performance practice in keyboard repertory including masterworks of all periods.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>MUL</td>
<td>6411</td>
<td>Keyboard Repertory II</td>
<td>2</td>
<td></td>
<td>A study of style, history, and performance practice in keyboard repertory including masterworks of all periods.</td>
</tr>
<tr>
<td>MUL</td>
<td>6505</td>
<td>Symphonic Literature</td>
<td>2</td>
<td></td>
<td>A chronological study of the development of orchestral music; analysis and study of major works from a stylistic and biographical perspective.</td>
</tr>
<tr>
<td>MUL</td>
<td>6555</td>
<td>Band/Wind Ensemble Literature</td>
<td>3</td>
<td></td>
<td>Combination of seminar and classroom experiences designed to provide depth in historical study of band and wind ensemble literature. Rpt. Up to 9 hrs.</td>
</tr>
<tr>
<td>MUL</td>
<td>6565</td>
<td>Chamber Music Literature</td>
<td>2</td>
<td></td>
<td>This course covers the standard chamber music repertoire for piano and strings and focuses on specific chamber works--from the baroque sonata until major 20th century pieces.</td>
</tr>
<tr>
<td>MUL</td>
<td>6624</td>
<td>Song Literature</td>
<td>2</td>
<td></td>
<td>Song Literature covers the standard repertoire for classical voice. Open to all M.M. voice majors; other students may petition to enroll with instructor approval. This course is not repeatable for credit.</td>
</tr>
<tr>
<td>MUL</td>
<td>6655</td>
<td>Choral Literature 1500-1800</td>
<td>3</td>
<td></td>
<td>A study and analysis of choral music from 1500-1800.</td>
</tr>
<tr>
<td>MUL</td>
<td>6656</td>
<td>Choral Literature 1800-present</td>
<td>3</td>
<td></td>
<td>A study and analysis of choral music from 1800-present.</td>
</tr>
<tr>
<td>MUL</td>
<td>6671</td>
<td>Opera Literature</td>
<td>2</td>
<td></td>
<td>A chronological study of the development of opera from 1600 to the present; emphasis on the technical, stylistic, and performance aspects of opera.</td>
</tr>
<tr>
<td>SUB</td>
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<td>TITLE</td>
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<tr>
<td>MUN</td>
<td>6135</td>
<td>Symphonic Band</td>
<td>1</td>
<td></td>
<td>The Symphonic Band fosters the highest performance standards of wind and percussion literature. Although made up primarily of music majors, the course is open to all university students by comprehensive auditions. It is repeatable for up to 8 credits.</td>
</tr>
<tr>
<td>MUN</td>
<td>6145</td>
<td>Wind Ensemble</td>
<td>1</td>
<td></td>
<td>Open to all university students with the necessary proficiency in their performing media; study and performance of music for large combination of voices, string, woodwind, brass or percussion instruments.</td>
</tr>
<tr>
<td>MUN</td>
<td>6215</td>
<td>University Orchestra</td>
<td>1</td>
<td></td>
<td>Open to all university students with the necessary proficiency in their performing media; study and performance of music for large combination of voices, string, woodwind, brass or percussion instruments.</td>
</tr>
<tr>
<td>MUN</td>
<td>6315</td>
<td>University Singers</td>
<td>1</td>
<td></td>
<td>Open to all university students with the necessary proficiency in their performing media; study and performance of music for large combination of voices, string, woodwind, brass or percussion instruments.</td>
</tr>
<tr>
<td>MUN</td>
<td>6345</td>
<td>Chamber Singers</td>
<td>1</td>
<td></td>
<td>Open to all university graduate students with the necessary proficiency in their performance media; study and performance of music for small combinations of voices, string, woodwind, brass or percussion instruments, and piano.</td>
</tr>
<tr>
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<tr>
<td>MUN</td>
<td>6385</td>
<td>University-Community Chorus</td>
<td>1</td>
<td></td>
<td>Open to all university students with the necessary proficiency in their performing media; study and performance of music for large combination of voices, string, woodwind, brass or percussion instruments.</td>
</tr>
<tr>
<td>MUN</td>
<td>6416</td>
<td>String Quartet</td>
<td>1</td>
<td></td>
<td>Open to all university graduate students with the necessary proficiency in their performance media; study and performance of music for small combinations of voices, string, woodwind, brass or percussion instruments, and piano.</td>
</tr>
<tr>
<td>MUN</td>
<td>6429</td>
<td>Woodwind Quintet</td>
<td>1</td>
<td></td>
<td>Open to all university graduate students with the necessary proficiency in their performance media; study and performance of music for small combinations of voices, string, woodwind, brass or percussion instruments, and piano.</td>
</tr>
<tr>
<td>MUN</td>
<td>6435</td>
<td>Brass Choir</td>
<td>1</td>
<td></td>
<td>Open to all university graduate students with the necessary proficiency in their performance media; study and performance of music for small combinations of voices, string, woodwind, brass or percussion instruments, and piano.</td>
</tr>
<tr>
<td>MUN</td>
<td>6436</td>
<td>Brass Quintet</td>
<td>1</td>
<td></td>
<td>Open to all university graduate students with the necessary proficiency in their performance media; study and performance of music for small combinations of voices, string, woodwind, brass or percussion instruments, and piano.</td>
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<tr>
<td>MUN</td>
<td>6445</td>
<td>Percussion Ensemble</td>
<td>1</td>
<td></td>
<td>Open to all university graduate students with the necessary proficiency in their performance media; study and performance of music for small combinations of voices, string, woodwind, brass or percussion instruments, and piano.</td>
</tr>
<tr>
<td>MUN</td>
<td>6446</td>
<td>Marimba Ensemble</td>
<td>1</td>
<td></td>
<td>Open to all university graduate students with the necessary proficiency in their performance media; study and performance of music for small combinations of voices, string, woodwind, brass or percussion instruments, and piano.</td>
</tr>
<tr>
<td>MUN</td>
<td>6456</td>
<td>Piano Ensemble</td>
<td>1</td>
<td></td>
<td>Open to all university students with the necessary proficiency in their performing media; study and performance of music for large combination of voices, string, woodwind, brass or percussion instruments.</td>
</tr>
<tr>
<td>MUN</td>
<td>6477</td>
<td>Collegium Musicum</td>
<td>1</td>
<td></td>
<td>Open to all university graduate students with the necessary proficiency in their performance media; study and performance of music for small combinations of voices, string, woodwind, brass or percussion instruments, and piano.</td>
</tr>
<tr>
<td>MUN</td>
<td>6715</td>
<td>Jazz Ensemble</td>
<td>1</td>
<td></td>
<td>Open to all university students with the necessary proficiency in their performing media; study and performance of music for large combination of voices, string, woodwind, brass or percussion instruments.</td>
</tr>
<tr>
<td>SUB</td>
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<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>MUN</td>
<td>6716</td>
<td>Jazz Chamber Ensemble</td>
<td>1</td>
<td></td>
<td>Open to all university graduate students with the necessary proficiency in their performance media; study and performance of music for small combinations of voices, string, woodwind, brass or percussion instruments, and piano.</td>
</tr>
<tr>
<td>MUO</td>
<td>6505</td>
<td>Opera Workshop</td>
<td>1</td>
<td></td>
<td>Open to all university students with the necessary proficiency in their performing media; study and performance of music for large combination of voices, string, woodwind, brass or percussion instruments.</td>
</tr>
<tr>
<td>MUS</td>
<td>5905</td>
<td>Directed Study</td>
<td>1-4</td>
<td></td>
<td>Independent studies in the various areas of music; course of study and credits must be assigned prior to registration.</td>
</tr>
<tr>
<td>MUS</td>
<td>6525</td>
<td>Computer Applications in Music Education</td>
<td>3</td>
<td></td>
<td>An examination of the teaching and learning processes in music as they are affected by music technology. Through the course, students will explore a variety of music software types and investigate the potential role of technology in music education.</td>
</tr>
<tr>
<td>MUS</td>
<td>6793</td>
<td>Techniques Of Research In Music And Music Education</td>
<td>3</td>
<td></td>
<td>A study of the methods of research and professional bibliography and with an individual, formal project as a terminal requirement.</td>
</tr>
<tr>
<td>MUS</td>
<td>6806</td>
<td>Fit to Play: Mind-Body Integration for Musician</td>
<td>2</td>
<td>CR: MVB, MVK, MVP, MVJ, MVS, MVV, MVW, MVX 5000-6000</td>
<td>This course is open to graduate performance majors, designed to help develop healthy, injury-free and effective life and practice style primed for the rigorous physical and mental regimen required in music study.</td>
</tr>
<tr>
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</tr>
<tr>
<td>MUS</td>
<td>6906</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
<td>Independent study in which student must have a contract with an instructor.</td>
</tr>
<tr>
<td>MUS</td>
<td>6910</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td>Directed research topics in various areas of Music. The student must have a contract with a faculty member that outlines the work to be completed, timeline and assessment to be used.</td>
</tr>
<tr>
<td>MUS</td>
<td>6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MUS</td>
<td>6976</td>
<td>Graduate Recital</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MUT</td>
<td>6545</td>
<td>Analysis of 18th and 19th Century Music</td>
<td>3</td>
<td></td>
<td>An in-depth examination of the music of the 18th and 19th centuries. Students provide detailed analyses of selected works and read appropriate scholarly writings. Additional activities may include in-class presentations and a research paper.</td>
</tr>
<tr>
<td>MUT</td>
<td>6575</td>
<td>Analysis of Twentieth Century Music</td>
<td>3</td>
<td></td>
<td>An in-depth examination of representative works. Students will learn analytical techniques such as set theory and 12-tons techniques, read scholarly articles, give in-class presentations, and write a research paper to gain an understanding of the theoretical and musical trends of the 20th-century.</td>
</tr>
<tr>
<td>MUT</td>
<td>6586</td>
<td>Critical Analysis-History</td>
<td>2</td>
<td></td>
<td>A study of historical developments of music in western civilization. Emphasis on a different historical period each semester, from the Middle Ages through the Romantic Period.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>MUT</td>
<td>6629</td>
<td>Schenkerian Analysis</td>
<td>3</td>
<td></td>
<td>A study in theories and analytical methods developed by German theorist Heinrich Schenker. Students are expected to demonstrate their knowledge of these theoretical concepts by analyzing relevant literature, investigating scholarly articles, giving class presentations, and writing a research paper.</td>
</tr>
<tr>
<td>MUT</td>
<td>6665</td>
<td>Seminar Jazz Styles And Analysis</td>
<td>2</td>
<td></td>
<td>A studio course study of the improvised solos of the major innovators in jazz. Oriented toward the continuing development of students' soloing ability.</td>
</tr>
<tr>
<td>MUT</td>
<td>6751</td>
<td>Teaching of Music Theory</td>
<td>3</td>
<td></td>
<td>Comparative study of teaching, techniques, procedures, and materials used in teaching visual and aural theory.</td>
</tr>
<tr>
<td>MUT</td>
<td>6760</td>
<td>History of Music Theory</td>
<td>3</td>
<td></td>
<td>Evolutionary history of the materials of western music including tuning systems, scales, models, tonality, rhythm, counterpoint and harmony; also the exploration of treatises and theorists contributing to the evolution.</td>
</tr>
<tr>
<td>MVB</td>
<td>5251</td>
<td>Applied Trumpet</td>
<td>2-4</td>
<td></td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVB</td>
<td>5252</td>
<td>Applied French Horn</td>
<td>2-4</td>
<td></td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVB</td>
<td>5253</td>
<td>Applied Trombone</td>
<td>2-4</td>
<td></td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVB</td>
<td>5254</td>
<td>Applied Euphonium</td>
<td>2-4</td>
<td></td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVB</td>
<td>5255</td>
<td>Applied Tuba</td>
<td>2-4</td>
<td></td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVB</td>
<td>6451</td>
<td>Applied Trumpet</td>
<td>4</td>
<td></td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
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</tr>
<tr>
<td>MVB</td>
<td>6452</td>
<td>Applied French Horn</td>
<td>4</td>
<td></td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVB</td>
<td>6453</td>
<td>Applied Trombone</td>
<td>4</td>
<td></td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVB</td>
<td>6454</td>
<td>Applied Euphonium</td>
<td>4</td>
<td></td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVB</td>
<td>6455</td>
<td>Applied Tuba</td>
<td>4</td>
<td></td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVJ</td>
<td>5250</td>
<td>Applied Jazz Piano</td>
<td>2</td>
<td></td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVJ</td>
<td>5253</td>
<td>Applied Jazz Guitar</td>
<td>2</td>
<td></td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVJ</td>
<td>5254</td>
<td>Applied Jazz Bass</td>
<td>2</td>
<td></td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVJ</td>
<td>5259</td>
<td>Applied Jazz Percussion</td>
<td>2</td>
<td></td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVJ</td>
<td>5951</td>
<td>Applied Jazz Performance</td>
<td>2</td>
<td></td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVJ</td>
<td>6460</td>
<td>Applied Jazz Piano</td>
<td>4</td>
<td></td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVJ</td>
<td>6463</td>
<td>Applied Jazz Guitar</td>
<td>4</td>
<td></td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVJ</td>
<td>6464</td>
<td>Applied Jazz Bass</td>
<td>4</td>
<td></td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVJ</td>
<td>6469</td>
<td>Applied Jazz Percussion</td>
<td>4</td>
<td></td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVJ</td>
<td>6952</td>
<td>Applied Jazz Performance</td>
<td>4</td>
<td></td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVK</td>
<td>5251</td>
<td>Applied Piano</td>
<td>2-4</td>
<td></td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVK</td>
<td>6451</td>
<td>Applied Piano</td>
<td>4</td>
<td></td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>SUB</td>
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<td>PREREQUISITES</td>
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<tr>
<td>MVK</td>
<td>6650</td>
<td>Graduate Piano Pedagogy I</td>
<td>2</td>
<td></td>
<td>Emphasis on techniques used in teaching the individual student in performance.</td>
</tr>
<tr>
<td>MVK</td>
<td>6651</td>
<td>Graduate Piano Pedagogy II</td>
<td>2</td>
<td></td>
<td>Emphasis on techniques used in teaching the individual student in performance.</td>
</tr>
<tr>
<td>MVP</td>
<td>5251</td>
<td>Applied Percussion, Secondary</td>
<td>2-4</td>
<td></td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVP</td>
<td>6451</td>
<td>Applied Percussion</td>
<td>4</td>
<td></td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVS</td>
<td>5251</td>
<td>Applied Violin</td>
<td>2-4</td>
<td></td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVS</td>
<td>5252</td>
<td>Applied Viola</td>
<td>2-4</td>
<td></td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVS</td>
<td>5253</td>
<td>Applied Cello</td>
<td>2-4</td>
<td></td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVS</td>
<td>5254</td>
<td>Applied Double Bass</td>
<td>2-4</td>
<td></td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVS</td>
<td>6451</td>
<td>Applied Violin</td>
<td>4</td>
<td></td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVS</td>
<td>6452</td>
<td>Applied Viola</td>
<td>4</td>
<td></td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVS</td>
<td>6453</td>
<td>Applied Violoncello</td>
<td>4</td>
<td></td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVS</td>
<td>6454</td>
<td>Applied Double Bass</td>
<td>4</td>
<td></td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVV</td>
<td>5251</td>
<td>Applied Voice</td>
<td>2-4</td>
<td></td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVV</td>
<td>6451</td>
<td>Applied Voice</td>
<td>4</td>
<td></td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
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<tr>
<td>MVV</td>
<td>6652</td>
<td>Voice Pedagogy</td>
<td>2</td>
<td></td>
<td>Voice Pedagogy covers the fundamentals of the teaching of singing. Open to all M.M. voice majors; other students may petition to enroll with instructor approval. This course is not repeatable for credit.</td>
</tr>
<tr>
<td>MVW</td>
<td>5251</td>
<td>Applied Flute</td>
<td>2-4</td>
<td></td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVW</td>
<td>5252</td>
<td>Applied Oboe</td>
<td>2-4</td>
<td></td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVW</td>
<td>5253</td>
<td>Applied Clarinet</td>
<td>2-4</td>
<td></td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVW</td>
<td>5254</td>
<td>Applied Bassoon</td>
<td>2-4</td>
<td></td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVW</td>
<td>5255</td>
<td>Applied Saxophone</td>
<td>2-4</td>
<td></td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVW</td>
<td>6451</td>
<td>Applied Flute</td>
<td>4</td>
<td></td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVW</td>
<td>6452</td>
<td>Applied Oboe</td>
<td>4</td>
<td></td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVW</td>
<td>6453</td>
<td>Applied Clarinet</td>
<td>4</td>
<td></td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVW</td>
<td>6454</td>
<td>Applied Bassoon</td>
<td>4</td>
<td></td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVW</td>
<td>6455</td>
<td>Applied Saxophone</td>
<td>4</td>
<td></td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
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<td>PREREQUISITES</td>
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<tr>
<td>NGR</td>
<td>5871</td>
<td>Informatics in Nursing and Healthcare</td>
<td>3</td>
<td></td>
<td>Foundations course with emphasis on essential content and applications in healthcare informatics and clinical systems. Provides understanding of the interdisciplinary issues in medical and nursing informatics and a foundation for those seeking expertise in healthcare informatics. Focus on technologies in healthcare, nomenclatures and classification systems, health care documentation, electronic medical records, and web-based technologies for healthcare.</td>
</tr>
<tr>
<td>NGR</td>
<td>6002C</td>
<td>Advanced Health Assessment Across the Lifespan</td>
<td>4</td>
<td>PR: NGR 6152, NGR 6172</td>
<td>Development of advanced clinical skills in assessing and maintaining the health of individuals across the life span through history taking, physical examinations, and diagnostic/therapeutic procedures.</td>
</tr>
<tr>
<td>NGR</td>
<td>6055</td>
<td>Health Assessment for the Advanced Generalist Nurse</td>
<td>2</td>
<td></td>
<td>Health assessment with application to the advanced generalist nurse. Using a case study approach, techniques will be applied to the clinical setting with emphasis on education and management.</td>
</tr>
<tr>
<td>NGR</td>
<td>6060</td>
<td>Medical Laboratory Interpretation for the Advanced Practice Nurse</td>
<td>1</td>
<td></td>
<td>Interpretation of common medical laboratory results for the Advanced Practice Nurse with focus on the differential diagnosis.</td>
</tr>
<tr>
<td>NGR</td>
<td>6064C</td>
<td>Advanced Diagnostics &amp; Procedures</td>
<td>3</td>
<td>PR: NGR 6002C</td>
<td>Introduces evaluation, selection, interpretation, and application of diagnostic testing, evaluation techniques and procedures. Fosters evidence-based critical thinking and decision-making skills. Simulation lab practice included for skills acquisition.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
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<td>HRS</td>
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<tr>
<td>NGR</td>
<td>6080</td>
<td>Family and Population-Based Health Promotion</td>
<td>3</td>
<td>PR: NGR 6121</td>
<td>Focuses on the assessment of family and population groups for the purpose of planning, implementing, and evaluating nursing interventions for health promotion, health maintenance, and disease and injury prevention.</td>
</tr>
<tr>
<td>NGR</td>
<td>6121</td>
<td>Theoretical Foundations</td>
<td>3</td>
<td></td>
<td>Examination of knowledge development in nursing science, critique and evaluation of theories from nursing and related fields. Professional role development is emphasized to facilitate transition into advanced nursing practice roles.</td>
</tr>
<tr>
<td>NGR</td>
<td>6140</td>
<td>Pathophysiology for Advanced Practice</td>
<td>4</td>
<td></td>
<td>Central concepts of pathophysiology: embryologic origins, cells, tissues, organs, and systems. Provides essential knowledge base in pathophysiology across the life span for advanced nurse practice nurses.</td>
</tr>
<tr>
<td>NGR</td>
<td>6143</td>
<td>Pathophysiologic Concepts in Acute Care Nursing</td>
<td>3</td>
<td>PR: NGR 6140; NGR 6121;</td>
<td>This course will explore pathophysiologic mechanisms of the major body systems in critically ill patients across the lifespan.</td>
</tr>
<tr>
<td>NGR</td>
<td>6146</td>
<td>Pathophysiology/Pharmacology for the Advanced Generalist Nurse</td>
<td>4</td>
<td></td>
<td>Course will focus on what is currently known about the pathophysiology of commonly seen diseases with updates in pharmacology. A case study approach will be used.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
<td>DESCRIPTION</td>
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</tr>
<tr>
<td>NGR</td>
<td>6152</td>
<td>Advanced Physiology and Pathophysiology</td>
<td>4</td>
<td></td>
<td>In-depth review of research findings in foundational sciences of human physiology. Findings will be applied to mechanisms important in disease pathogenesis, pathophysiology, and clinical manifestations in selected disease states throughout the lifespan.</td>
</tr>
<tr>
<td>NGR</td>
<td>6157</td>
<td>Physiology &amp; Pharmacology for Nurse Anesthetists II</td>
<td>5</td>
<td>PR: NGR 6404 and NGR 6460.</td>
<td>An integrative approach for nurse anesthetist students to advanced principles of pharmacology and human physiology across the lifespan with an emphasis on understanding the effects of anesthesia on the individual human organs systems.</td>
</tr>
<tr>
<td>NGR</td>
<td>6168</td>
<td>Alternative and Complementary Therapies</td>
<td>2</td>
<td></td>
<td>Critical assessment of behavioral, cognitive, and plant-based interventions being used in various cultures to treat disease. Emphasis will be upon remedies popular in the United States and their proposed mechanisms of action.</td>
</tr>
<tr>
<td>NGR</td>
<td>6172</td>
<td>Pharmacology for Advanced Nurse Practitioners</td>
<td>4</td>
<td>PR: NGR 6140 with a &quot;B&quot; or higher.</td>
<td>This course is designed to provide the advanced nurse practitioner student with a current knowledge base in pharmacology and pharmacotherapeutics focusing on pharmacokinetics and pharmacodynamics across drug categories.</td>
</tr>
<tr>
<td>NGR</td>
<td>6201</td>
<td>Primary Care of Adults I</td>
<td>3</td>
<td>PR: NGR 6140, NGR 6121, NGR 6737, NGR 6800, NGR 6080, NGR 6172, NGR 6002C.</td>
<td>The didactic basis for diagnosing and managing common and acute health conditions of the adult. Students will compile/analyze data and develop/implement a plan of care. Concepts of health promotion/health maintenance are integrated throughout the course.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
<td>DESCRIPTION</td>
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<tr>
<td>NGR</td>
<td>6202C</td>
<td>Primary Care of Adults II</td>
<td>6</td>
<td>PR: NGR 6002C, NGR 6121, NGR 6800, NGR 6140, NGR 6172, NGR 6737, NGR 6080, NGR 6207.</td>
<td>Didactic basis and practical experience for diagnosing and managing chronic health problems of the adult; emphasis on compiling and analyzing data, developing and implementing a plan; integrating health promotion and maintenance throughout course.</td>
</tr>
<tr>
<td>NGR</td>
<td>6207C</td>
<td>Health Management of Adults and Older Adults I</td>
<td>6</td>
<td>PR: NGR 6002C.</td>
<td>Comprehensive evaluation and treatment of common acute conditions and acute exacerbations of common chronic conditions of adults and older adults.</td>
</tr>
<tr>
<td>NGR</td>
<td>6210C</td>
<td>Clinical Management of the Acutely Ill Adult</td>
<td>7</td>
<td>PR: NGR 6002C and NGR 6143</td>
<td>This course focuses on the management of commonly encountered acute and chronic episodic health problems in adults and older adults.</td>
</tr>
<tr>
<td>NGR</td>
<td>6211C</td>
<td>Acute Care of Adults &amp; Older Adults: Special Topics</td>
<td>7</td>
<td>PR: NGR 6210C, NGR 6244C, NGR 6232C</td>
<td>This course focuses on both theoretical and clinical knowledge of topics of special interest to the Acute Care, Adult-Gerontologist Primary Care Nurse Practitioner. A variety of teaching strategies will be utilized.</td>
</tr>
<tr>
<td>NGR</td>
<td>6215</td>
<td>Primary Care: Adult Health Management</td>
<td>3</td>
<td>PR: NGR 6205, NGR 6205L, NGR 6207, NGR 6207L.</td>
<td>Focus on high risk, vulnerable adult patients/clients across the life span with complex, multi-system health problems. The course covers the assessment, management and continuity of care for individuals with these complex, acute and chronic health problems.</td>
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<tr>
<td>NGR</td>
<td>6220</td>
<td>Pathobiology Of Neoplasia</td>
<td>3</td>
<td></td>
<td>Emphasizes basic concepts of cellular differentiation and the abnormal</td>
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<td>cytological changes occurring in the pathogenesis of Neoplasia. Also</td>
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<td>emphasized is the role of the advanced practice nurse in relation to the</td>
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<td>role of the immune system and diet in oncogenesis, and the epidemiology</td>
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<td></td>
<td></td>
<td>and pathology of specific types of cancers.</td>
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<tr>
<td>NGR</td>
<td>6221</td>
<td>Oncology Nursing Concepts</td>
<td>3</td>
<td></td>
<td>Provides advanced oncology nursing content with a focus on nursing</td>
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<td>management of physical problems resulting from cancer and its treatment.</td>
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<tr>
<td>NGR</td>
<td>6222L</td>
<td>Practicum I in Advanced Oncology Nursing</td>
<td>3</td>
<td>PR: NGR 6140, NGR 6172, NGR 6002C, NGR</td>
<td>Provides clinical experiences in advanced oncology nursing focused on the</td>
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<td></td>
<td></td>
<td>Practice</td>
<td></td>
<td>6121, NGR 6737, NGR 6080, NGR 6800, NGR</td>
<td>application of theoretical and conceptual knowledge relevant to adults</td>
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<tr>
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<td></td>
<td>6220, NGR 6221.</td>
<td>with cancer or at risk. Clinical assessment is focused on developing</td>
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<td>assessment skills and documentation.</td>
</tr>
<tr>
<td>NGR</td>
<td>6223L</td>
<td>Practicum II in Advanced Oncology Nursing</td>
<td>3</td>
<td>PR: NGR 6140, NGR 6172, NGR 6002C, NGR</td>
<td>Clinical experiences in advanced oncology nursing focused on the</td>
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<td></td>
<td>6121, NGR 6737, NGR 6800, NGR 6080, NGR</td>
<td>application of theoretical and conceptual knowledge relevant to adults</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td>6220, NGR 6222L and NGR 6240 (proposed)</td>
<td>with cancer or at risk; development of diagnostic skills, clinical</td>
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<td>management and interdisciplinary collaboration.</td>
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<tr>
<td>NGR</td>
<td>6224L</td>
<td>Practicum III in Advanced Oncology Nursing Practice</td>
<td>1-9</td>
<td>PR: NGR 6140, NGR 6172, NGR 6002C, NGR 6121, NGR 6737, NGR 6800, NGR 6080, NGR 6220, NGR 6221, NGR 6222L, NGR 6223L, and NGR 6240.</td>
<td>Clinical experiences in advanced oncology nursing focused on the application of theoretical and conceptual knowledge relevant to adults with cancer or at risk; emphasizes evidence based practice, evaluating outcomes and professional role development.</td>
</tr>
<tr>
<td>NGR</td>
<td>6232C</td>
<td>Selected Concepts in the Acutely Ill Adult</td>
<td>7</td>
<td>PR: NGR 6140</td>
<td>This course focuses on engaging family and surrogate decision-makers in realistic goal setting while supporting physiologic function in acutely and critically ill adults and older adults.</td>
</tr>
<tr>
<td>NGR</td>
<td>6240</td>
<td>Adult Health For Specialty Care Nursing</td>
<td>3</td>
<td>PR: NGR 6140, NGR 6172, NGR 6002C</td>
<td>Prepares specialty care nurse practitioners to recognize and assess complex, multi-system problems within their specialty, make appropriate referrals and collaborate with other specialty/primary care providers to meet the healthcare needs of the patient.</td>
</tr>
<tr>
<td>NGR</td>
<td>6244C</td>
<td>Health Management of Adults and Older Adults II</td>
<td>6</td>
<td>PR: NGR 6207C.</td>
<td>Focuses on prevention and management of common chronic conditions and the symptoms that accompany these conditions.</td>
</tr>
<tr>
<td>NGR</td>
<td>6291C</td>
<td>Health Mgmt of Adults and Older Adults: Special Topics</td>
<td>6</td>
<td>PR: NGR 6207C, NGR 6244C.</td>
<td>Theoretical and clinical knowledge of topics of special interest to the Adult- Gerontologist Primary Care Nurse Practitioner. A variety of teaching strategies will be utilized.</td>
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<tr>
<td>NGR</td>
<td>6301</td>
<td>Primary Care Of Children And Adolescents I</td>
<td>3</td>
<td>CR: NGR 6001C.; PR: NGR 6121, 6135, 6800, 6080, 6140, 6199.</td>
<td>Focus is on primary care of children and adolescents with common acute and behavioral problems. Clinical management, available resources for patients, and the impact of illness on families are highlighted.</td>
</tr>
<tr>
<td>NGR</td>
<td>6301C</td>
<td>Primary Care of Children &amp; Adolescents I</td>
<td>6</td>
<td>PR: NGR 6002C.</td>
<td>Focus is on primary care of children and adolescents with common acute and behavioral problems. Clinical management, available resources for patients, and the impact of illness on families are highlighted.</td>
</tr>
<tr>
<td>NGR</td>
<td>6302C</td>
<td>Primary Care of Children and Adolescents II</td>
<td>6</td>
<td>PR: NGR 6301C.</td>
<td>This course is designed to provide the student with the basis for diagnosing and managing chronic health conditions of the child and adolescent. Attention will be paid to the needs of culturally diverse and vulnerable populations.</td>
</tr>
<tr>
<td>NGR</td>
<td>6305L</td>
<td>Primary Care Practicum: Children</td>
<td>2-3</td>
<td>CR: NGR 6305.; PR: NGR 6002C, NGR 6121, NGR 6140, NGR 6199</td>
<td>Application of knowledge gained in the classroom in PC: Children to the patient/client population between birth and pre-adolescent years. Screening, health maintenance, and management of health problems will make-up the clinical experiences.</td>
</tr>
<tr>
<td>NGR</td>
<td>6339C</td>
<td>Primary Care of Children and Adolescents: Special Topics</td>
<td>6</td>
<td>PR: NGR 6302.</td>
<td>This course provides information to prepare the pediatric nurse practitioner to provide primary care to the children and adolescents. Course content will include comprehensive diagnosis and management of acute and chronic pediatric health problems.</td>
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<tr>
<td>NGR</td>
<td>6342</td>
<td>Primary Care of Childbearing Family</td>
<td>1</td>
<td>PR: NGR 6207C.</td>
<td>Management of common, episodic and chronic health problems in women before, during and after conception. Developmental stage, psychosocial strengths, lifestyle variations, environmental stresses, cultural diversity and resources will be incorporated.</td>
</tr>
<tr>
<td>NGR</td>
<td>6342L</td>
<td>Primary Care of Childbearing Family Practicum</td>
<td>1</td>
<td>PR: NGR 6342.</td>
<td>Management of common, episodic and chronic health problems in women before, during and after conception. Critical analysis of the childbearing family will form the foundation for advanced practice nursing intervention and health promotion during pregnancy.</td>
</tr>
<tr>
<td>NGR</td>
<td>6343C</td>
<td>Primary Care of Women</td>
<td>5</td>
<td>PR: NGR 6002C, NGR 6080, NGR 6140, NGR 6121, NGR 6135, NGR 6172, NGR 6800, NGR 6247 AND NGR 6248C OR NGR 6307 AND NGR 6308C.</td>
<td>Management of common episodic and chronic health problems in women with critical analysis to form the foundation for advanced practice intervention and health promotion. Clinical experience focuses on application of the knowledge gained in the didactic.</td>
</tr>
<tr>
<td>NGR</td>
<td>6400</td>
<td>Chemistry, Biochemistry and Physics for Nurse Anesthesia</td>
<td>3</td>
<td>PR: undergraduate Chemistry course with a grade of B or higher.</td>
<td>This course examines the laws and principles of inorganic chemistry, organic chemistry and physics as they apply to pharmacology and the clinical practice of nurse anesthesia. Restricted to majors.</td>
</tr>
<tr>
<td>NGR</td>
<td>6404</td>
<td>Anatomy Physiology for Nurse Anesthesia I</td>
<td>3</td>
<td>PR: BSC 2085 and BSC 2086 or equivalent undergraduate Anatomy and Physiology course with a grade of B or higher.</td>
<td>This course focuses on human anatomy and physiology and its relevance to the practice of nurse anesthesia. Restricted to majors.</td>
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<tr>
<td>NGR</td>
<td>6420</td>
<td>Foundations &amp; Methods of Nurse Anesthesia Practice</td>
<td>4</td>
<td>PR: NGR6404, NGR6400, NGR6460, NGR6422, GMS6461, NGR6002C, NGR6800, PHC6050</td>
<td>Focuses on the fundamentals of nurse anesthesia practice and techniques. This course also focuses on the development of didactic knowledge for regional anesthesia and advanced nurse anesthesia practice.</td>
</tr>
<tr>
<td>NGR</td>
<td>6422</td>
<td>Principles of Nurse Anesthesia through the Lifespan</td>
<td>3</td>
<td>PR: NGR6404, NGR6400, NGR6460, NGR6800, PHC6050</td>
<td>Emphasizes the considerations of nurse anesthesia practice, principles, and techniques for the obstetrical, pediatric and geriatric patient.</td>
</tr>
<tr>
<td>NGR</td>
<td>6423</td>
<td>Principles of Cardiothoracic Nurse Anesthesia</td>
<td>3</td>
<td>PR: NGR 6424, NGR 6490, NGR 6492, NGR 6420, NGR 6400, NGR 6404, NGR 6460, NGR 6460, NGR 6800, GMS 6461, NGR 6140, NGR 6422, NGR 6002C, PHC 6050</td>
<td>Basic physiology, pathophysiology and anesthetic management of cardiac, thoracic, neurologic, endocrine and hepatic systems; emphasis on anesthetic implications and anesthesia management. Non-cardiothoracic surgery in patients with cardiothoracic pathology.</td>
</tr>
<tr>
<td>NGR</td>
<td>6424</td>
<td>Principles of Nurse Anesthesia</td>
<td>3</td>
<td>PR: NGR 6140, NGR 6422, NGR 6404, NGR 6400, NGR 6460, GMS 6461, NGR 6002C, PHC 6050, NGR 6800</td>
<td>Physiology, pathophysiology and anesthetic management and evaluation of orthopedic, neurologic, endocrine, hepatic, urology systems with emphasis on anesthetic implications and anesthesia management for surgery.</td>
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<tr>
<td>NGR</td>
<td>6431</td>
<td>Nurse Anesthesia Clinical Residency I</td>
<td>4</td>
<td>PR: GMS6461, NGR6002C, NGR6140, NGR 6400, NGR6404, NGR 6420, NGR6422, NGR6423, NGR6460, NGR6492, NGR6800, PHC6050.</td>
<td>This course focuses on clinical application of didactic material from the nurse anesthesia curriculum through novice level practice in the role of a nurse anesthetist.</td>
</tr>
<tr>
<td>NGR</td>
<td>6432</td>
<td>Nurse Anesthesia Clinical Residency II</td>
<td>4</td>
<td>CR: NGR 6929; PR: NGR 6431</td>
<td>This course focuses on clinical application of didactic material from the nurse anesthesia curriculum through novice level practice in the role of a nurse anesthetist.</td>
</tr>
<tr>
<td>NGR</td>
<td>6433</td>
<td>Nurse Anesthesia Clinical Residency III</td>
<td>4</td>
<td>CR: NGR 6929; PR: NGR 6432</td>
<td>This course focuses on clinical application of didactic material from the nurse anesthesia curriculum through intermediate level practice in the role of a nurse anesthetist.</td>
</tr>
<tr>
<td>NGR</td>
<td>6434</td>
<td>Nurse Anesthesia Clinical Residency IV</td>
<td>4</td>
<td>PR: NGR 6002C, NGR 6080, NGR 6121, NGR 6140, NGR 6172, NGR 6737, NGR 6800 AND NGR 6201, NGR 6202C OR NGR 6301 AND NGR 6302C.</td>
<td>This course focuses on clinical application of didactic material from the nurse anesthesia curriculum through an advanced level of practice in the role of a nurse anesthetist.</td>
</tr>
<tr>
<td>NGR</td>
<td>6440L</td>
<td>Nurse Anesthesia Simulation Lab I</td>
<td>2</td>
<td>PR: NGR 6420, NGR 6424.</td>
<td>This course will allow for repetitive, hands-on practice of procedures and techniques for the neurologic, renal, and orthopedic systems with an emphasis on anesthesia management. It will also focus on the trauma patient as well as team training.</td>
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<tr>
<td>NGR</td>
<td>6441L</td>
<td>Nurse Anesthesia Simulation Lab II</td>
<td>2</td>
<td>PR: NGR 6440L.</td>
<td>Demonstration of theoretical and clinical knowledge needed to verify competency of the student registered nurse anesthetist and promote safe practice. Procedures and techniques performed in the obstetrical, pediatric, and geriatric patient.</td>
</tr>
<tr>
<td>NGR</td>
<td>6442L</td>
<td>Nurse Anesthesia Simulation Lab III</td>
<td>2</td>
<td>PR: NGR 6441L.</td>
<td>This course will allow for repetitive, hands-on practice of anesthetic procedures and techniques for the cardiac, thoracic, general, ophthalmic (ENT), endocrine, and hepatic systems with an emphasis on anesthesia management.</td>
</tr>
<tr>
<td>NGR</td>
<td>6460</td>
<td>Pharmacology for Nurse Anesthesia I</td>
<td>3</td>
<td></td>
<td>This course focuses on the pharmacokinetics, pharmacodynamics and general pharmacological principles of anesthetic drugs and adjunctive agents. Restricted to majors.</td>
</tr>
<tr>
<td>NGR</td>
<td>6470</td>
<td>Assessment, Radiology, and Psychology of Pain</td>
<td>3</td>
<td></td>
<td>Demonstration of theoretical and clinical knowledge needed to make proper assessment of pain based on relevant diagnostic, radiological facts and understand the importance of the psychological aspect of pain for the proper diagnosis and treatment.</td>
</tr>
<tr>
<td>NGR</td>
<td>6471</td>
<td>Concepts of Pain Pathophysiology</td>
<td>3</td>
<td></td>
<td>This course is designed to introduce the basic anatomy, physiology, and mechanisms underlying the pain pathology. It will also introduce an overview of different pain theories and philosophies.</td>
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<tr>
<td>NGR</td>
<td>6472</td>
<td>Pharmacology of Pain Management</td>
<td>3</td>
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<td>This course is designed to review the commonly used analgesic medications in pain management clinical practice. It also reviews chemical dependency, addiction, and professional responsibilities associated with high risk medications.</td>
</tr>
<tr>
<td>NGR</td>
<td>6473C</td>
<td>Interventional Procedures/Simulation in Pain Management</td>
<td>2</td>
<td>PR: NGR 6470 and NGR 6471.</td>
<td>Focuses on introduction of various interventional techniques used in treatment of pain syndromes. The course is based on application of didactic material from previous pain management graduate courses. More advanced interventional modalities.</td>
</tr>
<tr>
<td>NGR</td>
<td>6491</td>
<td>Nurse Anesthesia Practice Comprehensive</td>
<td>2</td>
<td>CR: NGR 6434.; PR: NGR 6433, NGR 7892, NGR 6929.</td>
<td>This course is designed to measure the knowledge base and clinical competency of the nurse anesthesia student.</td>
</tr>
<tr>
<td>NGR</td>
<td>6492</td>
<td>Nurse Anesthesia Role Development</td>
<td>3</td>
<td>PR: GMS 6461, NGR 6002C, NGR 6140, NGR 6400, NGR6404, NGR6422, NGR6460, NGR 6800, PHC 6050.</td>
<td>Overview of the professional, ethical, and legal aspects regarding the practice of nurse anesthesia and information about the American Association of Nurse Anesthetists, including its history and the Councils on Accreditation, Certification and Practice.</td>
</tr>
<tr>
<td>NGR</td>
<td>6500</td>
<td>Theoretical Foundations for Advanced Psychiatric Nursing</td>
<td>3</td>
<td>PR: NGR 6121.</td>
<td>Theoretical basis for advanced practice in psychiatric nursing. Focus on selected psychodynamic, neuropsychological, development, and systems models of behavior and their impact for nursing practice.</td>
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<tr>
<td>NGR</td>
<td>6500L</td>
<td>Psychiatric APN Practicum: Psychiatric Care Outpatient</td>
<td>1-6</td>
<td>CR: NGR 6500.</td>
<td>Clinical experience in advanced psychiatric mental health nursing that focuses on comprehensive mental health assessment, crisis intervention and brief psychotherapy.</td>
</tr>
<tr>
<td>NGR</td>
<td>6501</td>
<td>Psychopathology for Advanced Psychiatric Nursing</td>
<td>3</td>
<td></td>
<td>In-depth study of psychosocial, factors contributing to psychosocial dysfunction, and diagnostic reasoning basis to advanced practice psychiatric health nursing, emphasis on etiology and differential diagnoses.</td>
</tr>
<tr>
<td>NGR</td>
<td>6501L</td>
<td>Psychiatric APN Practicum: Psychiatric Care in the Inpatient Setting</td>
<td>1-4</td>
<td>PR: NGR 6500</td>
<td>Clinical experience in in-patient settings with selected acute and chronic populations. Emphasis on the role of the psychiatric APN working with individuals, groups and families conducting comprehensive mental health in the inpatient setting.</td>
</tr>
<tr>
<td>NGR</td>
<td>6502</td>
<td>Treatment Modalities for Advanced Psychiatric Nursing</td>
<td>3</td>
<td></td>
<td>Examination of treatment modalities for advanced practice psychiatric nursing. Focus on theoretical and conceptual foundation for specialty practice with individuals, families, and groups.</td>
</tr>
<tr>
<td>NGR</td>
<td>6538</td>
<td>Psychopharmacology</td>
<td>3</td>
<td>PR: NGR 6140</td>
<td>Provide advanced knowledge of psychobiological information with the use of psychopharmacological interventions in patients. Focus will be on pharmacokinetics and clinical management including prescription of medications for psychiatric disorders.</td>
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<tr>
<td>NGR</td>
<td>6613C</td>
<td>Health Management of Families: Special Topics</td>
<td>5</td>
<td>PR: NGR 6244C.</td>
<td>Theoretical and clinical knowledge of topics of special interest to the Family Nurse Primary Care Practitioner. A variety of teaching strategies will be utilized.</td>
</tr>
<tr>
<td>NGR</td>
<td>6638</td>
<td>Health Promotion, Clinical Prev, &amp; Pop Health for Adv Nurs</td>
<td>3</td>
<td></td>
<td>Provides knowledge and skills required for planning, implementing, and evaluating evidence-based health promotion and clinical prevention services for individuals and families across the lifespan and for populations.</td>
</tr>
<tr>
<td>NGR</td>
<td>6650</td>
<td>Occupational Health Nursing I</td>
<td>2</td>
<td></td>
<td>Primary care of the worker relative to health promotion/risk reduction/acute injuries/chronic conditions, assessment of the workplace and needs of worker aggregates, and planning for health services relative to worker lifestyles and risk factors.</td>
</tr>
<tr>
<td>NGR</td>
<td>6650L</td>
<td>Clinical Experiences In Occupational Health Nursing I</td>
<td>1</td>
<td></td>
<td>Clinical experiences at selected worksites to apply content from NGR 6650 Occupational Health Nursing with an emphasis on analysis of the workplace and worker aggregates, occupational health nurse(s) roles/functions.</td>
</tr>
<tr>
<td>NGR</td>
<td>6651</td>
<td>Occupational Health Nursing II</td>
<td>2</td>
<td></td>
<td>Focuses on the analysis of clinical strategies (e.g. triage, biological monitoring) relevant to advanced occupational health programs, medical surveillance programs, and worker's compensation managed care.</td>
</tr>
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<td>SUB</td>
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<tr>
<td>NGR</td>
<td>6651L</td>
<td>Clinical Experiences in Occupational Health II</td>
<td>1</td>
<td></td>
<td>Clinical experiences relative to the application of content in NGR 6650 Occupational Health Nursing II with a focus on workplace assessment utilizing a comprehensive instrument and evaluation of worker’s compensation managed care programs.</td>
</tr>
<tr>
<td>NGR</td>
<td>6652</td>
<td>Occupational Health Nursing III</td>
<td>3</td>
<td></td>
<td>Focuses on the prevention of occupational injuries and illnesses; direct care in the occupational setting; disability case management; and health promotion and adult education.</td>
</tr>
<tr>
<td>NGR</td>
<td>6653</td>
<td>Occupational Health Nursing IV</td>
<td>3</td>
<td></td>
<td>Focuses on the management of psychosocial factors in the occupational setting; examples of occupational health and safety programs; environmental health; research; and professional issues related to occupational and environmental health nursing.</td>
</tr>
<tr>
<td>NGR</td>
<td>6673</td>
<td>Epidemiology for Advanced Nursing</td>
<td>3</td>
<td></td>
<td>This course assists graduate level nurses to identify and describe patterns of disease occurrence and to evaluate potential determinants of disease and disease prevention.</td>
</tr>
<tr>
<td>NGR</td>
<td>6691</td>
<td>Counseling for the Terminally Ill</td>
<td>3</td>
<td></td>
<td>Provides specialized psychological and psychosocial content with a focus on the principles and techniques for conducting psychosocial counseling with terminally ill patients.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>NGR</td>
<td>6700C</td>
<td>Advanced Practice Nurse Transitions</td>
<td>5</td>
<td>PR: NGR 6002C, NGR 6080, NGR6121, NGR 6140, NGR 6172, NGR 6737, NGR 6800 and NGR 6201, 6202C OR NGR 6301, NGR 6302C AND NGR 6343C.</td>
<td>This is a synthesis course for professional and clinical development. It completes the summative process for students to design and develop their roles as APNs. The clinical portion focuses on the cumulative knowledge gained from previous courses.</td>
</tr>
<tr>
<td>NGR</td>
<td>6700L</td>
<td>APN Transitions Practicum</td>
<td>2-3</td>
<td>CR: NGR 6700C.</td>
<td>Clinical concentration in the intended area of practice for the graduating Advanced Practice Nurse (APN). Focus on applying integrated knowledge to provide collaborative comprehensive care. By Permit Only.</td>
</tr>
<tr>
<td>NGR</td>
<td>6710</td>
<td>Teaching Strategies in Nursing Education</td>
<td>3</td>
<td>PR: NGR 6713.</td>
<td>This course focuses on classroom and clinical teaching in nursing, including computer-based learning and distance learning. Evaluation of textbooks, assignment making and construction of learning plans are included.</td>
</tr>
<tr>
<td>NGR</td>
<td>6713</td>
<td>Foundations of Nursing Education</td>
<td>3</td>
<td></td>
<td>This course focuses on the philosophical, theoretical and evidence-based approaches for nursing education programs. Emphasis is on role of the nurse educator and curriculum development.</td>
</tr>
<tr>
<td>NGR</td>
<td>6718</td>
<td>Evaluation Strategies for Nursing Education</td>
<td>3</td>
<td>PR: NGR 6710, NGR 6713</td>
<td>This course provides an overview of evaluation strategies used in the class, clinical setting and in web-based instruction. Program evaluation models are explored.</td>
</tr>
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<tr>
<td>NGR</td>
<td>6719</td>
<td>Clinical Case Studies in Nursing Education</td>
<td>3</td>
<td></td>
<td>Serves as a vehicle for nursing education students to increase their clinical knowledge and skills in a selected area of specialty through analysis of common health problems. A case study format will be used.</td>
</tr>
<tr>
<td>NGR</td>
<td>6723</td>
<td>Leadership and Applied Management in Nursing Healthcare</td>
<td>3</td>
<td></td>
<td>Leadership in management of resources to achieve quality and enhance healthcare outcomes in nursing. Focus on, evidence-based practice and patient-care outcomes within the context of an interdisciplinary team.</td>
</tr>
<tr>
<td>NGR</td>
<td>6733</td>
<td>Org &amp; Sys Leadership &amp; Qual Impr for Adv Prac Nurs</td>
<td>3</td>
<td></td>
<td>Provides knowledge and skills required for organizational and systems leadership and interprofessional collaboration in the design and implementation of change to improve health care delivery and health outcomes.</td>
</tr>
<tr>
<td>NGR</td>
<td>6737</td>
<td>Ethical, Legal, and Policy Issues in Advanced Nursing Practice</td>
<td>3</td>
<td></td>
<td>Emphases on contemporary ethical, legal, and policy issues related to advanced nursing practice and health care delivery; issues are analyzed at the global, national and local levels; nursing's role in agenda setting and strategies for health care reform.</td>
</tr>
<tr>
<td>NGR</td>
<td>6770C</td>
<td>Introduction to the Clinical Nurse Leader Role</td>
<td>1</td>
<td></td>
<td>Concepts essential for the students’ development into a Clinical Nurse Leader, focusing on the CNL role, communication, leadership and assessing the practice environment. Clinical assignments are designed to assist them in developing the CNL role.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>NGR</td>
<td>6771L</td>
<td>CNL Clinical Seminar</td>
<td>1</td>
<td></td>
<td>Exploration and application of the clinical concepts essential to the role of the Clinical Nurse Leader.</td>
</tr>
<tr>
<td>NGR</td>
<td>6773L</td>
<td>CNL Residency</td>
<td>5</td>
<td>CR: NGR 6777C; PR: NGR 6723, NGR 6770C, NGR 6872C, NGR 6898</td>
<td>Residency practice in the role of the Clinical Nurse Leader.</td>
</tr>
<tr>
<td>NGR</td>
<td>6777C</td>
<td>Shaping the Practice Environment</td>
<td>1</td>
<td>PR: NGR 6872C, NGR 6723.</td>
<td>Concepts essential to shape the clinical practice environment, including components of a patient centered, safe effective and equitable care environment.</td>
</tr>
<tr>
<td>NGR</td>
<td>6800</td>
<td>Nursing Research</td>
<td>3</td>
<td></td>
<td>Research designs and methods for nursing with primary emphasis on these topics: critique of research studies, researchable problems, research designs, instruments and other data collection methods, approaches to data analyses using computer applications, and preparation of research proposals for thesis, directed research, or funded research.(CI)</td>
</tr>
<tr>
<td>NGR</td>
<td>6803</td>
<td>Research and Evidence-Based Practice</td>
<td>3</td>
<td></td>
<td>Theoretical and clinical knowledge to prepare the advanced practice nurse to engage in evidence-based practice. Development of skills needed to critically evaluate new information available from professional consensus statements and research findings.</td>
</tr>
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<tr>
<td>NGR</td>
<td>6821</td>
<td>Applied Analysis for Outcomes Research Using Large Healthcare Databases</td>
<td>3</td>
<td></td>
<td>Focus on knowledge discovery in clinical domains by exploring large nursing and healthcare databases for the purposes of outcomes research or quality improvement. Emphasis on theoretical models and methods of analysis, providing experimental computer applications with large healthcare databases.</td>
</tr>
<tr>
<td>NGR</td>
<td>6824</td>
<td>Data Analysis for Health Sciences</td>
<td>3</td>
<td></td>
<td>This course is designed to provide the graduate Student interested in health sciences research with practical experience using SPSS for Windows and Microsoft's Excel programs to manage, organize, analyze and present both primary and secondary data in biophysical sciences.</td>
</tr>
<tr>
<td>NGR</td>
<td>6872C</td>
<td>Concepts in Information Management</td>
<td>1</td>
<td>PR: NGR 6770C</td>
<td>Emphasis on health information technologies that puts knowledge at the point of care to promote safe and high quality healthcare outcomes. Clinical component focuses on data that support decision making.</td>
</tr>
<tr>
<td>NGR</td>
<td>6885</td>
<td>Bioethics in Contemporary Society</td>
<td>3</td>
<td></td>
<td>Ethical issues related to health and illness encountered during stages of the life cycle, focusing on the influences exerted by cultural diversities and psychosocial factors, including the bi-directional interaction between the individual and society.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>NGR</td>
<td>6893</td>
<td>Systems &amp; Populations in Healthcare</td>
<td>3</td>
<td></td>
<td>Analysis of critical issues in health care delivery and population health; overview of design and structure of U.S. health care system; issues of cultural diversity, health disparities, and social justice; and healthcare systems outcomes management.</td>
</tr>
<tr>
<td>NGR</td>
<td>6898</td>
<td>Microsystem Concepts of Health Care Finance</td>
<td>3</td>
<td></td>
<td>Concepts, language and data about financial and economic elements of patient care in a microsystem; skills to obtain, synthesize and utilize information from health economics and health finance using specialized language, concepts and operating rules.</td>
</tr>
<tr>
<td>NGR</td>
<td>6905</td>
<td>Directed Independent Study</td>
<td>1-6</td>
<td></td>
<td>Specialized individualized study determined by students' needs and interests; requires an approved contract with a faculty member. (CI). Restricted to majors; repeatable for credit.</td>
</tr>
<tr>
<td>NGR</td>
<td>6915</td>
<td>Directed Research</td>
<td>1-3</td>
<td>PR: NGR 6800</td>
<td>Builds on knowledge gained in NGR 6800 and specialty concentration by participating in a research project under the direction of selected faculty. (CI)</td>
</tr>
<tr>
<td>NGR</td>
<td>6929</td>
<td>Clinical Correlational Conferences</td>
<td>1</td>
<td>PR: NGR 6431 or NGR 6432 or NGR 6433 or NGR 6434.</td>
<td>This course is designed to complement each clinical residency; these conferences will discuss clinical experience, morbidity and mortality utilizing current research.</td>
</tr>
<tr>
<td>NGR</td>
<td>6931</td>
<td>Selected Topics</td>
<td>1-4</td>
<td></td>
<td>Seminars for the analysis and discussion of selected issues in nursing of topical concern to student and faculty.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>NGR</td>
<td>6940</td>
<td>Classroom/Online Teaching Practicum</td>
<td>2</td>
<td>PR: NGR 6713.</td>
<td>Provides knowledge and experience in the application of teaching strategies in the classroom and online settings.</td>
</tr>
<tr>
<td>NGR</td>
<td>6944</td>
<td>Practicum in Acute Care Nursing</td>
<td>1-9</td>
<td>PR: NGR 6143, NGR 6333 or NGR 6232</td>
<td>Clinical experiences in critical care settings focusing on the role of the advanced practice nurse (1:4 ratio).</td>
</tr>
<tr>
<td>NGR</td>
<td>6947</td>
<td>Practicum in Nursing Education</td>
<td>2</td>
<td>PR: NGR 6822, NGR 6710, NGR 6712</td>
<td>Instructional experiences that utilize educational concepts and instructional strategies in a variety of educational settings in nursing. (CI)</td>
</tr>
<tr>
<td>NGR</td>
<td>6952</td>
<td>Writing for Nursing Publication</td>
<td>3</td>
<td>PR: NGR 6800.</td>
<td>Focus is on scientific writing and dissemination of scientific knowledge in advanced nursing practice.</td>
</tr>
<tr>
<td>NGR</td>
<td>6971</td>
<td>Thesis: Master's</td>
<td>1-9</td>
<td>PR: NGR 6800</td>
<td>Restricted to majors; repeatable for credit.</td>
</tr>
<tr>
<td>NGR</td>
<td>7003</td>
<td>Advanced Health Assessment II</td>
<td>3</td>
<td>PR: A grade of B or higher must have been earned in master's level course in pathophysiology, pharmacology, and advanced health assessment.</td>
<td>Mastery of the comprehensive physical examination and health history for individuals across the life span. Focus on systematic review, analysis, and documentation within the context of the studentâ€™s clinical expertise.</td>
</tr>
<tr>
<td>NGR</td>
<td>7061</td>
<td>Radiology for the Advanced Practice Nurse</td>
<td>1</td>
<td></td>
<td>Basics of X-ray, MRI, CT Scan Interpretation and Nuclear Medicine Studies for the Advanced Practice Nurse.</td>
</tr>
<tr>
<td>NGR</td>
<td>7062</td>
<td>ECG Interpretation for the Advanced Practice Nurse</td>
<td>1</td>
<td></td>
<td>Advanced ECG Interpretation, including 12 lead ECG for the Advanced Practice Nurse.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>NGR</td>
<td>7103</td>
<td>Evidence-Based Practice</td>
<td>3</td>
<td>PR: NGR 7774 or NGR 7766 with a B or higher</td>
<td>Provides experience in the evaluation, selection and implementation of evidence based practice standards. Qualitative research methods are used to consider patient and provider values and preferences in patient care and practice/program evaluation.</td>
</tr>
<tr>
<td>NGR</td>
<td>7111</td>
<td>Disciplinary Perspectives in Nursing Science</td>
<td>3</td>
<td></td>
<td>Historic and philosophic issues in science and nursing science. Development of scientific knowledge base and scientific progress in nursing. Emphasis on emerging areas of nursing science.</td>
</tr>
<tr>
<td>NGR</td>
<td>7123</td>
<td>Theory Development in Nursing</td>
<td>3</td>
<td></td>
<td>This course focuses on the process and foundations of theory development and theory construction in nursing science. Elements of scientific underpinnings of knowledge development in the discipline are incorporated. The relationship between theory construction and research and methods to generate theories are explored.</td>
</tr>
<tr>
<td>NGR</td>
<td>7124</td>
<td>Advances in Nursing Science</td>
<td>3</td>
<td></td>
<td>Focus on history and philosophy of science: history and development of nursing's scientific knowledge base and theoretical progress. Emphasis methods of theory building and theory testing through research. Explore progress in middle range theories and areas of high priority for additional research for the discipline.</td>
</tr>
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<tr>
<td>NGR</td>
<td>7125</td>
<td>Model Development for Nursing</td>
<td>3</td>
<td></td>
<td>This course focuses on the methods of model development that guides a program of research. Concept analysis as a method for development of a framework/diagram related to empirical referents is emphasized.</td>
</tr>
<tr>
<td>NGR</td>
<td>7141</td>
<td>Pathophysiology for Advanced Practice II</td>
<td>3</td>
<td>PR: A grade of B or higher must have been earned in masterâ€™s level course in pathophysiology, pharmacology, and advanced health assessment.</td>
<td>Core elements of embryologic, genetic, and environmental factors in disease will be presented as well as aspects of immune phenomenon as related to genetic information and research impetus.</td>
</tr>
<tr>
<td>NGR</td>
<td>7176</td>
<td>Pharmacotherapeutics for Advanced Nursing Practice</td>
<td>3</td>
<td>PR: A grade of B or higher must have been earned in masterâ€™s level course in pathophysiology, pharmacology, and health assessment.</td>
<td>Progressive pharmacotherapeutics for advanced nursing practice. Focus diagnostic reasoning of scientific evidence relating to prescribing and monitoring drugs.</td>
</tr>
<tr>
<td>NGR</td>
<td>7209</td>
<td>Diagnostic Reasoning</td>
<td>3</td>
<td></td>
<td>This course provides practice in analyzing data and making effective clinical decisions. Students will practice diagnostic reasoning using the health history, physical examination, and diagnostic tests to create a prioritized differential diagnosis.</td>
</tr>
<tr>
<td>NGR</td>
<td>7411</td>
<td>Basics for Surgical Assistants</td>
<td>1</td>
<td></td>
<td>Overview and basics for the Advanced Practice Nurse as the surgical assistant.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
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<tr>
<td>NGR</td>
<td>7761</td>
<td>Breast Workshop for the Advanced Practice Nurse</td>
<td>1</td>
<td></td>
<td>Breast assessment techniques and interpretation for Advanced Practice Nurse.</td>
</tr>
<tr>
<td>NGR</td>
<td>7762</td>
<td>Casting and Splinting for the Advanced Practice Nurse</td>
<td>1</td>
<td></td>
<td>Basics of casting and splinting for the Advanced Practice Nurse.</td>
</tr>
<tr>
<td>NGR</td>
<td>7763</td>
<td>Minor Surgical Procedures for the Advanced Practice Nurse</td>
<td>1</td>
<td></td>
<td>Basics of minor surgical procedures for the Advanced Practice Nurse.</td>
</tr>
<tr>
<td>NGR</td>
<td>7764</td>
<td>Neurological Techniques for the Advanced Practice Nurse</td>
<td>1</td>
<td></td>
<td>Basic neurological techniques for the Advanced Practice Nurse.</td>
</tr>
<tr>
<td>NGR</td>
<td>7765</td>
<td>Invasive Medical Procedures for the Advanced Practice Nurse</td>
<td>1</td>
<td></td>
<td>Basics of invasive medical procedures for the Advanced Practice Nurse.</td>
</tr>
<tr>
<td>NGR</td>
<td>7766</td>
<td>Health Systems Leadership and Interprofessional Practice</td>
<td>3</td>
<td></td>
<td>Knowledge and skills required for leading interprofessional teams to improve health care delivery and health outcomes with emphasis on systems thinking, communication, health system fluency, and management of ethical dilemmas.</td>
</tr>
<tr>
<td>NGR</td>
<td>7767</td>
<td>Practice Management, Quality Improvement, and Patient Safety</td>
<td>3</td>
<td></td>
<td>This course provides knowledge and skills required for successful advanced nursing and health care practice management at the organizational or systems level and for leading quality improvement and patient safety initiatives.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>NGR</td>
<td>7810</td>
<td>Design, Measurement, and Analysis in Nursing Research I</td>
<td>3</td>
<td></td>
<td>This course focuses on design of studies in nursing research; including review of strengths &amp; limitations of study designs relating to different types of research questions in nursing science &amp; principles of hypothesis testing &amp; empirical inference.</td>
</tr>
<tr>
<td>NGR</td>
<td>7811</td>
<td>Concepts in Nursing Practice</td>
<td>3</td>
<td></td>
<td>Emphasis on analysis of phenomena (concepts) that impact on nursing practice. Phenomena are selected and analyzed from theoretical and research perspectives.</td>
</tr>
<tr>
<td>NGR</td>
<td>7812</td>
<td>Design, Measurement, and Analysis in Nursing Research II</td>
<td>3</td>
<td>PR: NGR 7810</td>
<td>This course focuses on concepts to design &amp; carry out research in nursing science; including methods to minimize bias &amp; increase study precision, classification &amp; interpretation of research data, &amp; use of probability to estimate health-related quantities.</td>
</tr>
<tr>
<td>NGR</td>
<td>7813</td>
<td>Design, Measurement, and Analysis in Nursing Research III</td>
<td>3</td>
<td>PR: NGR 7812</td>
<td>This course focuses on knowledge and mastery of a wide range of analytical principles and methods that are routinely used and critical for designing and conducting research studies, including disseminating research results in nursing science.</td>
</tr>
<tr>
<td>NGR</td>
<td>7814</td>
<td>Design, Measurement, and Analysis in Nursing Research IV</td>
<td>3</td>
<td>PR: NGR 7813</td>
<td>This course focuses on obtaining working knowledge and proficiency in a range of advanced analytical principles and methods that may be used in the design and analysis of nursing science research.</td>
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<tr>
<td>NGR</td>
<td>7815</td>
<td>Qualitative Research Methods in Nursing</td>
<td>3</td>
<td>PR: NGR 6800.</td>
<td>An overview of qualitative research methods in nursing, identification of problems appropriate for qualitative research methods, and application of appropriate qualitative research methods to a researchable problem.</td>
</tr>
<tr>
<td>NGR</td>
<td>7816</td>
<td>Research Designs and Methods in Nursing</td>
<td>3</td>
<td></td>
<td>Focus on designs used in nursing research to test or develop theoretical models, or concepts, including clinical or outcome variables, or hypotheses. Emphasis on quantitative designs.</td>
</tr>
<tr>
<td>NGR</td>
<td>7823</td>
<td>Psychometrics and Measurement for Nursing Research</td>
<td>3</td>
<td>PR: NGR 7841.</td>
<td>Explores issues in developing, testing, and applying measurement theory in research. Analysis of psychometric properties of instruments and methods appropriate to theoretical and conceptual demands of science.</td>
</tr>
<tr>
<td>NGR</td>
<td>7837</td>
<td>Innovative Programs in Biobehavioral Research</td>
<td>3</td>
<td></td>
<td>This course provides foundations in theoretical models, critical analyses of research literature, and design and measurement issues in biobehavioral research.</td>
</tr>
<tr>
<td>NGR</td>
<td>7838</td>
<td>Innovative Programs in Symptom Management Research</td>
<td>3</td>
<td></td>
<td>This course produces the foundation to the study of nursing science. The specific purpose of this course is to utilize model program in symptom science as exemplars in the development in the scientific basis for nursing practice.</td>
</tr>
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<tr>
<td>NGR</td>
<td>7841</td>
<td>Statistical Methods in Nursing Research I</td>
<td>3</td>
<td>PR: NGR 6800 or</td>
<td>Standard parametric and nonparametric statistical methods in nursing research; role of assumptions and theory in selecting the appropriate statistic for testing hypotheses/research questions. Emphasis on analysis of variance and simple linear regression. Statistical software applications are integrated into the course.</td>
</tr>
<tr>
<td>NGR</td>
<td>7842</td>
<td>Statistical Methods in Nursing Research II</td>
<td>3</td>
<td>PR: NGR 7841.</td>
<td>Focus on advanced multivariate methods in nursing research: regression (linear, multiple, logistic) and multiple analysis of variance (MANOVA) and covariance software applications are integrated into the course.</td>
</tr>
<tr>
<td>NGR</td>
<td>7843</td>
<td>Statistical Methods in Nursing Research III</td>
<td>3</td>
<td>PR: NGR 7842.</td>
<td>Focus on advanced multivariate statistical methods in nursing research; emphasizing multiple regression and correlational analysis.</td>
</tr>
<tr>
<td>NGR</td>
<td>7848</td>
<td>Fundamentals of Statistics for Clinicians</td>
<td>3</td>
<td></td>
<td>An overview of the statistical methods typically used in clinical research including the language and logic of these methods. Fundamental statistical theory and common nursing applications are covered.</td>
</tr>
<tr>
<td>NGR</td>
<td>7874</td>
<td>Informatics and Patient Care Technology</td>
<td>3</td>
<td></td>
<td>Provides the knowledge and skills needed to prepare nurse leaders to use information systems and patient care technology to implement quality improvement initiatives and support practice and administrative decision making.</td>
</tr>
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<tr>
<td>NGR</td>
<td>7881</td>
<td>Ethics in Research and Practice</td>
<td>3</td>
<td></td>
<td>Explores issues and research in esthetics (carative factors-art of healing) and ethics in advanced practice. Focuses on use of alternative approaches to healing and application of ethical decision making models to complex health care issues.</td>
</tr>
<tr>
<td>NGR</td>
<td>7892</td>
<td>Health Care Policy &amp; Clinical Prevention for Improv Pop Health</td>
<td>3</td>
<td>PR: NGR 7841 and NGR 7842</td>
<td>This course provides knowledge and skills required for engagement in the analysis, development, and implementation of health policy and for application of health promotion and disease prevention interventions to improve population health.</td>
</tr>
<tr>
<td>NGR</td>
<td>7905</td>
<td>Directed Readings</td>
<td>1-6</td>
<td></td>
<td>Specialized individual participation in research activity, including but not limited to pilot studies and other investigative activities.</td>
</tr>
<tr>
<td>NGR</td>
<td>7915</td>
<td>Advanced Directed Research in Nursing</td>
<td>1-6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NGR</td>
<td>7916</td>
<td>Grant Writing for Translational Science</td>
<td>3</td>
<td></td>
<td>This course prepares individuals to develop a grant application in their area of research. The critical elements of the NIH grant application including the significance, innovation and approach are presented along with the development processes.</td>
</tr>
<tr>
<td>NGR</td>
<td>7930</td>
<td>Scientific Inquiry Forum</td>
<td>1</td>
<td></td>
<td>This bi-weekly seminar provides students with an opportunity to develop ideas and collaborative relationships to develop their own work innovatively that leads to advances in nursing science.</td>
</tr>
<tr>
<td>NGR</td>
<td>7932</td>
<td>Special Topics</td>
<td>1-4</td>
<td></td>
<td>Seminars for the analysis and discussion of selected issues in nursing of topical concern to student and faculty.</td>
</tr>
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<tr>
<td>NGR</td>
<td>7941</td>
<td>Nursing Research Pro Seminar</td>
<td>1-6</td>
<td>PR: Nursing Knowledge Systems and Issues in Knowledge Dissemination.</td>
<td>The Pro Seminar provides experiential opportunities for students to test innovative methods and technologies in a variety of educational or clinical settings. Seminars designed to critique current research in the area.</td>
</tr>
<tr>
<td>NGR</td>
<td>7942</td>
<td>Educational Leadership Residency</td>
<td>1-9</td>
<td></td>
<td>This residency provides the nurse educator with opportunities to acquire a distinct specialty of advanced nursing practice leadership. Experiences will be developed to assist in development of the dnp essentials and specialty competencies.</td>
</tr>
<tr>
<td>NGR</td>
<td>7945</td>
<td>Doctor of Nursing Practice Practicum</td>
<td>1-7</td>
<td></td>
<td>The Doctor of Nursing Practice practicum experience provides students with advanced knowledge and expertise in a focused area of advanced nursing practice within the student’s established population focus and/or an APRN specialty.</td>
</tr>
<tr>
<td>NGR</td>
<td>7951</td>
<td>Scientific Writing - Writing for Publication</td>
<td>3</td>
<td></td>
<td>This course focuses on the development of a scholarly empirical manuscript or technical report of publishable quality.</td>
</tr>
<tr>
<td>NGR</td>
<td>7954</td>
<td>Communicating Nursing Science</td>
<td>3</td>
<td></td>
<td>Prepares individuals to attain skills in communicating nursing science through written and other media. Weekly peer review exercises emphasize writing, editing, and revising scientific evidence into understandable publishable manuscripts.</td>
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<tr>
<td>NGR</td>
<td>7974</td>
<td>Doctor of Nursing Practice Project</td>
<td>1-3</td>
<td></td>
<td>This course provides for synthesis and application of knowledge and skills acquired in previous courses through the development, implementation, and evaluation of a practice improvement project.</td>
</tr>
<tr>
<td>NGR</td>
<td>7980</td>
<td>Dissertation: Doctoral</td>
<td>2-12</td>
<td></td>
<td>Directed research and writing of dissertation topic appropriate to the discipline. Restricted to majors; repeatable for credit.</td>
</tr>
<tr>
<td>NGR</td>
<td>7981</td>
<td>Dissertation Proposal Writing</td>
<td>2</td>
<td></td>
<td>Selected topics pertaining to the dissertation proposal writing process, dissertation research planning and funding, and proposal defense. PR: CI or Ph.D. GS; completion of majority of required course work.</td>
</tr>
<tr>
<td>OCB</td>
<td>6050</td>
<td>Biological Oceanography</td>
<td>3</td>
<td></td>
<td>Study of life in the oceans, its rates and processes, and its interaction with the physical and chemical environment. Lec.</td>
</tr>
<tr>
<td>OCB</td>
<td>6567</td>
<td>Phytoplankton Ecology</td>
<td>3</td>
<td>PR: OCB 6050</td>
<td>An introduction to the physiology and ecology of marine phytoplankton. Emphasis will be on those variables and interactions that regulate photosynthesis, production, nutrient kinetics and regeneration, growth, spatial distribution, losses, and succession.</td>
</tr>
<tr>
<td>OCB</td>
<td>6671L</td>
<td>Methods In Biological Oceanography</td>
<td>1</td>
<td></td>
<td>To acquaint students with field and laboratory equipment and techniques currently used in biological oceanography. Emphasis will be on field problems, especially those requiring research at sea.</td>
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<tr>
<td>OCC</td>
<td>6050</td>
<td>Chemical Oceanography</td>
<td>3</td>
<td>PR: CHM 2046</td>
<td>The ocean as a chemical system, including composition, physical-chemical aspects, role of nutrients, trace metals, interaction between bottom and overlying water, organic matter, and stable and radioactive isotopes. Lec</td>
</tr>
<tr>
<td>OCC</td>
<td>6057</td>
<td>Marine Pollution</td>
<td>3</td>
<td>PR: OCC 6050</td>
<td>Marine pollutant sources, reservoirs, transport processes, and dynamics. Topics include heavy metals, chlorinated hydrocarbons, radioactivity, petroleum, pathogens, and thermal pollution including functional and physiological responses of marine organisms.</td>
</tr>
<tr>
<td>OCC</td>
<td>6057L</td>
<td>Methods in Chemical Oceanography</td>
<td>1</td>
<td>PR: OCC 6050</td>
<td>An intensive study of the use and limitations of field and laboratory equipment that is a standard part of chemical oceanographic research into the behavior of dissolved and particulate constituents in seawater.</td>
</tr>
<tr>
<td>OCC</td>
<td>6111C</td>
<td>Applications of Gas Chromatography and Mass Spectrometry in Marine Science</td>
<td>3</td>
<td>PR: OCC 6050</td>
<td>Analytical techniques of high resolution gas chromatography and combined gas chromatography-mass spectrometry are applied to problems in Marine Science. Theoretical aspects of the techniques are covered in lectures, while detailed experimental procedures are taught and practiced in the laboratory.</td>
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<tr>
<td>OCC</td>
<td>6216</td>
<td>Marine Organic Chemistry</td>
<td>3</td>
<td>PR: OCC 6050</td>
<td>Distribution and biogeochemical cycling of organic matter in the oceans. Topics include carbohydrates, proteins, lipids, humics, pheromones, interaction with trace metals, isotopic fractionation, microbial alterations, and biochemical tracers.</td>
</tr>
<tr>
<td>OCE</td>
<td>6048</td>
<td>Scientist in the Classroom</td>
<td>1-4</td>
<td></td>
<td>Provides students with a theoretical framework, practical knowledge, and skills required to successfully design, implement, and evaluate effective science teaching and learning.</td>
</tr>
<tr>
<td>OCE</td>
<td>6085</td>
<td>Ocean Policy</td>
<td>2</td>
<td></td>
<td>Learn about the community of people involved in marine affairs; the use of the sea and coast; current technology and the major policy issues related to the technology trends, and identify multiple sources of information available to students.</td>
</tr>
<tr>
<td>OCE</td>
<td>6609</td>
<td>Data Analysis Methods</td>
<td>3</td>
<td></td>
<td>This course introduces students to common statistical techniques like linear regression, Fourier series, low-pass filtering, optimal interpolation, and principal component analysis that are commonly used to analyze time-series and mapped data.</td>
</tr>
<tr>
<td>OCE</td>
<td>6609L</td>
<td>Data Analysis Programming</td>
<td>1</td>
<td>CR: OCE 6609</td>
<td>This optional lab to the Data Analysis Methods class is designed for students with no background in a programming language. The lab will introduce students to the basics of programming necessary for the main class.</td>
</tr>
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<tr>
<td>OCE</td>
<td>6908</td>
<td>Independent Study</td>
<td>1-10</td>
<td></td>
<td>Independent study in which students must have a contract with an instructor.</td>
</tr>
<tr>
<td>OCE</td>
<td>6934</td>
<td>Selected Topics in Oceanography</td>
<td>1-3</td>
<td></td>
<td>Special topics in Biological, Chemical, Geological, and Physical Oceanography.</td>
</tr>
<tr>
<td>OCE</td>
<td>6940C</td>
<td>Experiential Learning in Marine Science</td>
<td>1-4</td>
<td></td>
<td>Demonstrates marine science teaching protocols via the examination of marine science concepts and inquiry-based learning strategies through team building, lab-based research experiences, and field explorations to local marine environments.</td>
</tr>
<tr>
<td>OCE</td>
<td>6949C</td>
<td>Developing and Teaching a STEM Course</td>
<td>1-4</td>
<td></td>
<td>Designed to enhance participants’ science teaching and science communication skills. The course will provide students with the opportunity to develop the modules necessary to teach their first formal STEM Course.</td>
</tr>
<tr>
<td>OCE</td>
<td>6950</td>
<td>Teaching the Broader Impacts of Ocean Sciences</td>
<td>1-4</td>
<td></td>
<td>This experiential learning course is designed to teach graduate students how to prepare research grants, develop lab, field-based, and in classroom lesson modules to effectively translate science concepts to their students.</td>
</tr>
<tr>
<td>OCE</td>
<td>6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OCE</td>
<td>6972</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OCE</td>
<td>7910</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OCE</td>
<td>7980</td>
<td>Dissertation: Doctoral</td>
<td>2-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OCG</td>
<td>6051</td>
<td>Geological Oceanography</td>
<td>3</td>
<td></td>
<td>Marine geology including plate tectonics; coastal, shelf and pelagic sedimentation; geochemical cycling; and sedimentary history of the ocean basins.</td>
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<tr>
<td>OCG</td>
<td>6080</td>
<td>Plate Tectonics</td>
<td>3</td>
<td></td>
<td>An overview of the Plate Tectonic theory, including such topics as: geometry of Plate Tectonics, tectonics on a sphere, past plate motions, seismicity, oceanic gravity, geochronology, heat flow, oceanic lithosphere, ridges, transforms, trenches, oceanic islands, and continental lithosphere.</td>
</tr>
<tr>
<td>OCG</td>
<td>6656C</td>
<td>Marine Micropaleontology</td>
<td>3</td>
<td>PR: OCG 6051</td>
<td>Introduction to the microscopic marine fauna and flora found in the fossil sedimentary record. Emphasis is placed on the ecology, paleoecology, paleontology, and biostratigraphic record of calcareous and siliceous microfossils.</td>
</tr>
<tr>
<td>OCG</td>
<td>6664</td>
<td>Paleoceanography</td>
<td>3</td>
<td>PR: OCB 6050, OCC 6050, OCG 6051, and OCP 6050</td>
<td>The study of the development of the ocean system through geologic history, including tectonic framework, sea level history, paleoclimatology, paleocirculation within the ocean basins, and the evolution of marine biota.</td>
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<tr>
<td>OCG</td>
<td>6668</td>
<td>Evolution and Ecology of Reefs</td>
<td>3</td>
<td>PR: OCB 6050 and OCG 6051</td>
<td>Advanced course in ecology and evolution of reef communities. Topics include environmental controls on reef development, basic components of modern reef communities, and how those components have changed through geologic time.</td>
</tr>
<tr>
<td>OCP</td>
<td>6050</td>
<td>Physical Oceanography</td>
<td>3</td>
<td>PR: Diff/int. calculus, General Physics</td>
<td>The world ocean including its morphology, physical properties, currents, waves, tides, heat and water budgets, and related topics. Lec.</td>
</tr>
<tr>
<td>ORI</td>
<td>5930</td>
<td>Topics in Performance Genres</td>
<td>3</td>
<td></td>
<td>Variable topics course.</td>
</tr>
<tr>
<td>ORI</td>
<td>6018</td>
<td>Performance Art</td>
<td>3</td>
<td></td>
<td>Explores historical, theoretical, and critical perspectives on performance art in the US.</td>
</tr>
<tr>
<td>ORI</td>
<td>6020</td>
<td>Performing Social Resistance</td>
<td>3</td>
<td></td>
<td>Explores performance as a site of and means for creating social resistance and change.</td>
</tr>
<tr>
<td>ORI</td>
<td>6107</td>
<td>Texts in Performance</td>
<td>3</td>
<td></td>
<td>Explores contemporary literary texts through dramatic analysis, live performance, adaptation and staging strategies.</td>
</tr>
<tr>
<td>ORI</td>
<td>6250</td>
<td>Performance and Technology</td>
<td>3</td>
<td></td>
<td>Explores the relationship between live and mediated performance, the use of media technologies in performance, and the place of live performance in a Western mediated society.</td>
</tr>
<tr>
<td>ORI</td>
<td>6456</td>
<td>Performance Theory</td>
<td>3</td>
<td></td>
<td>A survey of modern and contemporary approaches to performance as constitutive of identity, verbal art, communication, and culture.</td>
</tr>
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<tr>
<td>ORI</td>
<td>6506</td>
<td>Performance Criticism</td>
<td>3</td>
<td></td>
<td>Focuses on the development and honing of critical skills employed in response to performance. These skills can be applied to a multitude of acts and texts.</td>
</tr>
<tr>
<td>ORI</td>
<td>7930</td>
<td>Seminar in Performance Studies</td>
<td>3</td>
<td></td>
<td>Variable topics course.</td>
</tr>
<tr>
<td>PAD</td>
<td>5035</td>
<td>Issues in Public Administration and Public Policy</td>
<td>3</td>
<td></td>
<td>Selected issues and topics in Public Administration and Public Policy.</td>
</tr>
<tr>
<td>PAD</td>
<td>5044</td>
<td>Environment of Public Administration</td>
<td>3</td>
<td></td>
<td>Examination of the legal, political, and ethical environment in which public managers work.</td>
</tr>
<tr>
<td>PAD</td>
<td>5605</td>
<td>Administrative Law and Regulation</td>
<td>3</td>
<td></td>
<td>An examination of the constitutional and statutory base and limitations of the administrative process, administrative adjudication, rule-making, and the judicial review of such actions. An examination of the Constitutional and statutory base and limitations of the administrative process, administrative adjudication, rule-making, and the judicial review of such actions. Attention is also directed to regulatory commissions, their functions, powers, management and relationship with other branches of government.</td>
</tr>
<tr>
<td>PAD</td>
<td>5700</td>
<td>Research Methods in Public Administration</td>
<td>3</td>
<td></td>
<td>Research design; skills in public agencies. Must be prepared to demonstrate proficiency in EXCEL, Access, and other relevant software programs.</td>
</tr>
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<tr>
<td>PAD</td>
<td>5807</td>
<td>Urban and Local Government Administration</td>
<td>3</td>
<td></td>
<td>Analysis of the role of the administrator at the municipal level, the division of functions, policy formation, alternative governmental structures, effects on the administrative process.</td>
</tr>
<tr>
<td>PAD</td>
<td>5836</td>
<td>Comparative Public Administration</td>
<td>3</td>
<td></td>
<td>How organizations and managers perform within a particular environment, potential impact of innovation, and how service is accomplished in a variety of socio-economic environments.</td>
</tr>
<tr>
<td>PAD</td>
<td>6041</td>
<td>Ethics and Public Service</td>
<td>3</td>
<td></td>
<td>The purpose of this course is to provide students with an understanding of the ethical dimensions of public service, with particular attention focused on the role, duties and responsibilities of the public administrator. Additionally, the course seeks to help students develop awareness, skill, and value framework to act ethically in their public service and management roles.</td>
</tr>
<tr>
<td>PAD</td>
<td>6056</td>
<td>Practice of Public Management</td>
<td>3</td>
<td></td>
<td>An integrative course applying the skills, knowledge, and values taught in the core curriculum and applied to public issues or problems.</td>
</tr>
<tr>
<td>PAD</td>
<td>6060</td>
<td>Public Administration Theory</td>
<td>3</td>
<td></td>
<td>Examination of major theoretical and practical developments in public administration with focus on organization theory and current research trends in the field.</td>
</tr>
<tr>
<td>PAD</td>
<td>6105</td>
<td>Public Organizations and Change</td>
<td>3</td>
<td></td>
<td>In-depth coverage of organizational theory and focus with special attention to issues and problems of organizational change and reform in the public sector.</td>
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<tr>
<td>PAD</td>
<td>6134</td>
<td>Project Management</td>
<td>3</td>
<td></td>
<td>Course is designed to introduce students to the concepts, theories, principles, and practices in project management, as well as to the use of project management software.</td>
</tr>
<tr>
<td>PAD</td>
<td>6146</td>
<td>Nonprofit Management and Leadership</td>
<td>3</td>
<td></td>
<td>Role and importance of third-sector organizations in American society; unique problems of nonprofit administration, role of leadership in nonprofit organizations.</td>
</tr>
<tr>
<td>PAD</td>
<td>6207</td>
<td>Public Financial Administration</td>
<td>3</td>
<td></td>
<td>Examination of the fiscal organization of federal, state, and local governments. Current problems in budgeting, revenue, and indebtedness are considered.</td>
</tr>
<tr>
<td>PAD</td>
<td>6208</td>
<td>Financial Oversight for Nonprofit Organizations</td>
<td>3</td>
<td></td>
<td>Introduce the non-financial manger to financial information used to make decisions for nonprofit organizations. Students will learn how to use the principles of financial management to make operating and capital budgeting decisions and to analyze long-term financial options.</td>
</tr>
<tr>
<td>PAD</td>
<td>6222</td>
<td>Issues in Florida--Budgeting and Finance</td>
<td>3</td>
<td></td>
<td>Selected issues in public financial management and budgeting related to state agencies or local governments in Florida.</td>
</tr>
<tr>
<td>PAD</td>
<td>6227</td>
<td>Public Budgeting</td>
<td>3</td>
<td></td>
<td>Development, authorization, execution, and assessment of government budgets. Topics include current trends and issues in budget theory and practice, as well as reform efforts.</td>
</tr>
<tr>
<td>PAD</td>
<td>6231</td>
<td>Resource Dev.: Fundraising and Grantsmanship</td>
<td>3</td>
<td></td>
<td>Administration and management of the fundraising process; principles, skills, methods, and techniques. Administration and management of the grantsmanship process.</td>
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<tr>
<td>PAD</td>
<td>6275</td>
<td>Political Economy for Public Managers</td>
<td>3</td>
<td></td>
<td>Introduces students to the fundamental concepts, theories, principles and tools used in public sector managerial economics. Students will be using economic concepts and applying economic tools and techniques to address common issues faced by public managers.</td>
</tr>
<tr>
<td>PAD</td>
<td>6307</td>
<td>Policy Analysis, Implementation, and Program Evaluation</td>
<td>3</td>
<td></td>
<td>An introduction to analyzing public problems and program development. Emphasis is placed on the methodological tools for analyzing public problems, and criteria to assess the value of programs in addressing public problems.</td>
</tr>
<tr>
<td>PAD</td>
<td>6335</td>
<td>Strategic Planning and Social Innovation for Public and Nonprofit Organizations</td>
<td>3</td>
<td></td>
<td>Addresses strategic planning and social innovation. Emphasizes methods of strategic planning and the principles of social innovation as practiced by the public and nonprofits sectors. Contemporary research and literature is discussed.</td>
</tr>
<tr>
<td>PAD</td>
<td>6336</td>
<td>Community Development Programs and Strategies</td>
<td>3</td>
<td></td>
<td>Discusses community development principles and practices in historical and contemporary perspectives, federal, state and local initiatives, physical, social, and economic approaches to community development.</td>
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<tr>
<td>PAD</td>
<td>6338</td>
<td>Urban Land Use and Policy Administration</td>
<td>3</td>
<td></td>
<td>Focuses on the political, economic, and legal environment of urban land development. Examines public policies affecting the spatial distribution of urban land activities, overt and covert rationales of such policies; zoning; subdivision regulations; building codes, and other urban land use control measures.</td>
</tr>
<tr>
<td>PAD</td>
<td>6339</td>
<td>Housing and Public Policy</td>
<td>3</td>
<td></td>
<td>Explores housing policy in the broader context of public policy. Examination of housing market theories and the relationships between housing and city and regional planning.</td>
</tr>
<tr>
<td>PAD</td>
<td>6355</td>
<td>Urban Growth Management</td>
<td>3</td>
<td></td>
<td>Examines the political economy of controlling the growth and development of human settlements, regulatory and non-regulatory techniques of growth management, and the evolution of growth management practices in the U.S.</td>
</tr>
<tr>
<td>PAD</td>
<td>6417</td>
<td>Human Resources Management</td>
<td>3</td>
<td></td>
<td>A study of the major functions in public personnel, including recruiting, selection, testing, training, and development, and employee and human relations in the public service.</td>
</tr>
<tr>
<td>PAD</td>
<td>6427</td>
<td>Public Sector Labor Relations</td>
<td>3</td>
<td></td>
<td>Introduction to the historical, legal, political and procedural aspects of collective bargaining and labor relations in the public sector organizations. Addresses methods for resolving conflicts and grievances.</td>
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<tr>
<td>PAD</td>
<td>6703</td>
<td>Quantitative Aids for Public Managers</td>
<td>3</td>
<td>PR: PAD 5700</td>
<td>Techniques, models, to analyze managerial/policy problems.</td>
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<td>Descriptive, inferential, associational statistics; evaluate/make</td>
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<td>recommendations/alternative policy/decisions.</td>
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<tr>
<td>PAD</td>
<td>6710</td>
<td>Public Information Management</td>
<td>3</td>
<td></td>
<td>Intro to policy issues related to</td>
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<td>managing public info. by non-technical public &amp; nonprofit managers.  Non-</td>
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<td>tech. manager’s role with strategic tech. planning, process re-engineering,</td>
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<td>appl. dev., data admin., procurement, security, public access, Internet.</td>
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<tr>
<td>PAD</td>
<td>6907</td>
<td>Independent Study</td>
<td>1-3</td>
<td></td>
<td>A flexible format for conceptual or theoretical studies in public</td>
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<td>administration.</td>
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<tr>
<td>PAD</td>
<td>6909</td>
<td>Problem Report</td>
<td>3</td>
<td></td>
<td>Analysis of a significant administrative or policy problem facing a</td>
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<td>public agency or manager.</td>
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<tr>
<td>PAD</td>
<td>6915</td>
<td>Directed Research</td>
<td>1-3</td>
<td></td>
<td>A flexible format for structured field research in Public Administration.</td>
</tr>
<tr>
<td>PAD</td>
<td>6934</td>
<td>Selected Topics in Public Administration</td>
<td>1-3</td>
<td></td>
<td>A flexible format to offer specialized courses not available within the</td>
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<td></td>
<td></td>
<td>regular curriculum.</td>
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<tr>
<td>PAD</td>
<td>6946</td>
<td>Internship in Public Administration</td>
<td>2-6</td>
<td></td>
<td>Structured learning and work experience in a public agency or non-profit</td>
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<td>organization.</td>
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<tr>
<td>PCB</td>
<td>5256</td>
<td>Developmental Mechanisms</td>
<td>3</td>
<td>PR: ZOO 4695.</td>
<td>Topics in modern developmental biology to be covered in lecture and</td>
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<td>through readings so as to gain a detailed understanding of cellular and</td>
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<td>molecular mechanisms of differentiation and pattern formation in various</td>
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<td>eukaryotic species for majors/non-majors.</td>
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<tr>
<td>PCB</td>
<td>5307</td>
<td>Limnology</td>
<td>3</td>
<td>CPR: CHM 2211.; PR: PCB 3043 and CHM 2210 and MAC 1105 or higher-level MAC course or STA 2023 and PHY 2053.</td>
<td>An introduction to the physical, chemical, and biological nature of fresh-water environments. Lecture only.</td>
</tr>
<tr>
<td>PCB</td>
<td>5307L</td>
<td>Limnology Laboratory</td>
<td>1</td>
<td>CPR: PCB 5307.</td>
<td>Laboratory portion of Limnology. Laboratory and field experience in the area of aquatic ecology.</td>
</tr>
<tr>
<td>PCB</td>
<td>5616</td>
<td>Molecular Phylogenetics</td>
<td>3</td>
<td>PR: PCB 3063.</td>
<td>Provides a theoretical (lecture) and practical (computer lab) framework to allow students to carry out phylogenetic analysis using molecular data. Majors or nonmajors.</td>
</tr>
<tr>
<td>PCB</td>
<td>6093</td>
<td>Advances in Scientific Review</td>
<td>2</td>
<td></td>
<td>Introduce research graduate students to the review and generation of primary literature. It serves to prepare them for preparing their data for publication, and presenting it at national and international meetings.</td>
</tr>
<tr>
<td>PCB</td>
<td>6107</td>
<td>Advanced Cell Biology</td>
<td>4</td>
<td></td>
<td>Detailed examination of the structure, function and molecular biology of eukaryotic cells.</td>
</tr>
<tr>
<td>PCB</td>
<td>6205</td>
<td>Cancer Biology III - Cancer Genomics and Drug Discovery</td>
<td>3</td>
<td></td>
<td>An exploration of the normal and abnormal cancer biological processes as they pertain to regulation of the genome and of novel cancer genediscovery approaches, as well as methodological and conceptual approaches to oncologic drug design and development.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>PCB</td>
<td>6230</td>
<td>Cancer Biology I - Basics of Molecular Oncology</td>
<td>3</td>
<td></td>
<td>An introduction to the basics of molecular oncology. Topics will include cytoplasmic and nuclear oncogenes, cell cycle control, apoptosis, tumor suppressor genes and cancer drug discovery.</td>
</tr>
<tr>
<td>PCB</td>
<td>6231</td>
<td>Cancer Biology II - Immunology And Applied Biology</td>
<td>4</td>
<td></td>
<td>An exploration of the normal and abnormal immune development and function as well as the basic and applied aspects of tumor immunology.</td>
</tr>
<tr>
<td>PCB</td>
<td>6236</td>
<td>Advanced Immunology</td>
<td>4</td>
<td></td>
<td>Discussion of the basic immune reaction, nature of antigenicity; basic immunological techniques and their use in biological research and the medical sciences. Lec/Lab.</td>
</tr>
<tr>
<td>PCB</td>
<td>6275</td>
<td>Cell Signaling</td>
<td>3</td>
<td></td>
<td>A detailed examination of the cellular, biochemical, and molecular mechanism involved in signal transduction in various eukaryotic organism with emphasis on reviewing recent experimental evidence.</td>
</tr>
<tr>
<td>PCB</td>
<td>6365C</td>
<td>Physiological Ecology</td>
<td>4</td>
<td></td>
<td>Effect of environmental factors on animal function at the cellular and organ system level with emphasis on control and mechanism.</td>
</tr>
<tr>
<td>PCB</td>
<td>6426C</td>
<td>Population Biology</td>
<td>3</td>
<td></td>
<td>Introduction to population dynamics with emphasis on the ecological components of growth, competition, and perdition.</td>
</tr>
<tr>
<td>PCB</td>
<td>6447</td>
<td>Community Ecology</td>
<td>3</td>
<td></td>
<td>In-depth examination of community ecology with emphasis on diversity, stability, trophic structure and the mechanisms which affect how communities are structured.</td>
</tr>
<tr>
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<tr>
<td>PCB</td>
<td>6455</td>
<td>Statistical Ecology</td>
<td>3</td>
<td></td>
<td>Introduction to exploratory data analysis in ecology. Techniques for dealing with encountered data are emphasized.</td>
</tr>
<tr>
<td>PCB</td>
<td>6456C</td>
<td>Biometry</td>
<td>4</td>
<td>PR: MAC 2241 and MAC 2242</td>
<td>An introduction to statistical procedures for research in biological sciences. Experimental design, analysis of data, and presentation of results are emphasized. Lec./Dis.</td>
</tr>
<tr>
<td>PCB</td>
<td>6458</td>
<td>Biometry II</td>
<td>3</td>
<td>PR: PCB 6456C.</td>
<td>Fundamental concepts in the design of experiments for biological research. Factorial experiments, multiple regression analyses, analyses of covariance and SAS computer programs are emphasized. Lec/Lab.</td>
</tr>
<tr>
<td>PCB</td>
<td>6525</td>
<td>Molecular Genetics</td>
<td>3</td>
<td>PR: PCB 3063.</td>
<td>Detailed examination of DNA, RNA and protein synthesis; the effects of mutations on proteins and cellular control.</td>
</tr>
<tr>
<td>PCB</td>
<td>6526</td>
<td>Cancer Biology IV - Concepts and Techniques in Cancer Genetics</td>
<td>3</td>
<td></td>
<td>This course will explore major concepts in Cancer Genetics, how they are derived from experimental results and how they can be applied to outstanding problems in Cancer Biology.</td>
</tr>
<tr>
<td>PCB</td>
<td>6910</td>
<td>Cancer Biology Lab Rotations</td>
<td>1-3</td>
<td></td>
<td>This course is designed to help the students choose a compatible Major Professor and allow students to develop necessary technical skills. It is graded on a satisfactory (pass) or unsatisfactory (fail) basis.</td>
</tr>
<tr>
<td>PCB</td>
<td>6920</td>
<td>Advances in Cell and Molecular Biology</td>
<td>1</td>
<td>PR: PCB 6107</td>
<td>A journal club in which graduate students present and discuss research publications from the preceding twelve months in the fields of molecular and cellular biology.</td>
</tr>
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<td>SUB</td>
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<tr>
<td>PCB</td>
<td>6930</td>
<td>Current Topics in Cancer Biology</td>
<td>2</td>
<td></td>
<td>Renowned speakers from outside the USF Community will give weekly seminars on topics in oncology. Participants will meet weekly with the speakers and discuss the current state of the art.</td>
</tr>
<tr>
<td>PCB</td>
<td>6931</td>
<td>Advances in Cancer Biology Research</td>
<td>2</td>
<td></td>
<td>Advances in Cancer Research “Two participants will read and orally present current breaking research. They will gain experience in critically evaluating research reports and receive critique on presentation skills.</td>
</tr>
<tr>
<td>PCB</td>
<td>6932</td>
<td>Bioethics for Cancer Researchers</td>
<td>1</td>
<td></td>
<td>Explore the key issues of responsible conduct of research facing the cancer biologist. The course will use interactive open discussion sessions focused on individual ethics topics in cancer research.</td>
</tr>
<tr>
<td>PCB</td>
<td>6933</td>
<td>Seminar In Ecology</td>
<td>1-3</td>
<td></td>
<td>A detailed examination of topics in ecology pertaining to individual organisms, populations, communities and/or ecosystems.</td>
</tr>
<tr>
<td>PCB</td>
<td>6956</td>
<td>Scientific Grant Writing</td>
<td>3</td>
<td></td>
<td>Teach research graduate students the art of scientific grant writing. It also serves to prepare them for their written qualifying exam. It is only for research PhD students within the department of CMMB.</td>
</tr>
<tr>
<td>PET</td>
<td>6003</td>
<td>Theories &amp; Models of Health &amp; Physical Activity</td>
<td>3</td>
<td></td>
<td>This course covers the origin and application of theory in the general health and physical activity domains. Emphasis will be placed on learning the theoretical constructs and applied uses of classic and contemporary theories in health behaviors.</td>
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<td>SUB</td>
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<tr>
<td>PET</td>
<td>6085</td>
<td>Body Composition: Assessment and Management</td>
<td>3</td>
<td></td>
<td>This course covers advanced principles of body composition assessment and management. The role of physical activity and medical intervention will be considered.</td>
</tr>
<tr>
<td>PET</td>
<td>6086</td>
<td>Lifespan Fitness</td>
<td>3</td>
<td></td>
<td>The course is designed to assist students in developing an understanding of how fitness habits and recommendations change over a lifetime.</td>
</tr>
<tr>
<td>PET</td>
<td>6098</td>
<td>Topics in Strength and Conditioning</td>
<td>3</td>
<td></td>
<td>Covers selected topics in strength and conditioning. Some of the topics to be covered include: program design, periodization, core stabilization training, biochemical monitoring, overtraining, and strength training.</td>
</tr>
<tr>
<td>PET</td>
<td>6216</td>
<td>Sport Psychology</td>
<td>3</td>
<td></td>
<td>This course is designed to provide students with an understanding of the theoretical structure that underlies psychology applied to sport. There will be a particular emphasis on psychological concerns that confront coaches, educators, and athletes.</td>
</tr>
<tr>
<td>PET</td>
<td>6235</td>
<td>Motor Learning</td>
<td>3</td>
<td></td>
<td>This course deals with motor learning research as it relates to exercise science. Emphasis will be placed upon normal developmental patterns and behaviors and motor learning principles throughout the life span.</td>
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<tr>
<td>PET</td>
<td>6256</td>
<td>Sport in Society: Contemporary Issues</td>
<td>3</td>
<td></td>
<td>This course is a study of organized sport in contemporary society. Issues such as race, social class, gender, politics, religion, economics, media, physical disabilities, sexual orientation, and ethics as they relate to sports will be studied.</td>
</tr>
<tr>
<td>PET</td>
<td>6317</td>
<td>Applied Biomechanics</td>
<td>3</td>
<td></td>
<td>The course involves the integration of advanced kinesiological foundations to exercise science. Topics include: physical growth and neuro-muscular control, laws of physics in human movement, and effects of exercise on the muscular and skeletal systems.</td>
</tr>
<tr>
<td>PET</td>
<td>6367</td>
<td>Sports Nutrition and Exercise Metabolism</td>
<td>3</td>
<td></td>
<td>This course covers selected topics regarding exercise metabolism and sports nutrition. Some of the topics to be covered include: bioenergetics; protein, fat and carbohydrate metabolism during exercise; sports supplements designed to improve strength.</td>
</tr>
<tr>
<td>PET</td>
<td>6388</td>
<td>Physical Activity, Health, and Disease</td>
<td>3</td>
<td></td>
<td>This course focuses on the study of how physical activity is related to chronic diseases. Epidemiological techniques will be examined using physical activity as a factor in the cause of disease. The physiological basis will be examined.</td>
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<tr>
<td>PET</td>
<td>6389</td>
<td>Fitness Assessment and Prescription</td>
<td>3</td>
<td></td>
<td>This course covers advanced principles of physiological fitness assessment. Topics to be covered include the assessment and prescription of: aerobic capacity, anaerobic capacity, muscular strength, and muscular endurance.</td>
</tr>
<tr>
<td>PET</td>
<td>6396C</td>
<td>Specialized Study in Bio-Kinetics of Human Movement</td>
<td>1-4</td>
<td></td>
<td>Will provide in-depth study in specific areas related to neurological, physiological, and mechanical principles of human development.</td>
</tr>
<tr>
<td>PET</td>
<td>6419</td>
<td>Clinical Supervision In Physical Education</td>
<td>3</td>
<td></td>
<td>Provides specialized knowledge and skills for effective supervision of interns in physical education including observation and feedback techniques and communication skills.</td>
</tr>
<tr>
<td>PET</td>
<td>6425</td>
<td>Curriculum and Instructional Process in Physical Education</td>
<td>3</td>
<td></td>
<td>Will provide in-depth study of the structure of subject matter, theoretical curriculum models, styles of teaching, and investigation of the nature of the learner as these relate to teaching physical education. Fieldwork may be required.</td>
</tr>
<tr>
<td>PET</td>
<td>6443</td>
<td>Instructional Design and Content: Games</td>
<td>3</td>
<td></td>
<td>The purpose of this course is to help students plan and implement effective game content and instruction in K-12 physical education programs based on current research and best practice.</td>
</tr>
<tr>
<td>PET</td>
<td>6444</td>
<td>Instructional Design and Content: Dance and Gymnastics</td>
<td>3</td>
<td></td>
<td>The purpose of this course is to help students plan and implement effective dance and gymnastics content in K-12 movement education/physical education programs based on current research and best practice.</td>
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<tr>
<td>PET</td>
<td>6447</td>
<td>Specialized Study In Curriculum And Instructional Process In Physical Education</td>
<td>1-4</td>
<td></td>
<td>Will provide in-depth study in specific areas related to the teaching-learning process of physical education.</td>
</tr>
<tr>
<td>PET</td>
<td>6494</td>
<td>Legal Aspects of Physical Activity</td>
<td>3</td>
<td></td>
<td>Addresses the law, legal liability, and risk management related to physical activity programs. Content will focus on tort and contract law with an emphasis on negligence.</td>
</tr>
<tr>
<td>PET</td>
<td>6516</td>
<td>Learner Assessment in Physical Education</td>
<td>3</td>
<td></td>
<td>This course is designed to help teachers assess student learning in pre/K-12 physical activity settings and to conduct program evaluation in physical activity settings.</td>
</tr>
<tr>
<td>PET</td>
<td>6525L</td>
<td>Laboratory Techniques in Exercise Science</td>
<td>3</td>
<td></td>
<td>The course covers laboratory applications as they relate to exercise science. Emphasis will be placed upon laboratory experiences in biomechanics and exercise physiology involving equipment setup, data collection, data acquisition, and data analysis.</td>
</tr>
<tr>
<td>PET</td>
<td>6534</td>
<td>Research Methods in Exercise Science</td>
<td>3</td>
<td></td>
<td>Introduces students to the concepts, methods, and applications of research within exercise science. Development of research skills will be the primary focus.</td>
</tr>
<tr>
<td>PET</td>
<td>6645</td>
<td>Physical Education for Individuals with Disabilities</td>
<td>4</td>
<td></td>
<td>This course is concerned with the motor development and physical fitness of individuals with mental and motor related disabling conditions. Study includes psycho-educational characteristics; planning, conducting, and evaluating individualized programs of physical education; and review of relevant literature. Clinical fieldwork is required.</td>
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<tr>
<td>PET</td>
<td>6706</td>
<td>Analysis of Research in Physical Education</td>
<td>3</td>
<td></td>
<td><strong>Pet</strong> 6706. This course is designed to help teachers better understand the process of conducting classroom research. The course provides a set of guidelines for reading research and sharing perspectives based on studying original research in physical education.</td>
</tr>
<tr>
<td>PET</td>
<td>6716</td>
<td>Analysis of Teaching in Physical Education</td>
<td>3</td>
<td></td>
<td><strong>Pet</strong> 6716. The purpose of this course is to study teaching behaviors in physical activity settings. It includes a review of current research and involves the use of observation systems and other data collection strategies related to instructional effectiveness.</td>
</tr>
<tr>
<td>PET</td>
<td>6906</td>
<td>Independent Study: Professional Physical Education</td>
<td>1-6</td>
<td></td>
<td><strong>Pet</strong> 6906. Independent study. Students must have a contract with an instructor.</td>
</tr>
<tr>
<td>PET</td>
<td>6910L</td>
<td>Research Project in Physical Education</td>
<td>1-4</td>
<td></td>
<td><strong>Pet</strong> 6910L. In-depth research study of selected topics concerning human movement. Topics will vary according to needs and interests of student.</td>
</tr>
<tr>
<td>PET</td>
<td>6947</td>
<td>Internship in Exercise Science</td>
<td>1-6</td>
<td></td>
<td><strong>Pet</strong> 6947. Provides a field experience in an Exercise Science setting. Experiences will focus on all aspects of program development and delivery. Students may also be involved with administrative functions of a fitness/wellness center.</td>
</tr>
<tr>
<td>PET</td>
<td>6971</td>
<td>Thesis: Physical Education</td>
<td>1-5</td>
<td></td>
<td><strong>Pet</strong> 6971. This course will provide the student with experience in research related to the disciplines of physical education and exercise science. Restricted to Graduate Program Majors only and repeatable for up to 6 credit hours.</td>
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<tr>
<td>PET</td>
<td>7937</td>
<td>Graduate Seminar</td>
<td>1-6</td>
<td></td>
<td>Development of a research knowledge base that has significant depth for the seminar topic will be a primary focus.</td>
</tr>
<tr>
<td>PHA</td>
<td>6114C</td>
<td>Drug Delivery Systems I</td>
<td>3</td>
<td></td>
<td>Fundamental biological and physiochemical principles important for the formulation, preparation, stability, and performance of pharmaceutical dosage forms (compounding) and various advanced drug delivery systems. A weekly laboratory session of three hours is included to provide students the opportunity to apply learned principles.</td>
</tr>
<tr>
<td>PHA</td>
<td>6115C</td>
<td>Drug Delivery Systems II</td>
<td>3</td>
<td>PR: PHA 6114C</td>
<td>Fundamental biological and physiochemical principles important for the formulation, preparation, stability, and performance of pharmaceutical dosage forms (compounding). A weekly laboratory session is included to provide students the opportunity to apply learned principles.</td>
</tr>
<tr>
<td>PHA</td>
<td>6118</td>
<td>Nanomaterials, BioMEMS, and Nanodevices in Medicine</td>
<td>3</td>
<td></td>
<td>Covers control of materials at a micro-/nano-scale (new polymer-based drug delivery systems for anticancer agents, specialized devices for minimally invasive surgery, remote sensors &amp; cell sorting systems w/ high-throughput data collection).</td>
</tr>
<tr>
<td>PHA</td>
<td>6119</td>
<td>Micro-/Nanoscale Drug Delivery Systems</td>
<td>3</td>
<td></td>
<td>This is an advanced course for pharmacy students on novel approaches to drug delivery as it relates to medicine. The course will consists of lectures describing micro- and nanoscale methods of drug delivery.</td>
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<tr>
<td>PHA</td>
<td>6124</td>
<td>Principles of Pharmacokinetics and Pharmacodynamics I</td>
<td>3</td>
<td>PR: PY2 Standing</td>
<td>The goal of this course is to provide students a fundamental understanding of the concepts and principles underlying the discipline of pharmacokinetics and pharmacodynamics. The topics will include pharmacokinetic data analysis, dosage regimen design, determinants of drug absorption, distribution, metabolism and excretion, and study of drug concentration response relationships.</td>
</tr>
<tr>
<td>PHA</td>
<td>6129</td>
<td>Clinical Pharmacokinetics and Pharmacodynamics</td>
<td>3</td>
<td>PR: PHA 6124</td>
<td>The second course of the series continues concepts taught in the principles of pharmacokinetics and pharmacodynamics. Special emphasis will be placed on in-patient medication management and advanced monitoring techniques. Class discussions will review formulation factors involved in drug delivery. Students will demonstrate the ability to utilize basic principles of pharmacokinetics and pharmacodynamics to optimize patient specific dosing regimens.</td>
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<tr>
<td>PHA</td>
<td>6130C</td>
<td>Translational Pharmacogenomics - Principles and Clinical Applications</td>
<td>3</td>
<td>PR: PY3 Standing</td>
<td>Translational pharmacogenomics is designed as an introduction to the theory and practice of pharmacogenomics which are central to the personalized medicine paradigm. The course aims to provide students with the concepts and tools needed to interpret, analyze, and evaluate pharmacogenomics information. The goal is to enable students to gain a clear understanding of how genetic variations contribute to susceptibility to drug response and to incorporate this knowledge into routine clinical care.</td>
</tr>
<tr>
<td>PHA</td>
<td>6146</td>
<td>Introduction to Nanotechnology</td>
<td>3</td>
<td></td>
<td>Provides an overview of the distinctive features of nanotechnology and their application to biomedical problems. The course compares the macro/micro/nanoscale to highlight the unique properties of nanotechnology in nanomedicine.</td>
</tr>
<tr>
<td>PHA</td>
<td>6147</td>
<td>Nanotechnology and Risk Management</td>
<td>3</td>
<td></td>
<td>An introduction into theory with simultaneous laboratory experience for instrumentation in nanomedicine, nanotechnology, and nano-pharmaceutics as well as risk management associated with nano production.</td>
</tr>
<tr>
<td>PHA</td>
<td>6148</td>
<td>Nanoformulations and Nanopharmaceuticals</td>
<td>3</td>
<td></td>
<td>Focus on developing an understanding of the fundamental properties, synthesis and characterization of nanomaterials, coupled with their applications in nanomedicine.</td>
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<tr>
<td>PHA</td>
<td>6177</td>
<td>Advanced Compounding and Industrial Pharmacy</td>
<td>3</td>
<td>PR: PY3 Standing</td>
<td>Advanced formulations design, development and application in real world. Develop niche in the area of specialized compounding practices serving the needs of special population groups including geriatric patients. Utilizing the knowledge and apply it for patients specific needs for individualized medicine and better outcomes. Develop fundamental understanding for compounding pharmacy and industrial manufacturing regulatory aspects.</td>
</tr>
<tr>
<td>PHA</td>
<td>6185</td>
<td>Drug Discovery and Frontier</td>
<td>3</td>
<td>CPR: PHA 6577; PR: PHA 6575</td>
<td>This course will provide an overview of the drug development process, focusing on cutting-edge drug development science, regulation, and industry from the U.S. perspective. Most sessions will consist of a brief didactic overview of the day's topic, followed by a discussion of a primary scientific publication that emphasizes the most important principles covered.</td>
</tr>
<tr>
<td>PHA</td>
<td>6221</td>
<td>Pharmacists' Role in Transitions of Care</td>
<td>2</td>
<td>CR: PHA 6784C and PHA 6874C; PR: PHA 6783C and PHA 6720</td>
<td>The Transitions of Care (TOC) elective is focused on managing patients moving from different health care settings as it relates to the field of pharmacy. It is designed to address components of the TOC process through team-building activities, patient cases and problem-solving opportunities and further develop clinical decision-making, written and verbal communication skills. The course will allow students to identify strengths and limitations within TOC models and how to implement changes.</td>
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<tr>
<td>PHA</td>
<td>6222</td>
<td>Pharmacy Practice Management</td>
<td>3</td>
<td></td>
<td>Provides students with practical knowledge to enable them to function as pharmacy leaders and managers with competence in several key areas.</td>
</tr>
<tr>
<td>PHA</td>
<td>6223C</td>
<td>Pharmacy Leadership</td>
<td>2</td>
<td>PR: PY3 Standing</td>
<td>This course will focus on the perceptions, expectations, and necessary skill set for a leader in the pharmaceutical workplace, regardless of position or practice setting. Through various mediums, the students will have exposure to didactic and real-world application in order to cultivate the necessary tools to develop into future practitioners and leaders in the healthcare workforce. Students will identify their personal strengths and design a plan for developing their leadership skills.</td>
</tr>
<tr>
<td>PHA</td>
<td>6224</td>
<td>Pharmaceutical Debates on Recent Issues Affecting the Profession</td>
<td>2</td>
<td>PR: PY3 Standing</td>
<td>The course aims at providing an opportunity for students in the third professional year to discuss and debate critical issues affecting the pharmacy profession. Students will also learn to write a publication-quality paper and develop a presentation poster.</td>
</tr>
<tr>
<td>PHA</td>
<td>6225</td>
<td>Invention, Innovation and Entrepreneurship</td>
<td>3</td>
<td></td>
<td>Students will develop a theoretical and practical understanding of product development, including actions and methods appropriate in each phase using estimations, spreadsheets and geometric models.</td>
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<tr>
<td>PHA</td>
<td>6233C</td>
<td>Jurisprudence</td>
<td>2</td>
<td>PR: PY3 Standing</td>
<td>This course provides students with the essential concepts of pharmacy law, enabling them to practice pharmacy in compliance with federal and state statutes, rules, and regulations, as well as equipping them with the knowledge to pass the MPJE. Additionally, students receive an overview of federal and state government, agencies, health law topics, advocacy, ethics, and the policy process.</td>
</tr>
<tr>
<td>PHA</td>
<td>6243</td>
<td>Medical Informatics and Technology</td>
<td>2</td>
<td>PR: PY2 Standing</td>
<td>The focus of this course is to emphasize the roles and responsibilities of the profession and individual pharmacists in the implementation and utilization of electronic health records, medical information technology, institutional and community software, and healthcare system database management.</td>
</tr>
<tr>
<td>PHA</td>
<td>6245</td>
<td>Pharmaceutical Informatics</td>
<td>3</td>
<td></td>
<td>Discuss the applications of computers to the storage, retrieval and analysis of drug and prescription information. In addition, the application of bioinformatics or chemoinformatics to drug discovery and development will be covered.</td>
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<tr>
<td>PHA</td>
<td>6261</td>
<td>Healthcare Administration and Economics</td>
<td>3</td>
<td>PR: PHA 6898 and PY2 Standing</td>
<td>This course will discuss components of the U.S. Health Care System, including the administrative and financial determinants that influence patient care, and how pharmacy, pharmacists, and pharmacy systems contribute. An introduction to pharmacy leadership, management, planning, marketing, and financial and human resources management will also be covered.</td>
</tr>
<tr>
<td>PHA</td>
<td>6270</td>
<td>Healthcare and Medication Safety</td>
<td>2</td>
<td>PR: PY2 Standing</td>
<td>This course will introduce and reinforce principles of human error and patient safety within healthcare settings. The students will engage in activities that analyze, discuss, and provide recommendations for solutions to patient safety problems. Students will have opportunities to conduct an incident investigation, gain an understanding of the advantages and limitations of error reporting, learn how to disclose errors and adverse events, and learn models for improving safety in various health care settings. Classes are designed to provide students with hands-on skills in systems thinking and in preventing, learning from, and dealing with medical error and adverse events.</td>
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<tr>
<td>PHA</td>
<td>6277</td>
<td>Ethics in Pharmaceutical Practice and Research</td>
<td>1</td>
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<td>This course will cover the ethical considerations which control and influence pharmacy practice and research. Professional ethics will also be covered in this course.</td>
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<tr>
<td>PHA</td>
<td>6336</td>
<td>Tissue Engineering and Regenerative Medicine</td>
<td>3</td>
<td></td>
<td>How materials interact with cells through their micro- and nanostructure, mechanical properties degradation characteristics, surface chemistry and biochemistry. Principles of tissue engineering, design strategies for practical applications for tissue repair.</td>
</tr>
<tr>
<td>PHA</td>
<td>6352</td>
<td>Herbal Medicines and Alternative Therapy</td>
<td>2</td>
<td>PR: PHA 6782, PHA 6783, PHA 6795, and PHA 6618</td>
<td>An overview of the most commonly used herbal medicines and alternative therapy methods. Course content will be classified by organ system (i.e. nervous system, cardiovascular system) and will provide evidence based review of the use of herbal medicines and/or alternative therapies for particular disease states effecting these systems. Efficacy, safety, and drug interactions will be a major focus. Students will evaluate available scientific literature to make clinical decisions in patient care.</td>
</tr>
<tr>
<td>PHA</td>
<td>6428C</td>
<td>Advanced Topics in Metabolic Syndrome Treatment</td>
<td>2</td>
<td>PR: PHA 6577, PHA 6783C, and PHA 6946</td>
<td>This course will explore advanced topics in the assessment and treatment of patients with metabolic syndrome, defined as hypertension, diabetes/insulin resistance, and hyperlipidemia. Mastery on the understanding of vascular inflammatory pathways, vascular complications, understanding laboratory values, pharmacotherapy for treatment, and key patient education points will be covered. Students will experience a combination active learning of lecture, online courses, and live patient encounters.</td>
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<tr>
<td>PHA</td>
<td>6449</td>
<td>Pharmacogenomics--Current and Future Prospects</td>
<td>3</td>
<td></td>
<td>The course is designed to include the scientific and societal components essential for the implementation of pharmacogenomics in the healthcare system and to provide a clear understanding of &quot;Future Medicine for the Future Pharmacist&quot;.</td>
</tr>
<tr>
<td>PHA</td>
<td>6451</td>
<td>Clinical Biochemistry</td>
<td>3</td>
<td></td>
<td>Course focus will be on the structure, chemistry and function of macromolecules and their building blocks, i.e. amino acids, carbohydrates, nucleotides and fatty acids. Major metabolic and catabolic pathways will be discussed in relation to drug action. Enzyme kinetics and regulation, and bioenergetics will be presented.</td>
</tr>
<tr>
<td>PHA</td>
<td>6531</td>
<td>Basic Principles of Toxicology</td>
<td>2</td>
<td>PR: PHA 6577 and PHA 6783C</td>
<td>This course will focus on the basic principles of toxicology, and application to the potential health hazards and the risks associated with toxic exposure. The goal of the course is to review the specialized areas of toxicology, emphasizing the importance of dose effect and dose response relationship, absorption, distribution, and elimination of toxins, target organ and non-organ toxicity, toxic agents, natural toxins, applied toxicology, medical toxicology and management of poisoned patients.</td>
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<td>PHA</td>
<td>6562</td>
<td>Physiologic Basis of Disease</td>
<td>4</td>
<td></td>
<td>This course entails the study of disease at molecular, cellular, and organ levels. It provides a foundation for understanding the etiologies and pathogenesis of diseases. It facilitates the interpretation of the changes induced by stimuli, correlating the microscopic and macroscopic changes with the manifestations of diseases and ultimately with a diagnosis. The knowledge gained from the study of these mechanisms will form the basis for therapeutic approaches, drug interaction and dependence.</td>
</tr>
<tr>
<td>PHA</td>
<td>6575</td>
<td>Introduction to Principles of Drug Action</td>
<td>2</td>
<td></td>
<td>Initial course discussions will focus on the principles of pharmacology, and their application to anatomical and physiologic function. Special emphasis will be placed on medication receptor recognition, introductory pharmacology, specific organ system, and variations of medication action at receptor sites.</td>
</tr>
<tr>
<td>PHA</td>
<td>6577</td>
<td>Biochemical and Molecular Principles of Drug Action</td>
<td>5</td>
<td>PR: PHA 6575</td>
<td>Initial course discussions will focus on the principles of pharmacology, and their application to anatomical and physiologic function. Special emphasis will be placed on medication receptor recognition, drug structure, introductory pharmacology, specific organ system, mechanisms of signaling response, variations of medication action at receptor sites, adverse effects of various medications, absorption, distribution, metabolism, elimination, and physical chemical properties.</td>
</tr>
<tr>
<td>SUB</td>
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<td>PHA</td>
<td>6592C</td>
<td>Advanced Cardiology Pharmacotherapy</td>
<td>2</td>
<td>CR: PHA 6784C; PR: PHA 6782C, PHA 6783C, PY3 Standing</td>
<td>Cardiovascular disease management is one of the most evidence-based areas of medicine and pharmacy practice. Students will also be evaluating medical literature and applying clinical evidence. This course provides an overview of selected cardiovascular topics. New topics will be discussed and topics covered in core courses augmented.</td>
</tr>
<tr>
<td>PHA</td>
<td>6598</td>
<td>Current Perspectives in Mental Health</td>
<td>2</td>
<td>PR: PHA 6783C and PY3 Standing</td>
<td>The purpose of this clinical elective is to introduce the student to the mental health system, emphasizing the role of a pharmacist in the treatment of individuals with mental illnesses. Students will gain further knowledge of psychiatric pharmacotherapy, beyond knowledge acquired in previous pharmacotherapeutics courses.</td>
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<tr>
<td>PHA</td>
<td>6602</td>
<td>Pediatric Pharmacotherapy</td>
<td>2</td>
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<td>The pediatric pharmacotherapeutics course is designed to give the pharmacy candidate an understanding of pediatric care ranging from general pediatric pharmacy concerns, developmental pharmacology, management of pediatric patients in acute and ambulatory settings, as well as pediatric emergency management.</td>
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<tr>
<td>PHA</td>
<td>6615C</td>
<td>Ambulatory Care Pharmacy Practice Elective</td>
<td>3</td>
<td>PR: PY3 Standing</td>
<td>This course is designed to teach pharmacy students how to develop patient-specific pharmaceutical care plans for the various disease states encountered in an ambulatory care setting. Along with therapeutic discussions, the course will involve active participation through mock patient assessments in a controlled setting, patient case presentations and therapeutic plan debates. The course will also introduce pharmacy students to the various roles pharmacists encounter in an ambulatory setting.</td>
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<tr>
<td>PHA</td>
<td>6618</td>
<td>Principles of Geriatric Medicine</td>
<td>3</td>
<td></td>
<td>Prepares future health professionals to address the needs of their older patients expanding student understanding of psychosocial and communication issues exposing participants to cross-cultural issues in health care.</td>
</tr>
<tr>
<td>PHA</td>
<td>6618C</td>
<td>Principles of Geriatric Pharmacotherapy</td>
<td>2</td>
<td>PR: PY2 Standing</td>
<td>This course will reinforce specific geriatric pharmacotherapy issues, including medication administration, impact of the aging process, and frequently encountered social issues. Course content will include discussions regarding health systems management issues, and the changing demographics in the country and state of Florida.</td>
</tr>
<tr>
<td>PHA</td>
<td>6622</td>
<td>Advanced Geriatric Pharmacy Care</td>
<td>3</td>
<td></td>
<td>Focuses on the clinical aspects and advanced training of pharmacists to become specialists in geriatrics to meet the needs of older adults.</td>
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<tr>
<td>PHA</td>
<td>6628</td>
<td>Introduction to Post Graduate Residency Training</td>
<td>2</td>
<td>PR: PY3 Standing</td>
<td>This is an elective course designed to provide students an in-depth knowledge of postgraduate pharmacy residency training so that they are prepared to seek and obtain a residency position upon graduation. Topics to be covered include benefits of residency training, types of residency programs available, requirements to achieve a residency training certificate, application requirements, composing a letter of intent, curriculum vitae, choosing a residency program and interviewing for residency.</td>
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<tr>
<td>PHA</td>
<td>6708</td>
<td>Teaching in Pharmacy</td>
<td>3</td>
<td></td>
<td>This course provides direct instruction in the field of academia specifically in the role of pharmacy faculty focusing on essential skills for effective classroom and laboratory teaching in the 21st century.</td>
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<tr>
<td>PHA</td>
<td>6730C</td>
<td>Drugs of Abuse, Addiction, and Law Enforcement</td>
<td>2</td>
<td>PR: PY3 Standing</td>
<td>Course will consist of one to two hours of didactic lecture covering the medical chemistry and pharmacology for the drug and for certain topics, one hour of documentary on the drug in society. Students will also be required to write a book report on a book about drug addition taken from a list that will be provided of approved books. There will be two exams worth 40% each and the book report will be worth the remaining 20%.</td>
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<td>PHA</td>
<td>6740</td>
<td>Grant Writing and Clinical Research</td>
<td>2</td>
<td>PR: PHA 6792  and PHA 6795</td>
<td>This course is based upon a current K-30 research training program at USF Health. Students will be taught the components of grant writing and conducting clinical research. Topics covered in this course include the development of a grant proposal, research ethics, and federal funding agency requirements.</td>
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<tr>
<td>PHA</td>
<td>6755</td>
<td>Medical Microbiology and Immunology</td>
<td>3</td>
<td>PR: PY1 Standing</td>
<td>This course will provide a comprehensive study of the field of medical microbiology and the immune system. Microbiology discussions will include a review of infectious microbes and the clinical consequences of infection. Immunology discussions will focus on the structure and function of the individual components of the immune system, and manipulation of the immune system in medicine.</td>
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<tr>
<td>PHA</td>
<td>6760</td>
<td>Non-Prescription and Herbal Therapies</td>
<td>3</td>
<td>PR: PY3 Standing</td>
<td>This course will provide an in-depth examination of over-the-counter products and devices used for self-treatable conditions. Community pharmacists are often asked questions regarding appropriate medication selection and proper selection of durable medical equipment; therefore, the focus of this course will be to provide students with tools to best assess the patient, make appropriate over-the-counter (OTC) product selection, provide thorough counseling, and examine numerous alternative medications.</td>
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<td>PHA</td>
<td>6771C</td>
<td>Clinical Nutrition in Pharmacy Practice</td>
<td>2</td>
<td>PR: PY3 Standing</td>
<td>This course is designed to prepare pharmacy students to function as members of an interdisciplinary nutritional support team who will share responsibility for promoting maintenance and/or restoration of optimal nutrition status. This course will focus on internal and parenteral nutrition with an emphasis on nutritional guidelines, drug nutrient interactions, and disease state specific nutritional needs.</td>
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<tr>
<td>PHA</td>
<td>6780C</td>
<td>Oncology Pharmacy Practice</td>
<td>2</td>
<td>PR: PHA 6784C</td>
<td>This elective course will provide an overview of oncology pharmacotherapy and the roles of an oncology pharmacy practitioner. Concepts introduced in the oncology module of Pharmacotherapeutics III, including pharmacology, tumor types, anticancer therapy and supportive care strategies, will be further delineated and discussed in more comprehensive manner.</td>
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<tr>
<td>PHA</td>
<td>6782C</td>
<td>Pharmacotherapeutics I</td>
<td>5</td>
<td>PR: PY2 Standing</td>
<td>Pharmacotherapeutics is an integrated course sequence utilizing medicinal chemistry, pharmacology, and pharmacy practice faculty. The over-arching goal of the sequence is to review and discuss the applied principles of pharmacotherapy/patient management following an organ system process to include cardiovascular, pulmonary, endocrine, and gastrointestinal systems.</td>
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<tr>
<td>PHA</td>
<td>6783C</td>
<td>Pharmacotherapeutics II</td>
<td>5</td>
<td>PR: PHA 6782C</td>
<td>Pharmacotherapeutics is an integrated course sequence utilizing medicinal chemistry, pharmacology and pharmacy practice faculty. The overarching goal of the sequence is to review and discuss the applied principles of pharmacotherapy/patient management following an organ system process. This is the second of four courses in the integrated course sequence. Areas to be covered include psychiatry, neurology, men's and women's health topics, and genitourinary system.</td>
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<tr>
<td>PHA</td>
<td>6784C</td>
<td>Pharmacotherapeutics III</td>
<td>5</td>
<td>PR: PY3 Standing</td>
<td>Pharmacotherapeutics is an integrated course sequence utilizing medicinal chemistry, pharmacology and pharmacy practice faculty. The overarching goal of this semester is to review and discuss the applied principles of pharmacotherapy and patient management following an organ system process to include infectious diseases, hematology, oncology, and renal disease.</td>
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<tr>
<td>PHA</td>
<td>6786</td>
<td>Travel Medicine</td>
<td>3</td>
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<td>Travel medicine is a service provided to travelers to prevent and manage health problems that arise as a result of international travel. Students will learn the various components to providing travel medicine services to patients.</td>
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<tr>
<td>PHA</td>
<td>6787C</td>
<td>Pharmacotherapeutics IV</td>
<td>5</td>
<td>PR: PHA 6784C</td>
<td>Pharmacotherapeutics is an integrated course sequence utilizing medicinal chemistry, pharmacology and pharmacy practice faculty. The overarching goal of the sequence is to review and discuss the applied principles of pharmacotherapy/patient management following an organ system process to include critical care, nutrition, pediatrics, solid organ transplant, and drug induced diseases.</td>
</tr>
<tr>
<td>PHA</td>
<td>6792C</td>
<td>Drug Information/Literature Evaluation</td>
<td>2</td>
<td>PR: PY1 Standing</td>
<td>Introduce and reinforce the fundamental principles of DI practice. Provide an introduction to databases used for DI inquiries; including text- and web-based media. Develop proficiency in using databases and other literature resources to retrieve and/or supply DI. Learn the principles of proper literature evaluation, and begin to develop their skills in reviewing and evaluating 1 and 3 literature. Learn and apply medical writing principles.</td>
</tr>
<tr>
<td>PHA</td>
<td>6795</td>
<td>Research Methods and Biostatistics</td>
<td>3</td>
<td>PR: PY2 Standing</td>
<td>This course focuses on the advanced application of scientific literature evaluation, to include the assessment of appropriateness of study design, performed statistical analysis, and clinical applications to pharmacy practice.</td>
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<td>PHA</td>
<td>6797</td>
<td>Scientific Writing and Communication</td>
<td>1</td>
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<td>Enhance student’s personal and written communication, and develop effective presentation skills aiding students in effective communication within a professional workforce setting. Includes scientific grant and white paper proposal writing.</td>
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<tr>
<td>PHA</td>
<td>6804C</td>
<td>Pharmaceutical Calculations</td>
<td>2</td>
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<td>Accurate pharmacy calculations enhance patient care in all areas of pharmacy practice. This course serves as an introduction to the clinical role calculations play in patient safety. Students will learn the direct application of their previous math and chemistry skills to the human body. Calculations will encompass different approaches to measurement including the metric, avoirdupois, and traditional apothecary systems. Course topics will include specific gravity/volume, percentage and ratio.</td>
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<tr>
<td>PHA</td>
<td>6870C</td>
<td>Pharmaceutical Skills I</td>
<td>2</td>
<td></td>
<td>The pharmaceutical skills sequence serves dual functions; the first is to allow integration and application of materials learned during the semester, the second to address key professional competencies that are not otherwise addressed in the curriculum (professionalism, communication, ethics, and law). The first course in the sequence will include discussion regarding pharmaceutical care techniques, the history of pharmacy, professional communication tactics and behaviors, and cultural competency.</td>
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<td>PHA</td>
<td>6871C</td>
<td>Pharmaceutical Skills II</td>
<td>3</td>
<td>PR: PHA 6870</td>
<td>The focus of this semester will be a continued discussion of pharmaceutical care techniques, with an emphasis on special populations, motivational interviewing, career options, and the application of public health principles. In addition, students will receive instruction on physical assessment techniques to include blood pressure measurement, medical device training, and techniques specific to medication administration such as eye/ear drops, nasal sprays, and inhalers.</td>
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<tr>
<td>PHA</td>
<td>6872C</td>
<td>Pharmaceutical Skills III</td>
<td>3</td>
<td>PR: PHA 6871C</td>
<td>Integration of the principles of Pharmacotherapeutics I and Pharmacokinetics/Pharmacodynamics I will provide students with an opportunity to develop and monitor patient specific care plans in order to optimize therapeutic outcomes for patients with cardiovascular, respiratory, endocrine, and gastrointestinal diseases. Other activities will emphasize the patient-centered application of health policy, literature evaluation, and outpatient medication therapy management as well as introduce basic principles.</td>
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<tr>
<td>PHA</td>
<td>6873C</td>
<td>Pharmaceutical Skills IV</td>
<td>3</td>
<td>PR: PHA 6872C</td>
<td>Integration of the principles of Pharmacotherapeutics II, Pharmacokinetics/Pharmacodynamics II, and Geriatric Pharmacotherapy will provide students with the opportunity to develop patient specific care plans for patients with neurologic, psychiatric, and musculoskeletal diseases as well as men's/women's health. Other activities will emphasize informatics and technology, the impact of medication errors on patient safety, and interprofessional education initiatives.</td>
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<tr>
<td>PHA</td>
<td>6874C</td>
<td>Pharmaceutical Skills V</td>
<td>3</td>
<td>PR: PY3 Standing</td>
<td>Integration of the principles of Pharmacotherapeutics III and IPPE will provide students with the opportunity to develop patient specific care plans for patients with hematologic disorders, malignancies, infectious disease, and renal disorders. Other activities will emphasize principles of translational pharmacogenomics, research methods and grant writing, and interprofessional education initiatives.</td>
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<td>PHA</td>
<td>6875C</td>
<td>Pharmaceutical Skills VI</td>
<td>3</td>
<td>PR: PHA 6870C, PHA 6871C, PHA 6872C, PHA 6873C and PHA 6874C</td>
<td>Integration of the principles of Pharmacotherapeutics IV will provide students with an opportunity to develop and monitor patient specific care plans in order to optimize therapeutic outcomes for patients with critical care, pediatric, nutritional, toxicology, and solid organ transplant disorders. Other activities will emphasize the patient-centered application of health policy, literature evaluation, and inpatient medication therapy management as well as introduce basic principles of health systems administration. Interprofessionalism will also be emphasized through simulated activities with medical and nursing students.</td>
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<tr>
<td>PHA</td>
<td>6877C</td>
<td>Critical Care Pharmacotherapy</td>
<td>2</td>
<td>CR: PHA 6787C; PR: PHA 6784C</td>
<td>The course provides an overview of critical care pharmacotherapy. The focus of the course will be the role of the critical care pharmacist and an introduction to medications, disease states, and conditions encountered in the critical care setting.</td>
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<td>PHA</td>
<td>6898</td>
<td>Foundations of Public Health</td>
<td>3</td>
<td>PR: PY1 Standing</td>
<td>This course provides the student with an introduction to public health. It covers the basic definition of public health, the analytical methods used in public health, the biomedical basis of public health, the social and behavioral factors related to health interactions, and environmental and medical care issues. Students will also learn about the relationship between public health and pharmacy, and the role of the pharmacist as it relates to Healthy People 2020 goals and objectives.</td>
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<tr>
<td>PHA</td>
<td>6907</td>
<td>Directed Independent Study</td>
<td>2-3</td>
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<td>Individual study by students under the direction of a faculty member. Topics may vary and are selected on an individual basis. Hours may vary.</td>
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<tr>
<td>PHA</td>
<td>6916</td>
<td>Directed Independent Research</td>
<td>3</td>
<td>PR: PY3 Standing</td>
<td>Study abroad will be conducted in collaboration with RIWATCH (Research Institute for World Ancient Traditions, Cultures, and Heritage), Roing Arunachal Pradesh, India, an institute which has an agreement with USF World for student and faculty training and exchange. RIWATCH has the following centers: 1. Center for Social Work Research, 2. Center for Public Health Research, and 3. Center for Community Research. Students will create a project within one of these centers to submit before the trip.</td>
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<td>PHA</td>
<td>6940</td>
<td>Introductory Pharmacy Practice Experience I</td>
<td>1</td>
<td>PR: PY1 Standing</td>
<td>The first Introductory Pharmacy Practice Experience (IPPE) is the beginning course in a three year sequence of introductory experiences exposing pharmacy students to the principles of pharmaceutical care. IPPE will focus on special populations to promote health improvement, wellness, and disease prevention in cooperation with an interprofessional team of health care providers.</td>
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<tr>
<td>PHA</td>
<td>6945</td>
<td>IPPE Community Pharmacy Practice I</td>
<td>1</td>
<td>PR: PY2 Standing</td>
<td>Introductory Pharmacy Practice Experience in Community Pharmacy is a structured course in which students will meet with an assigned community pharmacist for 15 consecutive weeks for the fall semester. Students will practice pharmacy under supervision while demonstrating and reinforcing skills taught in didactic course work. Upon completion of the course, the student should be knowledgeable about the basic functions of a pharmacist in a community pharmacy practice setting.</td>
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<tr>
<td>PHA</td>
<td>6946</td>
<td>IPPE Community Pharmacy Practice II</td>
<td>1</td>
<td>PR: PHA 6945</td>
<td>Introductory Pharmacy Practice Experience in Community Pharmacy is a structured course in which students will meet with an assigned community pharmacist for 15 consecutive weeks for the spring semester. Students will practice pharmacy under supervision while demonstrating and reinforcing skills taught in didactic course work. Upon completion of the course, the student should be knowledgeable about the basic functions of a pharmacist in a community pharmacy practice setting.</td>
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<tr>
<td>PHA</td>
<td>6947</td>
<td>IPPE - Institutional Pharmacy Practice I</td>
<td>1</td>
<td>PR: PHA 6946 and PY3 Standing</td>
<td>This course gives pharmacy students experience in the institutional/hospital setting, allowing them to achieve educational outcomes in the areas of patient care and institutional pharmacy practices. Students will learn the basic distributive and administrative processes in the institutional setting including but not limited to: dispensing, clinical research, administration, and drug information/formulary review; gaining experience interacting with patients, preceptor, technicians and other pharmacy personnel.</td>
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<tr>
<td>PHA</td>
<td>6948</td>
<td>IPPE - Institutional Pharmacy Practice II</td>
<td>1</td>
<td>PR: PHA 6947 and PY3 Standing</td>
<td>This course gives pharmacy students experience in the institutional/hospital setting, allowing them to achieve educational outcomes in the areas of patient care and institutional pharmacy practices. Students will learn the basic distributive and administrative processes in the institutional setting including but not limited to: dispensing, clinical research, administration, and drug information/formulary review; gaining experience interacting with patients, preceptor, technicians, and other pharmacy personnel.</td>
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<tr>
<td>PHA</td>
<td>7626</td>
<td>Advanced Health-System Pharmacy Practice Experience</td>
<td>6</td>
<td>PR: PHA 6940</td>
<td>The goal of the advanced health-system pharmacy practice experience is to provide opportunities for students to build on knowledge and skills acquired through didactic education and introductory pharmacy practice experiences and apply them in direct patient care experiences.</td>
</tr>
<tr>
<td>PHA</td>
<td>7627</td>
<td>Advanced Community Pharmacy Practice Experience</td>
<td>6</td>
<td>PR: PHA 6940</td>
<td>The goal of the advanced community pharmacy practice experience is to provide opportunities for students to build on knowledge and skills acquired through didactic education and introductory pharmacy practice experiences and apply them in direct patient care activities in the community pharmacy setting. Students will participate in patient care services and patient-focused dispensing functions. These services will focus on identifying, resolution, and prevention of medication-related problems.</td>
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<tr>
<td>PHA</td>
<td>7644</td>
<td>Geriatrics Patient Care Pharmacy Practice Experience</td>
<td>6</td>
<td>PR: PHA 6940</td>
<td>The goal of the geriatrics patient care advanced pharmacy practice experience is to provide opportunities for students to build on knowledge and skills acquired through didactic education and introductory pharmacy practice experiences and apply them in the care of a specialized patient population.</td>
</tr>
<tr>
<td>PHA</td>
<td>7684</td>
<td>Elective 1 Pharmacy Practice Experience</td>
<td>6</td>
<td>PR: PHA 6940</td>
<td>The goal of the elective specialty patient care advanced pharmacy practice experience is to provide opportunities for students to build on knowledge and skills acquired through didactic education and introductory pharmacy practice experiences and apply them in the care of a specialized patient population.</td>
</tr>
<tr>
<td>PHA</td>
<td>7692</td>
<td>Advanced Ambulatory Pharmacy Practice Experience</td>
<td>6</td>
<td>PR: PHA 6940</td>
<td>The goal of the ambulatory care advanced pharmacy practice experience is to provide opportunities for students to build on knowledge and skills acquired through didactic education and introductory pharmacy practice experiences and apply them in direct patient care activities in the ambulatory care setting. This course takes place in an ambulatory care, multidisciplinary practice setting. Practice sites may include hospital-based clinics, physician group practices, community, and others.</td>
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<tr>
<td>PHA</td>
<td>7694</td>
<td>Advanced Adult Medicine Pharmacy Practice Experience</td>
<td>6</td>
<td>PR: PHA 6940</td>
<td>The goal of the adult medicine advanced pharmacy practice experience is to provide opportunities for students to build on knowledge and skills acquired through didactic education and introductory pharmacy practice experiences and apply them in direct patient care activities in the adult medicine setting. This course takes place in an internal medicine/general medicine unit where patients are managed using a team-based approach.</td>
</tr>
<tr>
<td>PHA</td>
<td>7928</td>
<td>Professional Forum</td>
<td>var.</td>
<td></td>
<td>The focus of the professional forum is to prepare pharmacists to identify, resolve, and prevent drug-related problems. The curriculum integrates didactics with practice, reflecting the faculty's dedication to the profession and its commitment to educating students to become competent practitioners. Graduates of the professional forum are capable practitioners who are prepared to sit for the NAPLEX.</td>
</tr>
<tr>
<td>PHA</td>
<td>7930</td>
<td>Special Topics in Pharmacy</td>
<td>1-6</td>
<td></td>
<td>Special topics for discussion and analysis related to Pharmacy.</td>
</tr>
<tr>
<td>PHC</td>
<td>5933</td>
<td>Special Topics</td>
<td>1-3</td>
<td></td>
<td>Provides students the opportunity to learn about the multiple ways to view controversial topics in public health. It covers current public health topics including biomedical issues, social and behavioral factors, and environmental issues.</td>
</tr>
<tr>
<td>PHC</td>
<td>6000</td>
<td>Epidemiology</td>
<td>3</td>
<td></td>
<td>Study of epidemiological methods to evaluate the patterns and determinants of health and diseases in populations.</td>
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<tr>
<td>PHC</td>
<td>6002</td>
<td>Infectious Disease Epidemiology</td>
<td>3</td>
<td>PR: PHC 6000, PHC 6050</td>
<td>The course help students to understand epidemiological patterns, etiology and risk factors of infectious diseases as they occur in populations, rather than in individual patients. Familiarity with epidemiological terminology and biostatistics is required.</td>
</tr>
<tr>
<td>PHC</td>
<td>6006</td>
<td>Epidemiological Methods in Infectious Diseases</td>
<td>3</td>
<td>PR: PHC 6000, PHC 6050 or equivalent, PHC 6002</td>
<td>In depth understanding of the implication of epidemiological methods within the context of infectious disease. Focus will be on the application of methods such as study design, as applied to infectious disease.</td>
</tr>
<tr>
<td>PHC</td>
<td>6007</td>
<td>Cancer Epidemiology</td>
<td>3</td>
<td>PR: PHC 6000</td>
<td>The course will consider the extent of the cancer problem, present the epidemiology of the major cancer sites, including those of the respiratory, digestive and reproductive systems, and evaluate the potential for primary and secondary preventive efforts.</td>
</tr>
<tr>
<td>PHC</td>
<td>6008</td>
<td>Cardiovascular Disease Epidemiology</td>
<td>3</td>
<td>PR: PHC 6000</td>
<td>A review of the major issues in cardiovascular disease epidemiology, including trends, the extent of the disease nationally and internationally, implications of major epidemiological studies, and strategies for prevention.</td>
</tr>
<tr>
<td>PHC</td>
<td>6010</td>
<td>Epidemiology Methods I</td>
<td>3</td>
<td>PR: PHC 6000</td>
<td>This course is designed to cover the important concepts in epidemiology and their application in epidemiological research. Emphasis on measures and quantitative techniques, proper interpretation and explanation of quantitative measures and results.</td>
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<tr>
<td>PHC</td>
<td>6011</td>
<td>Epidemiology Methods II</td>
<td>3</td>
<td>PR: PHC 6000, PHC 6010</td>
<td>This course will cover methods and practices, principles and concepts in epidemiology research. It will provide training in implementing appropriate study design, analyzing results and presenting research findings to a wide variety of audiences.</td>
</tr>
<tr>
<td>PHC</td>
<td>6016</td>
<td>Epidemiology Methods III</td>
<td>3</td>
<td>PR: PHC 6000, PHC 6010, PHC 6011, PHC 6051.</td>
<td>This course will increase the scope, expand upon and detail material presented in Epidemiology Methods I and Epidemiology Methods II. This course will focus on in-depth design of cohort, case-control and cross sectional epidemiologic studies.</td>
</tr>
<tr>
<td>PHC</td>
<td>6020</td>
<td>Design and Conduct of Clinical Trials</td>
<td>3</td>
<td>PR: PHC 6050, PHC 6000</td>
<td>The course will familiarize students with the issues in the design and conduct of clinical trials. Factors involved in organizing a trial, randomizing subjects, implementation, and analyzing data from the study will be considered.</td>
</tr>
<tr>
<td>PHC</td>
<td>6035</td>
<td>Comorbidity of Mental and Physical Disorders</td>
<td>3</td>
<td>PR: PHC 6000, PHC 6050.</td>
<td>This course examines the comorbidity of mental and physical disorders, taking a lifespan epidemiological approach. Emphasis is placed upon theories and empirical research elucidating comorbidities, risk factors, and mechanisms.</td>
</tr>
<tr>
<td>PHC</td>
<td>6037</td>
<td>Public Health Virology</td>
<td>3</td>
<td></td>
<td>A lecture-based course that fosters class participation, critical thinking and literature review. The focus of this course is on human diseases caused by viral infections, with emphasis on diseases of public health importance. There are no restrictions.</td>
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<tr>
<td>PHC</td>
<td>6050</td>
<td>Biostatistics I</td>
<td>3</td>
<td>PR: College Algebra</td>
<td>Concepts, principles, and methods of statistics applied to public health issues.</td>
</tr>
<tr>
<td>PHC</td>
<td>6051</td>
<td>Biostatistics II</td>
<td>3</td>
<td>PR: PHC 6000 and PHC 6050</td>
<td>Simple and multiple linear regression, ANOVA (Analysis of Variance) and ANCOVA (Analysis of Covariance), Model building procedure and diagnostics with applications in health research.</td>
</tr>
<tr>
<td>PHC</td>
<td>6053</td>
<td>Categorical Data Analysis</td>
<td>3</td>
<td>PR: PHC 6051</td>
<td>Study of techniques used in analyzing data where subjects have been cross-classified by two or more categorical variables. Special emphasis given to problems frequently arising in epidemiology, public health, and medicine.</td>
</tr>
<tr>
<td>PHC</td>
<td>6057</td>
<td>Biostatistical Inference I</td>
<td>3</td>
<td>PR: Undergraduate Calculus or Equivalent</td>
<td>This course is primarily designed for students majoring in Biostatistics, emphasis is given to understanding and mastering of biostatistical theory and methods such as probability distribution, expectations, estimation and hypothesis testing.</td>
</tr>
<tr>
<td>PHC</td>
<td>6060</td>
<td>Biostatistical Case Studies and Collaboration I</td>
<td>3</td>
<td></td>
<td>This course provides hands on experience in biostatistical consulting. Biostatistical methods and computer skills are presented, along with the skills required for participating in collaborative and consultative research roles. A Foundation for biostatistical consultation is presented, involving the goals, content, conduct and presentation of Biostatisticians working in applied health settings. Students apply these principles to at least one consultative project and one collaborative project.</td>
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<tr>
<td>PHC</td>
<td>6061</td>
<td>Biostatistical Case Studies and Consulting II</td>
<td>3</td>
<td>PR: PHC 6060</td>
<td>This course prepares students to join an active biostatistical analyst of a multidisciplinary research groups. This collaborative role requires knowledge of successful grant writing and review, site visits, and formal presentations of analytical results. Special issues in collaborating research at a distance are discussed. The biostatistical methodology and theory pertaining to collaborative research projects chosen by the students covered in formal lectures.</td>
</tr>
<tr>
<td>PHC</td>
<td>6063</td>
<td>Public Health Data, Information and Decision Making</td>
<td>3</td>
<td>PR: PHC 6050</td>
<td>This course provides an understanding of public health databases and methods necessary for decision making. The emphasis is on the appropriateness and application of methods widely used for analysis in public health.</td>
</tr>
<tr>
<td>PHC</td>
<td>6074</td>
<td>Epidemiology of Diseases of Major Public Health Importance</td>
<td>3</td>
<td>PR: PHC 6000, PHC 6050</td>
<td>A study of the distribution and determinants of specific infectious and non-infectious human diseases of public health importance using epidemiological methods.</td>
</tr>
<tr>
<td>PHC</td>
<td>6081</td>
<td>Intermediate SAS in Epidemiology</td>
<td>3</td>
<td>PR: PHC 6000, PHC 6050, PHC 6701, and PHC 6051</td>
<td>This course is a fast-paced SAS language class for: (1) students majoring in epidemiology or biostatistics and (2) others intending to, as a substantial component of their careers, use SAS.</td>
</tr>
<tr>
<td>PHC</td>
<td>6102</td>
<td>Principles of Health Policy and Management</td>
<td>3</td>
<td></td>
<td>General principles of planning, management, evaluation, and behavior of public and private health care organizations at the local, state, and national levels.</td>
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<tr>
<td>PHC</td>
<td>6106</td>
<td>Global Health Program Development and Administration</td>
<td>3</td>
<td>PR: PHC 6761</td>
<td>Program Development and Administration is one of four foundation courses for the concentration in Global Health. As a foundation course, its primary role is to provide students with a solid knowledge base in managing global health programs and projects that will serve them in their field experiences and in any one of the seven focus areas available within the global health concentration.</td>
</tr>
<tr>
<td>PHC</td>
<td>6108</td>
<td>Foundations of Public Health</td>
<td>3</td>
<td></td>
<td>This course provides the student with an introduction to public health, the public health system, and the role of the public health professional and the pharmacist as it relates to Healthy People 2020 goals and objectives.</td>
</tr>
<tr>
<td>PHC</td>
<td>6110</td>
<td>International Health and Health Care Systems</td>
<td>3</td>
<td></td>
<td>Study of global health problems and trends, translated to needs and demands; socio-economic and political impact on health delivery; prevailing international systems compared to U.S. system; the role of international health agencies.</td>
</tr>
<tr>
<td>PHC</td>
<td>6114</td>
<td>Health Insurance and Managed Care</td>
<td>2</td>
<td>PR: PHC 6102 and ACG 6025</td>
<td>Financing, operations, and regulatory environment of health insurance and managed care, including principles, models, organization, management functions, public policies, and impact on cost, quality and access in communities.</td>
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<tr>
<td>PHC</td>
<td>6120</td>
<td>Community Partnerships and Advocacy</td>
<td>3</td>
<td></td>
<td>Designed to familiarize students with key aspects of developing partnerships among private and public sector organizations for the purposes of assessing and improving the health of communities. Particular skills include coalition development, developing a constituency/partnerships, advocacy, team building, and leadership.</td>
</tr>
<tr>
<td>PHC</td>
<td>6121</td>
<td>Vaccines</td>
<td>3</td>
<td></td>
<td>Provides an overview of current immunization strategies and their public health rationale. In addition, students will learn the use of vaccines in disease control and eradication, vaccine immunogenicity and adverse reactions.</td>
</tr>
<tr>
<td>PHC</td>
<td>6146</td>
<td>Health Services Planning and Evaluation</td>
<td>3</td>
<td>PR: PHC 6050</td>
<td>Study of health services planning concepts/methods, and evaluation, with an emphasis on facilities and manpower planning, providing an in-depth orientation to information requirements for health planning, and methods to cover gaps of information.</td>
</tr>
<tr>
<td>PHC</td>
<td>6147</td>
<td>Managing Quality in Health Care</td>
<td>2</td>
<td>PR: PHC 6102</td>
<td>Study of methods and tools for managing quality in health facilities, physician practices, managed care and public health; including developments in quality assurance and improvement, utilization review, risk management, and patient satisfaction.</td>
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<tr>
<td>PHC</td>
<td>6148</td>
<td>Strategic Planning and Health Care Marketing</td>
<td>3</td>
<td>PR: PHC 6102</td>
<td>The course reviews the fundamental steps in the strategic planning process and marketing approaches for health care organizations. The textbook and exercises emphasize non-profit organizations.</td>
</tr>
<tr>
<td>PHC</td>
<td>6151</td>
<td>Health Policy and Politics</td>
<td>3</td>
<td>PR: PHC 6102</td>
<td>This course will examine the role of federal, state, and local government in health care organization, delivery, and financing in the United States and other comparable industrial nations.</td>
</tr>
<tr>
<td>PHC</td>
<td>6160</td>
<td>Health Care Financial Management</td>
<td>3</td>
<td>PR: At least one undergraduate course in Financial or Managerial Accounting and PHC 6102</td>
<td>Introduction to the financial management practices in health care organizations, cost behavior analysis, financial statement analysis, and the time value of money.</td>
</tr>
<tr>
<td>PHC</td>
<td>6161</td>
<td>Health Care Finance and Costing</td>
<td>3</td>
<td>PR: PHC 6102 and ACG 6025</td>
<td>Uses lectures, cases and online learning activities to develop and apply skills in finance and costing required in health care management.</td>
</tr>
<tr>
<td>PHC</td>
<td>6166</td>
<td>Advanced Seminar in Health Care Management</td>
<td>2</td>
<td>PR: PHC 6148, PHC 6160, PHC 6180, PHC 6191 (or ACG 6025)</td>
<td>The course further develops analytic and decision-making skills regarding health services issues and problems. Students integrate and apply content from previous courses, (including finance, management policy, strategy, and quality) to analyze and solve health service problems by defining issues and goals, identifying methodologies to address concerns, analyzing information and developing and defining conclusions and recommendations.</td>
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<tr>
<td>PHC</td>
<td>6180</td>
<td>Health Services Management</td>
<td>3</td>
<td>CPR: PHC 6102</td>
<td>Advanced study of specific topics in health care organization management including the managerial process, organizational theory, resource utilization and control, and human resource management.</td>
</tr>
<tr>
<td>PHC</td>
<td>6181</td>
<td>Organizational Behavior in Health Services</td>
<td>3</td>
<td></td>
<td>Investigates the impact that individuals, groups, and structure have on behavior within organizations. The application of such knowledge is used toward advancing the effectiveness of health care and related organizations. Special consideration is given to human resource applications. Case studies and other exercises are used.</td>
</tr>
<tr>
<td>PHC</td>
<td>6182</td>
<td>Selected Topics In Social Science Education</td>
<td>3</td>
<td></td>
<td>Public health and other professionals will be given an overview of the disaster management process. Provides terms, definitions, and concepts of emergency management from a local, national, and international perspective.</td>
</tr>
<tr>
<td>PHC</td>
<td>6183</td>
<td>Overview of United States and International Emergency/Disaster Management</td>
<td>3</td>
<td></td>
<td>Public Health and other professionals will be given an overview of the disaster management process. Provides terms, definitions, and concepts of emergency management from a local, national, and international perspective.</td>
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<tr>
<td>PHC</td>
<td>6184</td>
<td>Emergency/Disaster Recovery</td>
<td>3</td>
<td></td>
<td>The content of this course is designed to expose the concepts of: 1) recovery models used by the United States and International operations, 2) recovery planning and response to a disaster environment, especially in terms of major disaster incidents, 3) broadening and enhancing the understanding of roles and responsibilities, and 4) the importance to the overall recovery effort. In addition to the United States and international focus, the course also addresses the coordination and problem solving aspects of disaster operations.</td>
</tr>
<tr>
<td>PHC</td>
<td>6185</td>
<td>Emergency/Disaster Preparedness and Planning</td>
<td>3</td>
<td></td>
<td>Emergency Preparedness and Planning provides an overview to preparedness strategies, emergency planning and assessment of hazards and resources. This course provides intermediate level direction and builds upon planning concepts learned in Overview of United States and International Energy Management. Studies include in-depth planning and analytical framework, hazard/vulnerability analysis, and management.</td>
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<tr>
<td>PHC</td>
<td>6186</td>
<td>Public Health Emergencies in Large Populations (PHLEP)</td>
<td>3</td>
<td></td>
<td>To develop or improve the skills of persons interested in providing emergency health services in humanitarian emergencies. The course is divided into two parts: 1) meeting health needs large populations and 2) the humanitarian and ethical issues of refugees and displaced people. Topics covered include food and nutrition, water and sanitation, providing health services, reproductive health, control of communicable diseases, humanitarian law, human rights, ethics, and the geopolitical issues related to population displacement particularly from conflict.</td>
</tr>
<tr>
<td>PHC</td>
<td>6190</td>
<td>Public Health Database Management</td>
<td>3</td>
<td>PR: PHC 6701</td>
<td>This course focuses on the creation of databases with applications to public health and clinical research; data entry and database management and checks for accuracy and consistency, and preparation of final databases for statistical analysis.</td>
</tr>
<tr>
<td>PHC</td>
<td>6191</td>
<td>Quantitative Analysis in Health Services</td>
<td>3</td>
<td>PR: PHC 6050, PHC 6102 and QMB 6305</td>
<td>Examines the use of quantitative modeling techniques to address operational problems in managing medical and health care settings. Topics: probability, sampling, hypotheses testing, estimation, time series, demand forecasting, simulation, and queuing.</td>
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<tr>
<td>PHC</td>
<td>6193</td>
<td>Qualitative Methods in Community Health Research</td>
<td>3</td>
<td></td>
<td>This course provides classroom instruction and field application of qualitative research methods for studying community health problems. It provides a general introduction to ethnographic field methods, emphasizing systematic approaches to collection and analysis of qualitative data. Students will learn to identify the kinds of research problems for which qualitative methods are appropriate, and to critique qualitative research in terms of design, technique, analysis and interpretation.</td>
</tr>
<tr>
<td>PHC</td>
<td>6196</td>
<td>Information Systems in Health Care Management</td>
<td>3</td>
<td>PR: PHC 6050</td>
<td>The course is designed to prepare students to analyze and design information systems in health services organizations.</td>
</tr>
<tr>
<td>PHC</td>
<td>6197</td>
<td>Secondary Data Analysis in Maternal and Child Health</td>
<td>3</td>
<td></td>
<td>The purpose of this course is to provide experience in the management and analysis of data sets relevant to public health. Among the data sets considered are vital statistics, health care utilization databases, practitioner and other registries, periodic surveys, selected surveillance systems, and programmatic data.</td>
</tr>
<tr>
<td>PHC</td>
<td>6230</td>
<td>Foundations of Humanitarian Assistance</td>
<td>3</td>
<td></td>
<td>This course is designed to develop or improve the skills of persons interested in providing emergency health services in international humanitarian emergencies.</td>
</tr>
<tr>
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<tr>
<td>PHC</td>
<td>6231</td>
<td>Organizing Emergency Humanitarian Actions</td>
<td>3</td>
<td></td>
<td>Topics to be covered in this course include the: use of early warning systems, logistics, security of food, safety, assessment and surveillance, epidemiology, malnutrition, feeding programs, water and sanitation, shelter, and communicable diseases.</td>
</tr>
<tr>
<td>PHC</td>
<td>6232</td>
<td>From Emergency to Development and Prevention</td>
<td>3</td>
<td>PR: PHC 6230 and PHC 6231</td>
<td>This course includes: resources, training for local agencies, basic services, cultural issues, Sphere Projects Minimum Standards, basic services, women after a disaster, and health service program.</td>
</tr>
<tr>
<td>PHC</td>
<td>6233</td>
<td>Current Challenges in the Humanitarian Field</td>
<td>3</td>
<td>PR: PHC 6230 and PHC 6231</td>
<td>This course will review: leadership issues, advocacy, neutrality and impartiality, the media, prisoner visitations, torture, demobilization and decommissioning of combatants, expatriates, peace-keeping to peace-building, sovereignty, and reconstruction.</td>
</tr>
<tr>
<td>PHC</td>
<td>6235</td>
<td>Critical Infrastructure Protection for Public Health Concepts</td>
<td>3</td>
<td></td>
<td>The content exposes: 1) HS Presidential Directives 7 and 63, 2) critical infrastructures and key resources, 3) public-private partnerships, and 4) vulnerability analysis and risk analysis/reduction.</td>
</tr>
<tr>
<td>PHC</td>
<td>6236</td>
<td>Business Continuity for Global Health and Security</td>
<td>3</td>
<td></td>
<td>Course covers effects of the environment on health, business, and national security; fundamentals of Business Continuity Management; development of a Business Continuity Plan and a family emergency plan.</td>
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<tr>
<td>PHC</td>
<td>6240</td>
<td>Cultural Competency in Children's Mental Health</td>
<td>3</td>
<td></td>
<td>The course will explore the need of cultural competence in provision of mental health services in a multicultural society. The course will examine culture and ethnicity, multiculturalism, and intercultural communication. The course will define cultural competence from the perspective of the current different approaches to the concept, and examine cultural competence at both mental health systems and service provision levels. Case studies of how cultural competence is implemented by different mental health organizations will be examined.</td>
</tr>
<tr>
<td>PHC</td>
<td>6251</td>
<td>Disease Surveillance and Monitoring</td>
<td>3</td>
<td></td>
<td>A review of epidemiological principles and methods used in the development and practice of disease and infection surveillance, prevention and control for public health in general and in the context of the hospital setting in particular. Basic epidemiological concepts will be focused in communicable diseases, nosocomial infections, environmental exposures, and emerging diseases.</td>
</tr>
<tr>
<td>PHC</td>
<td>6254</td>
<td>Public Health Implications and Concerns in Homeland Security</td>
<td>3</td>
<td></td>
<td>Identifies the implications public health presents within the context of homeland security related to public health strategy, interagency capabilities, and the resources that are aimed at preventing and containing risks from tragic events.</td>
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<tr>
<td>PHC</td>
<td>6255</td>
<td>Homeland Security: Law, Policy and Public Health</td>
<td>3</td>
<td></td>
<td>Examines the laws and policy documents that are the foundation of homeland security. It is both broad and in depth. Through rigorous analysis, and regular discussions and short papers, students will learn what makes homeland security happen.</td>
</tr>
<tr>
<td>PHC</td>
<td>6300</td>
<td>Principles of Environmental Health</td>
<td>3</td>
<td></td>
<td>This course provides information regarding fundamental topics in environmental and occupational health including air pollution, water pollution, solid and hazardous waste, and environmental health law and ethics.</td>
</tr>
<tr>
<td>PHC</td>
<td>6301</td>
<td>Water Pollution and Treatment</td>
<td>3</td>
<td></td>
<td>A study of treatment technologies for water and wastewater. Emphasis is given to treatment technologies appropriate for developing countries.</td>
</tr>
<tr>
<td>PHC</td>
<td>6303</td>
<td>Community Air Pollution</td>
<td>3</td>
<td>PR: CHM 3610C</td>
<td>A study of air pollutants. Emphasis is given to sources and control technologies as well as health effects and environmental impact.</td>
</tr>
<tr>
<td>PHC</td>
<td>6305</td>
<td>Environmental Analytical Laboratory</td>
<td>3</td>
<td></td>
<td>Techniques used for quantitative sampling and analysis of air, water, and soil contaminants.</td>
</tr>
<tr>
<td>PHC</td>
<td>6306</td>
<td>Radiation Health Principles</td>
<td>2</td>
<td></td>
<td>An analysis of the basic concepts of radiation and the protection of individuals and population groups from ionizing and non-ionizing radiation as well as establishing relationships between radiation exposure and biological damage.</td>
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<tr>
<td>PHC</td>
<td>6307</td>
<td>Principles of Exposure Assessment &amp; Control</td>
<td>3</td>
<td></td>
<td>The student learns the principles and details of processes involved in assessment of inhalation, ingestion, and dermal contact exposures to chemical and biological agents encountered in environmental and occupational settings.</td>
</tr>
<tr>
<td>PHC</td>
<td>6310</td>
<td>Environmental Occupational Toxicology</td>
<td>3</td>
<td></td>
<td>A study of the nature of industrial and environmental toxins and toxic by-products, generated and distributed, leading to disease, disability, or death, and the control measures available. Lecture and appropriate laboratory methods are used.</td>
</tr>
<tr>
<td>PHC</td>
<td>6313</td>
<td>Indoor Environmental Quality</td>
<td>3</td>
<td></td>
<td>Students will learn the importance of maintaining acceptable indoor environmental quality in occupational and residential settings. The course will emphasize current techniques, data interpretation methods, and proper data / conclusions reporting.</td>
</tr>
<tr>
<td>PHC</td>
<td>6314</td>
<td>Infection Control Program Design</td>
<td>3</td>
<td></td>
<td>This course will review educational program design for health care workers, instructional methods, personnel and financial resource management, role of Infection Control (IC) personnel, development of goals, mission statement, action plans for IC, evaluation of programs, communication with administration, physicians and care givers.</td>
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<tr>
<td>PHC</td>
<td>6325</td>
<td>Environmental Laboratory Principles</td>
<td>3</td>
<td></td>
<td>This course familiarizes students with analytical measurement methodologies in quantitative sampling and analysis of air, water, soil contaminants, and analytical chemistry generally.</td>
</tr>
<tr>
<td>PHC</td>
<td>6326</td>
<td>Global Issues in Environmental Health</td>
<td>3</td>
<td></td>
<td>Introduces students to global issues regarding civilization, industrialization and globalization and their effects on the environment and the health of workers and their families.</td>
</tr>
<tr>
<td>PHC</td>
<td>6345</td>
<td>HSE Management &amp; Administration</td>
<td>3</td>
<td></td>
<td>A study of techniques and administrative practices which are instrumental in the initiation and maintenance of programs and procedures that are geared to prevent and reduce work related injuries, illnesses, and discomfort.</td>
</tr>
<tr>
<td>PHC</td>
<td>6351</td>
<td>Occupational Medicine for Health Professionals</td>
<td>3</td>
<td></td>
<td>Designed to enhance the skills of select health professionals in identifying, evaluating and charting a course of action for medical conditions resulting from occupational exposures and hazards.</td>
</tr>
<tr>
<td>PHC</td>
<td>6353</td>
<td>Environmental Toxicology and Risk Assessment</td>
<td>3</td>
<td></td>
<td>Designed to provide training for students to develop the skills necessary to identify, characterize, quantify, and manage human health and ecological risks for the protection of human health and the environment.</td>
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<tr>
<td>PHC</td>
<td>6354</td>
<td>Safety and Health Administration</td>
<td>2</td>
<td></td>
<td>A study of techniques and administrative practices which are instrumental in the initiation and maintenance of programs and procedures that are geared to prevent and reduce work related injuries, illnesses, and discomfort.</td>
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<tr>
<td>PHC</td>
<td>6355</td>
<td>Principles of Occupational Safety</td>
<td>3</td>
<td></td>
<td>A study of safety management as it relates to hazard identification, accident investigation and training, enabling the safety manager to reduce costs to business, industry, and government.</td>
</tr>
<tr>
<td>PHC</td>
<td>6356</td>
<td>Industrial Hygiene</td>
<td>2</td>
<td></td>
<td>A study of the recognition, evaluation, and control of the workplace affecting the health of employees.</td>
</tr>
<tr>
<td>PHC</td>
<td>6357</td>
<td>Environmental and Occupational Health</td>
<td>3</td>
<td></td>
<td>The study of major environmental and occupational factors that contribute to development of health problems in industrialized and developed countries.</td>
</tr>
<tr>
<td>PHC</td>
<td>6358</td>
<td>Physical Agents - Assessment and Control</td>
<td>2</td>
<td></td>
<td>Presents advanced aspects of recognition, assessment and control of occupational physical agents. This is the synthesis course for industrial hygiene students, and students will apply knowledge of hazards evaluation and control.</td>
</tr>
<tr>
<td>PHC</td>
<td>6359</td>
<td>Xenobiotic Metabolism in Environmental and Occupational Health</td>
<td>3</td>
<td></td>
<td>Study of enzymes involved in biotransformation of foreign compounds important in environmental and occupational health.</td>
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<tr>
<td>PHC</td>
<td>6360</td>
<td>Safety Management Principles and Practices</td>
<td>2</td>
<td>PR: PHC 6360</td>
<td>A study of safety management as it relates to hazard identification,</td>
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<td>accident investigation and training, enabling the safety manager to reduce</td>
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<td>costs to business, industry, and government.</td>
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<tr>
<td>PHC</td>
<td>6361</td>
<td>Industrial Ergonomics</td>
<td>2</td>
<td>PR: PHC 6360</td>
<td>Systems logic and methodology for assessing the potential impact of work</td>
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<td>environments on the health and safety of workers; application of</td>
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<td>occupational ergonomics and human factors to the design and evaluation of</td>
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<td>complex work environments.</td>
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<tr>
<td>PHC</td>
<td>6362</td>
<td>Industrial Ventilation</td>
<td>2</td>
<td>PR: PHC 6356</td>
<td>Basic principles of fluid mechanics and exhaust ventilation are employed</td>
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<td>in the design and evaluation of the performance of industrial ventilation</td>
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<td></td>
<td>systems.</td>
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<tr>
<td>PHC</td>
<td>6364</td>
<td>Industrial Hygiene Aspects of Plant Operations</td>
<td>2</td>
<td>PR: PHC 6356</td>
<td>Field visits to industrial plants will be conducted so as to familiarize</td>
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<td>students without prior experience to the health hazards associated with</td>
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<td>various processes and the methods of control employed to prevent excessive</td>
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<td>exposures.</td>
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<tr>
<td>PHC</td>
<td>6365C</td>
<td>Analytical Methods in Industrial Hygiene I</td>
<td>2</td>
<td>PR: PHC 6356</td>
<td>Analytical measuring methodologies and instruments employed in evaluating</td>
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<td>exposure to chemical agents are described and detailed. Hands-on laboratory</td>
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<td>exercises permit full familiarization in the calibration and use of these</td>
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<td>instruments. Problem solving sessions result in the development of a routine</td>
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<td>for the proper handling of laboratory data.</td>
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<tr>
<td>PHC</td>
<td>6366C</td>
<td>Analytical Methods in Industrial Hygiene II</td>
<td>2</td>
<td>PR: PHC 6356</td>
<td>Analytical measuring methodologies and instruments employed in evaluating exposure to physical agents are described and detailed. Hands-on laboratory exercises permit full familiarization in the calibration and use of these instruments. Problem solving sessions result in the development of a routine for the proper handling of laboratory data.</td>
</tr>
<tr>
<td>PHC</td>
<td>6367</td>
<td>Control Aspects of Industrial Hygiene</td>
<td>2</td>
<td>PR: PHC 6356, PHC 6358.</td>
<td>This course maps out the framework for industrial hygiene controls with an emphasis on engineering controls, administrative controls and personal protection. It is the capstone course for industrial hygiene students, who will apply their knowledge of hazard evaluation to the appropriate selection of controls.</td>
</tr>
<tr>
<td>PHC</td>
<td>6369</td>
<td>Industrial Toxicology</td>
<td>2</td>
<td></td>
<td>This course will focus on specific industries, industrial processes and the chemicals that worker's may be potentially exposed to, and their impact on Public Health. The Standard Industrial Classification (SIC) division structure will be used to identify industries that have been studied by NIOSH or other agencies. For each industry identified, chemical hazards, exposure routes, toxicology effects, and monitoring methods will be discussed emphasizing the need for a multidisciplinary approach in providing information aimed at reducing worker exposures to industrial toxicants.</td>
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<td>PHC</td>
<td>6370</td>
<td>Biological and Surface Monitoring</td>
<td>2</td>
<td>PR: CHM 2200, CHM 2211, BSC 2010</td>
<td>This public health course will provide students with a thorough understanding of Biological Monitoring as a method of evaluating exposure to environmental agents. Students learn to distinguish between the limitations of this emerging technology and how to avoid pitfalls associated with misapplication of results. Students learn how to develop sampling strategies for specific chemicals.</td>
</tr>
<tr>
<td>PHC</td>
<td>6371</td>
<td>Air Dispersion Modeling for Regulatory Compliance</td>
<td>3</td>
<td></td>
<td>A study of air pollution meteorology (atmospheric energy balance, inversions and winds), micrometeorology (atmospheric fluid mechanics, turbulence, winds, stability classes, convective boundary layer) and atmospheric diffusion (different theories, Gaussian plume equation, air quality models, atmospheric removal processes), supported by a computer laboratory.</td>
</tr>
<tr>
<td>PHC</td>
<td>6373</td>
<td>Protecting Public Health: Bioterrorism/Biodefense</td>
<td>3</td>
<td></td>
<td>The theoretical, historical and contemporary issues associated with public health protection and safety. This includes quarantine, health and safety management, homeland security, and the history of biological warfare.</td>
</tr>
<tr>
<td>PHC</td>
<td>6400</td>
<td>Maltreated Children and Their Families</td>
<td>3</td>
<td></td>
<td>This course will identify and analyze public health policy and research issues specific to the area of child maltreatment.</td>
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<tr>
<td>PHC</td>
<td>6401</td>
<td>Homelessness: Implications for Behavioral Healthcare</td>
<td>3</td>
<td></td>
<td>A study of the structural, personal, treatment, and sociopolitical issues related to homelessness. Causes of homelessness from structural and personal factors are explored. Quantitative and qualitative data are reviewed to examine the experience of homelessness, pathways into homelessness including mental health, substance abuse, and violence/trauma. A special focus will be on the research conducted by the instructors on services for homeless families and the prevention of homelessness among individuals with severe mental illness.</td>
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<tr>
<td>PHC</td>
<td>6410</td>
<td>Social And Behavioral Sciences Applied to Health</td>
<td>3</td>
<td></td>
<td>A review of the conceptual, empirical, and theoretical contributions of the Social and Behavioral Sciences as they contribute to an understanding of health and illness.</td>
</tr>
<tr>
<td>PHC</td>
<td>6411</td>
<td>Introduction to Social Marketing for Public Health</td>
<td>3</td>
<td></td>
<td>This course is designed to analyze the components and applications of social marketing for public health: theoretical foundations; research methods; strategy development; program design and implementation, materials pretesting, and ethics.</td>
</tr>
<tr>
<td>PHC</td>
<td>6412</td>
<td>Health Disparities and Social Determinants</td>
<td>3</td>
<td></td>
<td>This course is designed to explore health disparities in the U.S. and multi-level strategies to reduce those disparities. Discussions will focus on a critique of the literature from a variety of disciplinary perspectives and an analysis of case studies.</td>
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<tr>
<td>PHC</td>
<td>6413</td>
<td>Family and Community Violence in Public Health</td>
<td>3</td>
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<td>The objective of this course will be to identify and to focus on the most</td>
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<td>serious policy and research issues which are specific to the field of family</td>
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<td>violence. The course will cover theory, research, and applied programs in</td>
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<td></td>
<td></td>
<td>community settings.</td>
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<tr>
<td>PHC</td>
<td>6414</td>
<td>Adolescent Health</td>
<td>3</td>
<td></td>
<td>The purpose of this course is to provide an overview of adolescent health</td>
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<td>issues and trends. With this primary aim, the objectives are organized</td>
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<td>around the knowledge of health assessment and interventions with adolescents</td>
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<td>and the skills needed for effective teaching methodologies to enhance</td>
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<td>health provider communication with adolescents. This course is not</td>
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<td>restricted to Public Health graduate students.</td>
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<tr>
<td>PHC</td>
<td>6418</td>
<td>Public Health and Aging</td>
<td>3</td>
<td></td>
<td>A study of specific health promotion and disease prevention strategies for</td>
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<td>older adults in the context of community health, immunizations, nutrition,</td>
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<td>exercise, and stress management. Also management for chronic disease,</td>
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<td>delay of disabilities, and types of long term care deliver and settings</td>
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<td>are examined.</td>
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<tr>
<td>PHC</td>
<td>6419</td>
<td>Global Issues in Community and Family Health</td>
<td>3</td>
<td></td>
<td>This course provides an overview of current public health issues and problems affecting communities and families around the world. A comparative approach is taken to highlight similarities and differences across countries at variable levels of socioeconomic development. Problems are addressed in terms of etiology, impact and intervention strategies. Reg. Permit Required. CI.</td>
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<tr>
<td>PHC</td>
<td>6420</td>
<td>Health Care Law, Regulation and Ethics</td>
<td>3</td>
<td></td>
<td>This is a survey course of the most significant issues in health care law. Core topics include licensure, malpractice, reproductive issues, the right to die, and managed care. Students will develop and understanding of substantive law, legal decision making, and the relationship between health care law and ethics. Graduate students from other departments may take the course.</td>
</tr>
<tr>
<td>PHC</td>
<td>6421</td>
<td>Public Health Law and Ethics</td>
<td>3</td>
<td></td>
<td>This course provides students with an overview of major ethical and legal concepts. The course considers the role of the legal system in resolving public health problems through the legislature, the courts, and administrative agencies.</td>
</tr>
<tr>
<td>PHC</td>
<td>6422</td>
<td>Environmental Health Law</td>
<td>3</td>
<td>PR: EOH 6357.</td>
<td>Review and analysis of Federal and State laws and regulations in relation to the pollution, regulation and protection of the air, water, and environment issues in general.</td>
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<tr>
<td>PHC</td>
<td>6430</td>
<td>Health Economics I</td>
<td>3</td>
<td>PR: ECO 2023 or equiv.</td>
<td>Microeconomic analysis of the structure of the health care industry and economic incentives facing physicians, patients, and hospitals.</td>
</tr>
<tr>
<td>PHC</td>
<td>6433</td>
<td>Health Economics II</td>
<td>3</td>
<td>PR: PHC 6430</td>
<td>Second of a two part sequence surveying various applications of economic principles and methods to current issues in public health. Emphasis on efficiency goals of health care policy and the use of economic analysis in the design of such policy.</td>
</tr>
<tr>
<td>PHC</td>
<td>6435</td>
<td>Comparative Health Insurance Systems</td>
<td>3</td>
<td>PR: Undergraduate Microeconomics, PHC 6430</td>
<td>Overview of health insurance concepts and major systems in developed countries, using microeconomic tools relevant to management and public policy.</td>
</tr>
<tr>
<td>PHC</td>
<td>6441</td>
<td>Social Determinants of Health</td>
<td>3</td>
<td>PR: PHC 6410.</td>
<td>The course provides students with a basic understanding of our society's most pervasive social disparities in health status and prepares students to evaluate underlying theories and promising interventions related to social determinants of health.</td>
</tr>
<tr>
<td>PHC</td>
<td>6442</td>
<td>Global Health Applications in the Field</td>
<td>3</td>
<td>PR: PHC 6106</td>
<td>This course prepares students for fieldwork in the global public health arena. A comparative approach is taken to highlight similarities and differences across countries at variable levels of socioeconomic development.</td>
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<tr>
<td>PHC</td>
<td>6450</td>
<td>Patient-centered Communication and Professionalism</td>
<td>3</td>
<td></td>
<td>This course will introduce patient-provider communication skills to health students. Through role modeling, practice, and case studies, students will develop effective patient interviewing and communication skills and demonstrate professionalism.</td>
</tr>
<tr>
<td>PHC</td>
<td>6460</td>
<td>Social Marketing Program Management</td>
<td>3</td>
<td>PR: PHC 6411; PHC 6705.</td>
<td>Address the operational and planning issues associated with social marketing programs. Develop social marketing problem-solving, and planning skills. Topics include budgeting, branding, implementation, evaluation.</td>
</tr>
<tr>
<td>PHC</td>
<td>6461</td>
<td>Advanced Social Marketing</td>
<td>3</td>
<td>PR: PHC 6411; PHC 6705.</td>
<td>This course enables students to use the social marketing framework to analyze public health problems and design program solutions. The course focuses on a managerial perspective to improve organizational efficiency and social design principles.</td>
</tr>
<tr>
<td>PHC</td>
<td>6462</td>
<td>Cultural Competency in Public Health Practice</td>
<td>2</td>
<td></td>
<td>An overview of the knowledge and skills needed to work in multicultural environments and apply the principles of cultural competency. Designed to critically examine this construct by incorporating anthropological perspectives and techniques.</td>
</tr>
<tr>
<td>PHC</td>
<td>6500</td>
<td>Theoretical and Behavioral Basis for Health Education</td>
<td>4</td>
<td>PR: PHC 6410.</td>
<td>Assessment of and current methodologies related to understanding and influencing psychosocial, cultural, and situational factors in voluntary behavior change process; theories of health behavior.</td>
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<tr>
<td>PHC</td>
<td>6505</td>
<td>Program Planning in Community Health</td>
<td>3</td>
<td>PR: PHC 6500</td>
<td>This course is designed to prepare students to analyze the planning and development process for community health programs. The PRECEDE-PROCEED model and intervention Mapping will be used as the primary planning frameworks.</td>
</tr>
<tr>
<td>PHC</td>
<td>6507</td>
<td>Health Education Intervention Methods</td>
<td>3</td>
<td>PR: PHC 6500 and PHC 6505.</td>
<td>Prepares students to analyze and incorporate effective content and process in health education program delivery. Course not restricted to health education majors.</td>
</tr>
<tr>
<td>PHC</td>
<td>6508</td>
<td>Case Studies in Health Education</td>
<td>3</td>
<td>PR: PHC 6500</td>
<td>An assessment of selected case studies in Health Education with an emphasis on application, analysis, and evaluation of health education theory and practice to various public, private, health care, and school settings.</td>
</tr>
<tr>
<td>PHC</td>
<td>6510</td>
<td>Exotic and Emerging Infectious Diseases</td>
<td>3</td>
<td></td>
<td>A study of human infectious disease with particular emphasis on diseases caused by parasites, viruses, bacteria, and fungi found in sub-tropical and tropical environments.</td>
</tr>
<tr>
<td>PHC</td>
<td>6511</td>
<td>Public Health Immunology</td>
<td>3</td>
<td></td>
<td>Immunology as applied to public health. Emphasis is on applications of immunology and immunological techniques used in surveillance, prevention, and control of public health problems.</td>
</tr>
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<tr>
<td>PHC</td>
<td>6512</td>
<td>Vectors of Human Disease</td>
<td>3</td>
<td></td>
<td>Biology of the vectors of human disease: major groups include the arthropods, mollusks, and mammals. Emphasis on the ecology of the vectors and their transmission of pathogens as they relate to public health.</td>
</tr>
<tr>
<td>PHC</td>
<td>6513</td>
<td>Public Health Parasitology</td>
<td>3</td>
<td></td>
<td>Human diseases caused by parasite infection with emphasis on diseases related to environmental exposure and of public health importance. Major groups include the protozoan, cestodes, trematodes, and nematodes of human disease.</td>
</tr>
<tr>
<td>PHC</td>
<td>6514</td>
<td>Infectious Disease Control in Developing Countries</td>
<td>3</td>
<td>PR: PHC 6000.</td>
<td>Focuses on disease control strategies for selected infectious and communicable diseases. Diseases covered have been selected on the basis of their relative contribution to the burden of disease in developing countries.</td>
</tr>
<tr>
<td>PHC</td>
<td>6515</td>
<td>Food Safety</td>
<td>3</td>
<td></td>
<td>Overview of food safety practices and principles emphasizing the role of food safety in public health. Emphasis is placed on the leading causes of foodborne illness and their associated food groups.</td>
</tr>
<tr>
<td>PHC</td>
<td>6516</td>
<td>Tropical Diseases</td>
<td>3</td>
<td></td>
<td>The course approaches tropical and infectious diseases from the preventive and global public health perspectives but takes the biological aspects of the host-parasite relationship as bases for its control.</td>
</tr>
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<tr>
<td>PHC</td>
<td>6517</td>
<td>Infectious Disease Prevention Strategies</td>
<td>3</td>
<td></td>
<td>This course focuses on surveillance criteria, outbreak criteria, data collection and study design. Also included will be data analysis and reporting; interaction with public health agencies; preparation for Joint Commission on Accreditation of Healthcare Organizations (JCAHO); prevention and intervention; sanitation, disinfection, antisepsis and sterilization; role of immunization, antimicrobial prophylaxis and therapy.</td>
</tr>
<tr>
<td>PHC</td>
<td>6518</td>
<td>EcoHealth &amp; the Ecology of Tropical Infectious Diseases</td>
<td>3</td>
<td>PR: PHC 6516.</td>
<td>This course surveys the history of the ecosystem approach to community health, and introduces the basic concepts from the emerging EcoHealth Model and recent developments in the transdisciplinary field of disease ecology—both environmental and social.</td>
</tr>
<tr>
<td>PHC</td>
<td>6520</td>
<td>Foodborne Diseases</td>
<td>3</td>
<td>PR: PHC 6562, PHC 4573, BSC 6932, MCB 3020, or CI</td>
<td>Provide knowledge about the principles and methods used in foodborne disease epidemiology as well as knowledge of the leading causes of hospitalization, illness, and deaths due to hazards found in foods.</td>
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<tr>
<td>PHC</td>
<td>6522</td>
<td>Nutrition in Health and Disease</td>
<td>3</td>
<td></td>
<td>Overview of nutrients required for health, regulatory mechanisms influencing requirements and metabolism in growth, reproduction, disease, senescence, psychological and sociological implications, and the coming impacts of genomic (personal) nutrition.</td>
</tr>
<tr>
<td>PHC</td>
<td>6530</td>
<td>Issues and Concepts in Maternal and Child Health</td>
<td>3</td>
<td></td>
<td>The purpose of this course is to provide for the foundation of Maternal and Child health for students who will be concentrating in this area, or as an overview for non-majors.</td>
</tr>
<tr>
<td>PHC</td>
<td>6532</td>
<td>Women's Health Issues in Public Health</td>
<td>3</td>
<td></td>
<td>A public health orientation of women's health needs with their impact on society, family, and children.</td>
</tr>
<tr>
<td>PHC</td>
<td>6535</td>
<td>International Maternal and Child Health</td>
<td>3</td>
<td>PR: PHC 6410</td>
<td>The course examines current priorities for improving the health of mothers and children in developing countries. The emphasis is on understanding MCH issues within the larger context of primary health care and sociocultural factors which influence behavior.</td>
</tr>
<tr>
<td>PHC</td>
<td>6536</td>
<td>Population and Community Health</td>
<td>3</td>
<td>PR: PHC 6410</td>
<td>Population information and applications in health programs. Topics include: population growth and decline, structure, distribution, fertility, morbidity and mortality, and migration as applied to maternal, child and community health.</td>
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<tr>
<td>PHC</td>
<td>6537</td>
<td>Case Studies in MCH Programs, Policies and Research</td>
<td>3</td>
<td>PR: PHC 6530, PH Core Courses</td>
<td>Capstone course intended to provide unifying opportunity to utilize concepts, principles, and skills learned in other MCH and public health courses.</td>
</tr>
<tr>
<td>PHC</td>
<td>6539</td>
<td>Foundations in Adolescent Behavioral Health</td>
<td>3</td>
<td></td>
<td>Examines the interaction of epidemiology, disease surveillance, social neuroscience, environmental vulnerability, pharmacology, and developmental risk &amp; resiliency that affect youth populations at risk for drug use and mental disorders.</td>
</tr>
<tr>
<td>PHC</td>
<td>6542</td>
<td>Epidemiology of Mental Disorders</td>
<td>3</td>
<td></td>
<td>Students in this course will study relevant factors that determine the frequency and distribution of mental disorders in human populations. Mental health intervention strategies also will be explored.</td>
</tr>
<tr>
<td>PHC</td>
<td>6543</td>
<td>Foundations in Behavioral Health Systems</td>
<td>3</td>
<td></td>
<td>This web-based course is a graduate course in Behavioral Health within the Department of Community and Family Health. It is designed to provide the graduate student with an overview and understanding of the significant issues and trends in community &amp; family mental health delivery systems in America. Four major areas of mental health will be emphasized: 1) history and legislation; 2) systems delivery; 3) programs and policies; 4) and selected at-risk populations.</td>
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<tr>
<td>PHC</td>
<td>6544</td>
<td>Children's Mental Health Services</td>
<td>3</td>
<td></td>
<td>The content of this course is designed to prepare professionals to work in partnership with families and other professionals and participate in interdisciplinary teams in a variety of settings to meet the needs of children with mental health problems.</td>
</tr>
<tr>
<td>PHC</td>
<td>6545</td>
<td>Evaluation in Mental Health</td>
<td>3</td>
<td>PR: Biostatistics I or Equivalent</td>
<td>A study of the theories and practical approaches to the development of evaluative methods for behavioral health.</td>
</tr>
<tr>
<td>PHC</td>
<td>6547</td>
<td>Case Management in Community Mental Health</td>
<td>3</td>
<td></td>
<td>This course focuses on case management systems with a special emphasis on clinical case management for vulnerable populations, especially persons with severe mental illness and older adults. This course is designed for persons who are interested in providing case management services, managing such services, or have an interest in the field. The course examines elements critical for the effective provision and evaluation of case management services.</td>
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<tr>
<td>PHC</td>
<td>6548</td>
<td>Grant Writing in Mental Health</td>
<td>3</td>
<td></td>
<td>This course focuses on the process and problems of grant writing in mental health. The course is designed for persons who are interested in identifying and evaluating mental health research questions and demonstration projects. The curriculum examines criteria for good mental health research and provides students with tools for successful grant writing. Students will learn how to develop and market fundable project ideas, where to start, what funding agencies look for, and how to construct a fundable mental health proposal.</td>
</tr>
<tr>
<td>PHC</td>
<td>6549</td>
<td>HIV and Mental Health</td>
<td>3</td>
<td></td>
<td>This course will provide students with an interdisciplinary understanding of HIV/AIDS, focusing primarily on behavioral health and ethical issues. Students will study the unique contributions to prevention and treatment that both mental healthcare workers and theories can make to persons affected by HIV.</td>
</tr>
<tr>
<td>PHC</td>
<td>6560</td>
<td>The Public Health Laboratory System</td>
<td>3</td>
<td></td>
<td>This course deals with the roles of the public health laboratory in the Public Health System and thus familiarizes the student with the types, functions and interactions of Public Health Laboratories.</td>
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<tr>
<td>PHC</td>
<td>6561</td>
<td>Laboratory Techniques in Public Health</td>
<td>3</td>
<td></td>
<td>This is a unique interactive laboratory based course. Each lecture will be supported by a wet lab where students would get hands on experience of laboratory research techniques using basic and advanced biochemical and molecular tools.</td>
</tr>
<tr>
<td>PHC</td>
<td>6562</td>
<td>Microbiology for Healthcare Workers</td>
<td>3</td>
<td></td>
<td>An overview of contemporary microbiology, with emphasis on the significance of microorganisms in the environment and clinical disease. The structure, physiology, molecular genetics, taxonomy, immunological and clinical aspects, and public health implications of microorganisms will be covered.</td>
</tr>
<tr>
<td>PHC</td>
<td>6580</td>
<td>Prevention and Control of Unintentional Injuries</td>
<td>3</td>
<td></td>
<td>Prepares students to critically analyze the nature, magnitude and intervention strategies of unintentional injuries and propose new directions for prevention and control. Not restricted to public health majors.</td>
</tr>
<tr>
<td>PHC</td>
<td>6588</td>
<td>History &amp; Systems of Public Health</td>
<td>1</td>
<td></td>
<td>An overview of the public health profession, including core functions and values, essential services, history, current challenges, and US and global public health systems.</td>
</tr>
<tr>
<td>PHC</td>
<td>6590</td>
<td>Reproductive Health Trends And Issues</td>
<td>3</td>
<td></td>
<td>Provides understanding of reproductive factors in Health and Disease and its impact on community, family, and individual quality of life, and to apply current advances in FP and MCH care components and management in Public Health Programs.</td>
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<tr>
<td>PHC</td>
<td>6591</td>
<td>Reproductive and Perinatal Epidemiology</td>
<td>3</td>
<td>PR: PHC 6000, PHC 6050</td>
<td>This course is an introduction to reproductive/perinatal epidemiology and its application in Maternal and Child Health. It examines perinatal &amp; family planning issues and emphasizes factors that affect reproductive, pregnancy and infant health outcomes.</td>
</tr>
<tr>
<td>PHC</td>
<td>6700</td>
<td>Research Methods in Epidemiology</td>
<td>3</td>
<td>PR: PHC 6000, PHC 6050</td>
<td>Planning, execution, analysis and intervention of epidemiological studies.</td>
</tr>
<tr>
<td>PHC</td>
<td>6701</td>
<td>Computer Applications for Public Health Researchers</td>
<td>3</td>
<td></td>
<td>Course covers essential computer-based techniques for a public health researcher; data entry, editing, management, subsample selection, and data encryption for confidentiality are all covered. SAS is used extensively. Course open to all graduate students.</td>
</tr>
<tr>
<td>PHC</td>
<td>6705</td>
<td>Formative Research Methods in Social Marketing</td>
<td>3</td>
<td>PR: PHC 6411</td>
<td>This course is designed to familiarize students with the basic principles and techniques in conducting formative research for social marketing program development. The major topics covered include: principles of formative research design, qualitative data collection methods, interviewing techniques, qualitative data analysis, survey design, pretesting, and implementation, ethical principles and protection of human subjects.</td>
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<tr>
<td>PHC</td>
<td>6708</td>
<td>Evaluation Methods in Community Health</td>
<td>3</td>
<td>PR: PHC 6505</td>
<td>This course will cover contextual issues surrounding evaluation, evaluation designs and methodological issues, steps involved in conducting an evaluation, communicating the results, and ensuring that evaluation findings are used by intended users.</td>
</tr>
<tr>
<td>PHC</td>
<td>6712</td>
<td>Air Pollution Research Seminar</td>
<td>1</td>
<td></td>
<td>This seminar course is designed to facilitate communication, sharpen research skills in the context of air pollution monitoring and modeling.</td>
</tr>
<tr>
<td>PHC</td>
<td>6716</td>
<td>Advanced Formative Research Methods</td>
<td>3</td>
<td>PR: PHC 6705.</td>
<td>This course gives students an advanced, applied perspective of formative research methods. The focuses on: survey design; online quantitative research; translating findings into social marketing strategy; and applied data reporting techniques.</td>
</tr>
<tr>
<td>PHC</td>
<td>6722</td>
<td>Laboratory Rotations in Global Health Research</td>
<td>3</td>
<td></td>
<td>Designed to familiarize MSPH students with ongoing research and laboratories within the Department of Global Health. Students will choose from a list of laboratory-projects rotation options.</td>
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<tr>
<td>PHC</td>
<td>6724</td>
<td>Synthesizing Public Health Research</td>
<td>1</td>
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<td>This course is an introduction to interpreting, synthesizing, and making claims about the research in different kinds of public health studies, and citing and referencing the research literature.</td>
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<tr>
<td>PHC</td>
<td>6725</td>
<td>Focus Group Research Strategies</td>
<td>3</td>
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<td>This course is an intensive overview of focus group procedures in the public health environment. Attention will be placed on question development, moderator skills, analysis strategies and planning critical logistical details of focus group interviews, and analyzing results of focus group interviews. The course will examine unique methodological characteristics of focus group interviews, identify emerging trends, and explore areas of appropriate and inappropriate use.</td>
</tr>
<tr>
<td>PHC</td>
<td>6726</td>
<td>Community-Based Participatory Research for Tropical Health</td>
<td>6</td>
<td>PR: PHC 6516 and PHC 6518.</td>
<td>Using project-based learning, this field course is designed as an intensive 4-week intro to the background, methods and techniques for Community-based Participatory Research (CbPR) for tropical health interventions in resource-constrained settings.</td>
</tr>
<tr>
<td>PHC</td>
<td>6728</td>
<td>Translational Research Methods in Adolescent Behavioral Health</td>
<td>3</td>
<td>CR: PHC 6946; PR: PHC 6539</td>
<td>Focuses on research methods and measurement models relevant to translational research, implementation science &amp; the transfer of knowledge from research to practice. Adolescents with co-occurring disorders are a special population of focus.</td>
</tr>
<tr>
<td>PHC</td>
<td>6729</td>
<td>Advanced Research Education in Adolescent Behavioral Health</td>
<td>3</td>
<td>CR: PHC 6947; PR: PHC 6539, PHC 6728</td>
<td>Focuses on advanced topics in community-based participatory research in adolescent behavioral health. It will also focus on organization readiness to adopt evidence-based practices in adolescent behavioral health.</td>
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<tr>
<td>PHC</td>
<td>6760</td>
<td>Research Methods in Public Health Programs</td>
<td>3</td>
<td></td>
<td>Improves the students' skills in quantitative research methods that are used evaluating public health programs and health service delivery systems.</td>
</tr>
<tr>
<td>PHC</td>
<td>6761</td>
<td>Global Health Assessment Strategies</td>
<td>3</td>
<td>PR: PHC 6764, PHC 6000, PHC 6050</td>
<td>This course provides a systematic approach for the assessment of public health interventions in low resource countries by providing tools and skills to collect, retrieve, manage, assemble, analyze and communicate information at the community level.</td>
</tr>
<tr>
<td>PHC</td>
<td>6762</td>
<td>Public Health Topics in Global Sustainability</td>
<td>3</td>
<td></td>
<td>The course will address global health problems from the perspective of a sustainable environment and system. Students will learn how this ecosystem is materialized in goods like water, food, housing, transportation and sanitation, key elements of health.</td>
</tr>
<tr>
<td>PHC</td>
<td>6764</td>
<td>Global Health Principles and Contemporary Issues</td>
<td>3</td>
<td></td>
<td>This course introduces students to the global context of public health and its dimensions particular to international settings; examines major themes and policies in global health; and analyzes health problems and varying responses globally.</td>
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<tr>
<td>PHC</td>
<td>6765</td>
<td>International Health Education</td>
<td>3</td>
<td></td>
<td>This travel abroad course compares the practice and venues of health education as they occur in another country with those in the United States. Specific course location varies. Focus is on comparative assessment of individual and community health education needs, program planning, implementation, and evaluation, coordination and administration of programs, resource availability of programs, resource availability, health communication mechanisms, application of research principles, and status of the health education profession.</td>
</tr>
<tr>
<td>PHC</td>
<td>6766</td>
<td>Global Health Challenges: In-Country Case Study (Field Course)</td>
<td>3</td>
<td></td>
<td>This travel abroad course compares the practice and venues of public health as they occur in another country with those in the United States. Health issues unique to and associated with the country are examined.</td>
</tr>
<tr>
<td>PHC</td>
<td>6907</td>
<td>Independent Study: Public Health</td>
<td>1-6</td>
<td></td>
<td>Independent study determined by the student's needs and interests.</td>
</tr>
<tr>
<td>PHC</td>
<td>6930</td>
<td>Public Health Seminar</td>
<td>1-3</td>
<td></td>
<td>Interaction of faculty, students and select health professionals in relation to public health issues and research.</td>
</tr>
<tr>
<td>PHC</td>
<td>6931</td>
<td>Advanced Seminar In Social &amp; Behavioral Sciences Applied To Health</td>
<td>3</td>
<td>PR: PHC 6410</td>
<td>The course overviews the use of social science theory and methods in health problem analysis and program design. For students with appropriate background.</td>
</tr>
<tr>
<td>PHC</td>
<td>6934</td>
<td>Selected Topics in Public Health</td>
<td>1-6</td>
<td></td>
<td>The content of this course will be governed by student demand and instructor interest.</td>
</tr>
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<tr>
<td>PHC</td>
<td>6936</td>
<td>Public Health Capstone</td>
<td>3</td>
<td></td>
<td>The capstone course is designed to provide a culminating highly interactive experience for students and to allow for the synthesis and application of public health core disciplines in situations simulating the actual practice of public health.</td>
</tr>
<tr>
<td>PHC</td>
<td>6945</td>
<td>Supervised Field Experience</td>
<td>1-12</td>
<td></td>
<td>Internship in a public health agency or setting. Application of administrative, program, and/or research models now employed in government and private public health organizations.</td>
</tr>
<tr>
<td>PHC</td>
<td>6946</td>
<td>Service Learning in Adolescent Behavioral Health I</td>
<td>2</td>
<td>CR: PHC 6728.; PR: PHC 6539.</td>
<td>Orient students to the organizational context of adolescent behavioral health community agencies and community implementation of evidence-based practices. Students complete first phase of the Capstone project.</td>
</tr>
<tr>
<td>PHC</td>
<td>6947</td>
<td>Service Learning in Adolescent Behavioral Health II</td>
<td>2</td>
<td>CR: PHC 6729.; PR: PHC 6539, PHC 6728, PHC 6946.</td>
<td>Facilitate completion of the second phase of the Capstone Project, the service learning component of the Institute. Students will implement research projects conceptualized in the first service learning course.</td>
</tr>
<tr>
<td>PHC</td>
<td>6948</td>
<td>Service Learning in Adolescent Behavioral Health III</td>
<td>2</td>
<td>PR: PHC 6539, PHC 6728, PHC 6729, 6946, PHC 6947.</td>
<td>Facilitate completion of the third phase of the Capstone Project. Students will analyze and report findings from research projects conducted during the Service Learning II course.</td>
</tr>
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<tr>
<td>PHC</td>
<td>6974</td>
<td>Social Marketing Capstone</td>
<td>3</td>
<td>PR: PHC 6411, PHC 6705, PHC 6934.</td>
<td>Students conduct a capstone project and present it to faculty and peers for critical evaluation. Competencies reinforced are the ability to design and carry out the formative research phase for a social marketing project and develop a marketing plan.</td>
</tr>
<tr>
<td>PHC</td>
<td>6977</td>
<td>Special Project: MPH</td>
<td>3</td>
<td></td>
<td>In-depth study of a selected issue in public health. A topic will be selected according to student's needs and interests.</td>
</tr>
<tr>
<td>PHC</td>
<td>7000</td>
<td>Practical Issues in Epidemiology</td>
<td>3</td>
<td>PR: PHC 6000.</td>
<td>Provides an understanding of the everyday tasks faced by an epidemiologist working in the field from hypothesis generation to writing up of study findings. Required for Ph.D. students; elective for all other graduate students.</td>
</tr>
<tr>
<td>PHC</td>
<td>7008</td>
<td>Neuroepidemiology</td>
<td>3</td>
<td>PR: PHC 6000, PHC 6050.</td>
<td>This course provides an overview of the epidemiology of selected neurologic diseases. Particular emphasis is placed on how methodologic problems apply to the epidemiologic study of a variety of neurologic diseases.</td>
</tr>
<tr>
<td>PHC</td>
<td>7015</td>
<td>Epidemiologic Study Design and Protocol Development</td>
<td>3</td>
<td>PR: PHC 6000, PHC 6700, PHC 6051</td>
<td>The course will provide the student with the opportunity to acquire knowledge and skill in formulating a research problem and developing an appropriate epidemiologic study design. A detailed proposal will be developed, presented, and defended.</td>
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<tr>
<td>PHC</td>
<td>7017</td>
<td>Epidemiology Methods V</td>
<td>3</td>
<td>PR: PHC 6000, PHC 6010, PHC 6011, PHC 6016 and HSC 6055</td>
<td>This course builds upon material presented in the Epidemiology Methods course sequence and covers advanced epidemiologic methods, including the epidemiologic perspective of advanced statistical techniques and their proper epidemiologic interpretation.</td>
</tr>
<tr>
<td>PHC</td>
<td>7018</td>
<td>Environmental Epidemiology</td>
<td>3</td>
<td>PR: PHC 6000</td>
<td>This course will consider the relationship between environmental (non-occupational) factors and the occurrence of disease in human populations, including the chemical and physical extrinsic agents to which humans are exposed.</td>
</tr>
<tr>
<td>PHC</td>
<td>7019</td>
<td>Occupational Epidemiology</td>
<td>3</td>
<td>PR: PHC 6000</td>
<td>Examines the existing epidemiologic data pertaining to the health effects of specific occupational exposures and the epidemiologic methods involved in the conduct of occupational studies.</td>
</tr>
<tr>
<td>PHC</td>
<td>7039</td>
<td>Critical Thinking in Epidemiology</td>
<td>1</td>
<td>PR: PHC 6000, PHC 6010, PHC 6011 and PHC 6016</td>
<td>This doctoral seminar focuses on important theoretical constructs in the scientific method and epidemiologic principles. The course also examines the general history, development and evolution of epidemiology as a discipline and the role of epidemiology.</td>
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<tr>
<td>PHC</td>
<td>7053</td>
<td>Generalized Linear Models</td>
<td>3</td>
<td>PR: PHC 7058</td>
<td>The course provides an in-depth coverage of the theory of generalized linear models with application in public health. Topics covered are numerical algorithms, exponential family, modeling checking, logistic regression, loglinear models, estimating equations.</td>
</tr>
<tr>
<td>PHC</td>
<td>7054</td>
<td>Advanced Biostatistical Methods</td>
<td>3</td>
<td></td>
<td>This course introduces students to both theoretical and practical problems in specialized advanced topics in Biostatistics. Alternate topics include Applied Multivariate Statistics, Nonparametric Methods, Spatial Statistics in Health Sciences and Advanced Sampling Design. Students can take this course repeatedly.</td>
</tr>
<tr>
<td>PHC</td>
<td>7055</td>
<td>Biostatistical Computing</td>
<td>3</td>
<td>PR: STA 6447 and PHC 7058</td>
<td>This course provides a broad foundation in modern biostatistical computing methods relevant to public health research. It prepares Ph.D. students with advanced computing skills for dissertation research. Topics include algorithms in matrix algebra, Newton Raphson, Fisher’s scoring, the EM algorithm, bootstrap, random number generation, Monte Carlo Markov Chain, and data augmentation.</td>
</tr>
<tr>
<td>PHC</td>
<td>7056</td>
<td>Longitudinal Data Analysis</td>
<td>3</td>
<td>PR: PHC 7058 and PHC 7053</td>
<td>This course is a discussion of recent development of methods for analysis of longitudinal data. Covered topics include generalized estimating equations, mixed effects models, hierarchal models.</td>
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<tr>
<td>PHC</td>
<td>7058</td>
<td>Biostatistical Inference II</td>
<td>3</td>
<td>PR: STA 6447</td>
<td>This course covers the foundation of biostatistical inference, required for biostatic program. Topics include likelihood theory, modern Bayes theory, estimation and testing, non-parametric theory.</td>
</tr>
<tr>
<td>PHC</td>
<td>7059</td>
<td>Advanced Survival Data Analysis</td>
<td>3</td>
<td>PR: STA 6647 and PHC 7058</td>
<td>This course addresses advanced topics of survival data analysis. Topics include recurrence multiple events and faulty models. Counting process based theory is discussed. Real data sets are used for illustration.</td>
</tr>
<tr>
<td>PHC</td>
<td>7067</td>
<td>Probability Models</td>
<td>3</td>
<td>PR: College-level calculus</td>
<td>Probability theory and models with applications in Public Health. Contents: fundamental probability theories; stochastic process; probability modeling with application to health data.</td>
</tr>
<tr>
<td>PHC</td>
<td>7103</td>
<td>Transforming Public Health Practice</td>
<td>3</td>
<td></td>
<td>An introduction to the needs for developing the contemporary public health infrastructure. An overview of current issues and methods of public health practice in addition to issues and methods of public health leadership and management.</td>
</tr>
<tr>
<td>PHC</td>
<td>7122</td>
<td>Vaccinology</td>
<td>3</td>
<td>PR: Graduate or undergraduate immunology course.</td>
<td>Provides advanced information regarding the current state of vaccinology. Besides currently available vaccines, the course reviews vaccines under experimentation for emerging and re-emerging diseases as well as vaccines for neglected tropical diseases.</td>
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<tr>
<td>PHC</td>
<td>7149</td>
<td>Practical Applications II: Public Health Leadership</td>
<td>1</td>
<td>PR: PHC 7103</td>
<td>Designed to engage future public health leaders in discussions and critical thinking activities regarding leadership roles and responsibilities as they contribute to a leadership framework in public health academic, governmental or community practice.</td>
</tr>
<tr>
<td>PHC</td>
<td>7152</td>
<td>Policy and Practice in Community and Family Health</td>
<td>3</td>
<td></td>
<td>This course is designed to prepare students to critically analyze issues and develop skills pertaining to effective policy development and practice in community and family health public health programs.</td>
</tr>
<tr>
<td>PHC</td>
<td>7154</td>
<td>Evidence-informed Public Health I</td>
<td>3</td>
<td></td>
<td>This course provides an overview of evidence-informed public health practice in addition to skills for evidence-informed decision making.</td>
</tr>
<tr>
<td>PHC</td>
<td>7156</td>
<td>Evidence-Informed Public Health II</td>
<td>3</td>
<td>PR: PHC 7154</td>
<td>An overview of evidence-informed public health decision making including: assessment of scientific evidence; development and quantification of problem statement; prioritizing evidence-informed options; and, translating evidence to action.</td>
</tr>
<tr>
<td>PHC</td>
<td>7198</td>
<td>Advanced Qualitative Methods in Community Health Research</td>
<td>3</td>
<td>PR: PHC 6193, PHC 6500.</td>
<td>This course provides advanced instruction and supervision of field application of qualitative research methods for studying community health problems. Content focuses on the skills to critically evaluate theory-based mixed method designs.</td>
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<tr>
<td>PHC</td>
<td>7317</td>
<td>Risk Communication in Public Health</td>
<td>2</td>
<td></td>
<td>Communicating with the public about environmental and occupational health risks that affect individuals, families, and communities is a central task facing public health professionals. Analyzes the structure, function, content and process of risk communication in order to maximize effective, responsible and ethical public interaction and to describe the issues related to the legal implementation of risk communication in public health organizations.</td>
</tr>
<tr>
<td>PHC</td>
<td>7368</td>
<td>Aerosol Technology in Industrial Hygiene</td>
<td>2</td>
<td></td>
<td>An advanced study of the properties, behavior, and measurement of aerosols, including the physical and chemical principles affecting behavior. Various applications of aerosol technology in industrial hygiene will be investigated, including inhalation and deposition of aerosols, aerosol sampling, and control.</td>
</tr>
<tr>
<td>PHC</td>
<td>7405</td>
<td>Theoretical Application to Public Health Issues</td>
<td>3</td>
<td></td>
<td>Designed for the advanced doctoral student focusing on the application of theory for developing, implementing, and evaluating public health interventions.</td>
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<tr>
<td>PHC</td>
<td>7417</td>
<td>Family Systems and Public Health</td>
<td>3</td>
<td></td>
<td>Intended for doctoral students in Community and Family Health interested in social and behavioral theories of family and health behavior. Covers an array of theoretical perspectives related to the process, structure and function of systems. Examines the human values associated with intimate and non-intimate relationships that comprise healthy relational settings. Implications of these conceptual and theoretical frames for public health issues will be discusses.</td>
</tr>
<tr>
<td>PHC</td>
<td>7437</td>
<td>Applications in Health Economics</td>
<td>3</td>
<td>PR: PHC 6430.</td>
<td>1. in depth, economic evaluation techniques, cost-benefit, cost-effectiveness, and cost-utility analysis. 2. critical review of selected peer reviewed empirical studies. 3. students use a large dataset and estimate an effect size.</td>
</tr>
<tr>
<td>PHC</td>
<td>7583</td>
<td>Community-Based Health Promotion</td>
<td>3</td>
<td>PR: PHC 7198, PHC 7405.</td>
<td>This course is designed to familiarize students with key historical underpinnings and principles and practices of community-based participatory research.</td>
</tr>
<tr>
<td>PHC</td>
<td>7702</td>
<td>Advanced Public Health Research and Evaluation Methods</td>
<td>3</td>
<td>PR: PHC 6010; PHC 6708; PHC 6701; HSC 7267; PHC 6500; PHC 7417; PHC 6193.</td>
<td>This course focuses on advanced research and evaluation methods of multi-level community based public health initiatives. Models and processes for evaluation of multi-level program interventions, study design and appropriate methods are covered.</td>
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<tr>
<td>PHC</td>
<td>7703</td>
<td>Advanced Research Methods in Epidemiology</td>
<td>3</td>
<td>PR: PHC 6010, PHC 6011, PHC 6016, PHC 6053, PHC 6051</td>
<td>Course emphasizes summary and statistical analysis of data. Methods include life tables, logistic and proportional hazards regression, assessment of confounding, interaction, and bias. Includes a two-hour weekly computer lab.</td>
</tr>
<tr>
<td>PHC</td>
<td>7704</td>
<td>Applied Research Methods in Community and Family Health</td>
<td>3</td>
<td>PR: PHC 6050, PHC 6700, PHC 6708</td>
<td>Focuses on the application of appropriate theories, models, and methods of research inquiry to multi-level public health research and evaluation.</td>
</tr>
<tr>
<td>PHC</td>
<td>7709</td>
<td>Case Studies in the Quantitative Analysis of Public Health Data</td>
<td>3</td>
<td>PR: PHC 6051 or Equivalent.</td>
<td>Focuses on training students in public health applications of multivariate analytic techniques including factor analysis, regression analysis, multivariate analysis of variance, event history analysis, multi-level modeling and structural equation modeling.</td>
</tr>
<tr>
<td>PHC</td>
<td>7727</td>
<td>Implementation and Management of Epidemiologic Studies</td>
<td>3</td>
<td>PR: PHC 6000, PHC 6010, PHC 6011, PHC 6050, PHC 6701, PHC 6190</td>
<td>This course addresses the practical aspects of implementation and management of research studies in a manner consistent with the scientific method, i.e., how do you get it done? Topics include systems theory, questionnaire design, &amp; operations research.</td>
</tr>
<tr>
<td>PHC</td>
<td>7908</td>
<td>Specialized Study in Public Health</td>
<td>1-9</td>
<td></td>
<td>Demonstration of an in-depth study in a specialized public health area. This study may be used to address areas where a student needs to demonstrate a higher level of competency.</td>
</tr>
<tr>
<td>PHC</td>
<td>7910</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td>Advanced research design and application.</td>
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<tr>
<td>PHC</td>
<td>7931</td>
<td>Advanced Interdisciplinary Seminar in Public Health</td>
<td>1-3</td>
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<td>Students, faculty and other health professionals will participate in presenting and discussing contemporary health issues and possible solutions.</td>
</tr>
<tr>
<td>PHC</td>
<td>7932</td>
<td>Practical Applications I: Policy, Advocacy and Public Health</td>
<td>1</td>
<td></td>
<td>This seminar course is designed to engage current public health practitioners in discussions and critical thinking activities that build skills for influencing health policy and program decision-making.</td>
</tr>
<tr>
<td>PHC</td>
<td>7934</td>
<td>Writing for Scholarly Publication in Health Science</td>
<td>3</td>
<td></td>
<td>The purpose of this course is for the development of skills that culminate in publishable works in health-related journals and other related publications. There will be an emphasis on writing, editing, reviewing and other applicable skills.</td>
</tr>
<tr>
<td>PHC</td>
<td>7935</td>
<td>Special Topics In Public Health</td>
<td>1-3</td>
<td></td>
<td>Content will include recent or current issues in public health.</td>
</tr>
<tr>
<td>PHC</td>
<td>7936</td>
<td>Seminar in Health Care Outcomes Measurement</td>
<td>3</td>
<td></td>
<td>This course is designed to prepare doctoral students and advanced masters degree students to design both population-based and practice-based studies of health care outcomes.</td>
</tr>
<tr>
<td>PHC</td>
<td>7937</td>
<td>Advanced Seminar in Grant-Writing</td>
<td>3</td>
<td></td>
<td>This course addresses advanced skills and techniques necessary for writing successful research grant proposals. The focus is on writing grant proposals aimed at public health research and evaluation of public health interventions.</td>
</tr>
<tr>
<td>PHC</td>
<td>7980</td>
<td>Dissertation</td>
<td>2-19</td>
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1330
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<tbody>
<tr>
<td>PHH</td>
<td>6105</td>
<td>Seminar in Ancient Philosophy</td>
<td>4</td>
<td></td>
<td>Examine major texts in Ancient Philosophy, such as Plato's Theaetetus and Timaeus, and Aristotle's Metaphysics, Physics, and De Anima.</td>
</tr>
<tr>
<td>PHH</td>
<td>6205</td>
<td>Seminar in Medieval Philosophy</td>
<td>4</td>
<td></td>
<td>Exams major texts, topics, and thinkers in medieval philosophy.</td>
</tr>
<tr>
<td>PHH</td>
<td>6310</td>
<td>Seminar in Seventeenth Century Philosophy</td>
<td>4</td>
<td></td>
<td>This course will examine major texts in Seventeenth Century Philosophy.</td>
</tr>
<tr>
<td>PHH</td>
<td>6426</td>
<td>Seminar in Eighteenth Century Philosophy</td>
<td>4</td>
<td></td>
<td>Exams major texts in Eighteenth Century Philosophy.</td>
</tr>
<tr>
<td>PHH</td>
<td>6645</td>
<td>Contemporary Continental Philosophy</td>
<td>4</td>
<td></td>
<td>This course examines four new directions in contemporary continental philosophy, genealogy, feminist critiques of the history of philosophy, Marxist-Hegelian analyses of popular culture, and mathematical-scientific approaches to continental philosophy.</td>
</tr>
<tr>
<td>PHH</td>
<td>6677</td>
<td>Seminar in German Idealism</td>
<td>4</td>
<td></td>
<td>Overview of the central theoretical currents in the development of German Idealism from Immanuel Kant through G.W.F. Hegel, with emphasis on the intermediary developments in the works of K.L. Reinhold and J.G. Fichte.</td>
</tr>
<tr>
<td>PHH</td>
<td>6938</td>
<td>Seminar in the History of Philosophy</td>
<td>3</td>
<td></td>
<td>A seminar in the history of philosophy. The instructor will determine the subject matter. Variable titles: Ancient, Modern, Recent, Contemporary.</td>
</tr>
<tr>
<td>PHI</td>
<td>5135</td>
<td>Symbolic Logic</td>
<td>3</td>
<td>PR: PHI 2101</td>
<td>Study of topics such as the following: Metatheory of propositional and predicate logic, related metatheoretic results, alternative logic.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>PHI</td>
<td>5225</td>
<td>Philosophy of Language</td>
<td>3</td>
<td>PR: Eight hours of philosophy</td>
<td>An examination of semantically, syntactical, and functional theories of language with special attention given to the problems of meaning, linguistic reference, syntactical form, and the relations between scientific languages and ordinary linguistic usage. Seminar format.</td>
</tr>
<tr>
<td>PHI</td>
<td>5913</td>
<td>Research</td>
<td>1-4</td>
<td></td>
<td>Individual research supervised by a faculty member.</td>
</tr>
<tr>
<td>PHI</td>
<td>5934</td>
<td>Selected Topics</td>
<td>1-3</td>
<td></td>
<td>Selected topics according to the needs of the student.</td>
</tr>
<tr>
<td>PHI</td>
<td>6305</td>
<td>Seminar in Epistemology</td>
<td>3</td>
<td></td>
<td>An analysis of recent and contemporary problems of knowledge. Seminar format.</td>
</tr>
<tr>
<td>PHI</td>
<td>6405</td>
<td>Seminar in the Philosophy of Natural Science</td>
<td>3</td>
<td></td>
<td>A study of the nature and status of physical theories, some basic problems associated with scientific methodology, and the philosophical implications of modern science. Seminar format.</td>
</tr>
<tr>
<td>PHI</td>
<td>6425</td>
<td>Seminar in the Philosophy of Social Science</td>
<td>3</td>
<td>PR: 8 hours of philosophy</td>
<td>Philosophical issues arising in the social sciences; value assumptions, laws and the theories, models, etc. Seminar format.</td>
</tr>
<tr>
<td>PHI</td>
<td>6506</td>
<td>Seminar in Metaphysics</td>
<td>3</td>
<td></td>
<td>In this course students will examine selected topics in classical and contemporary metaphysics, for example, the concept and categories of Being or existence, the existence of God, the problem of universals or general terms, the a priori, the mind--body problem, and the identity thesis.</td>
</tr>
<tr>
<td>PHI</td>
<td>6605</td>
<td>Seminar in Ethics</td>
<td>3</td>
<td></td>
<td>Advanced study of the problems of moral philosophy.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>PHI</td>
<td>6634</td>
<td>Seminar in Biomedical Ethics</td>
<td>3</td>
<td></td>
<td>A focused examination of a particular topic in biomedical ethics such as clinical bioethics, healthcare organizational ethics, philosophy of medicine, medical ethics and law, or medical ethics and conflict resolution.</td>
</tr>
<tr>
<td>PHI</td>
<td>6645</td>
<td>Developmental Ethics</td>
<td>3</td>
<td></td>
<td>This course presents and critically examines the major ethical theories related to both national and international development institutions, policies, and practices.</td>
</tr>
<tr>
<td>PHI</td>
<td>6665</td>
<td>Metaethics</td>
<td>3</td>
<td>PR: PHI 2600</td>
<td>A study of alternative theories of metaethics including emotivism, moral point of view, supererogate virtue theory.</td>
</tr>
<tr>
<td>PHI</td>
<td>6808</td>
<td>Seminar in Aesthetics</td>
<td>3</td>
<td></td>
<td>An analysis of fundamental special problems of aesthetics; value, perception, communication, technique, context. Seminar format.</td>
</tr>
<tr>
<td>PHI</td>
<td>6908</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td>Selected topics according to the needs of the student. Approval slip from instructor required.</td>
</tr>
<tr>
<td>PHI</td>
<td>6934</td>
<td>Selected Topics</td>
<td>1-3</td>
<td></td>
<td>Special course to be used primarily for the training of teaching assistants.</td>
</tr>
<tr>
<td>PHI</td>
<td>6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
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<tr>
<td>PHI</td>
<td>7980</td>
<td>Dissertation: Doctoral</td>
<td>2-19</td>
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<tr>
<td>PHM</td>
<td>5126</td>
<td>Social Issues in Biomedical Ethics</td>
<td>3</td>
<td></td>
<td>An examination of the social and political issues arising from rapid changes in medicine and technology. Topics covered may include social issues related to the just distribution of health care, reproductive technologies, HIV and AIDS, eugenics, genetic testing, and maternal-fetal relations.</td>
</tr>
<tr>
<td>PHM</td>
<td>6105</td>
<td>Seminar in Social Philosophy</td>
<td>3</td>
<td></td>
<td>A detailed study of the philosophical theories of society, class societies (Capitalism), advanced technocracy (all types). Seminar format.</td>
</tr>
<tr>
<td>PHM</td>
<td>6265</td>
<td>Continental Phil I: Phenomenology Of Hermeneutics</td>
<td>3</td>
<td></td>
<td>A general survey of the 20th century continental schools of phenomenology, ontology, and hermeneutics, with an emphasis on Husserl and Heidegger.</td>
</tr>
<tr>
<td>PHM</td>
<td>6266</td>
<td>Continental Philosophy II: Poli/Social Theory</td>
<td>3</td>
<td></td>
<td>A general survey of 20th century continental social and political theory, dealing both with the younger and older generations of the Critical Theory tradition, together with their contemporaries and critics.</td>
</tr>
<tr>
<td>PHM</td>
<td>6267</td>
<td>Continental Philosophy III: Struc/Deconstruc</td>
<td>3</td>
<td></td>
<td>An examination of leading philosophical texts in 20th century continental philosophical movements known as structuralism, post-structuralism, postmodernism and deconstruction, with special emphasis on the works of Michel Foucault and Jacques Derrida.</td>
</tr>
<tr>
<td>PHM</td>
<td>6305</td>
<td>Seminar in Political Philosophy</td>
<td>3</td>
<td></td>
<td>An examination of the main political philosophies. Seminar format.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>PHM</td>
<td>6506</td>
<td>Seminar in the Philosophy of History</td>
<td>3</td>
<td></td>
<td>The analysis of language and logic of historical explanation, historical idealism, historical materialism, positivism, and historical sociology. Seminar format.</td>
</tr>
<tr>
<td>PHP</td>
<td>6005</td>
<td>Plato</td>
<td>3</td>
<td></td>
<td>A systematic study of Plato's dialogues.</td>
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<tr>
<td>PHP</td>
<td>6015</td>
<td>Aristotle</td>
<td>3</td>
<td></td>
<td>A systematic study of Aristotle's philosophy.</td>
</tr>
<tr>
<td>PHP</td>
<td>6405</td>
<td>Seminar in Descartes' Philosophy</td>
<td>4</td>
<td></td>
<td>Examination of Descartes' major philosophical texts.</td>
</tr>
<tr>
<td>PHP</td>
<td>6415</td>
<td>Kant</td>
<td>3</td>
<td>CR: Computer Applications.</td>
<td>A survey of Kant's critical philosophy, emphasizing transcendental epistemology and Kant's critique of metaphysics. This course is open to graduate students (majors and non-majors). Prior knowledge of the history of philosophy is required, in particular of early-modern philosophy.</td>
</tr>
<tr>
<td>PHP</td>
<td>6420</td>
<td>Seminar in Leibniz's Philosophy</td>
<td>4</td>
<td></td>
<td>Examination of Leibniz's major philosophical texts.</td>
</tr>
<tr>
<td>PHP</td>
<td>6505</td>
<td>Seminar on Hegel's Philosophy</td>
<td>4</td>
<td></td>
<td>Careful interpretation and critical analysis of Hegel's seminal and perhaps most enduring work, the Phenomenology of Spirit.</td>
</tr>
<tr>
<td>PHP</td>
<td>6525</td>
<td>Nietzsche and the Nietzscheans</td>
<td>4</td>
<td></td>
<td>Examines Nietzsche's major texts as well as the radical differences in Nietzsche reception from 1889 to the present. For graduate students only.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>PHP</td>
<td>6624</td>
<td>Adorno</td>
<td>4</td>
<td></td>
<td>Examines Adorno's major texts, methodology, collaborations with other members of the Frankfurt School, and impact on twentieth-century continental philosophy and sociology. For graduate students only.</td>
</tr>
<tr>
<td>PHP</td>
<td>6645</td>
<td>Foucault</td>
<td>4</td>
<td></td>
<td>Examines Foucault's major texts, methodology, similarities and differences with structuralism and deconstruction, and impact on contemporary continental philosophy and history. For graduate students only.</td>
</tr>
<tr>
<td>PHY</td>
<td>5720C</td>
<td>Electronics for Research</td>
<td>3</td>
<td></td>
<td>A rigorous introduction to the fundamentals of analog and digital electronics. Theoretical circuit analysis and weekly labs introduce practical use of diodes, transistors, analog and digital Ics, breadboarding techniques and electronics test instrumentation. Spring Semester.</td>
</tr>
<tr>
<td>PHY</td>
<td>5937</td>
<td>Selected Topics in Physics</td>
<td>1-4</td>
<td></td>
<td>Each topic is a course in directed study under the supervision of a faculty member.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>PHY</td>
<td>6436</td>
<td>Applied Materials Physics</td>
<td>3</td>
<td></td>
<td>Introduces students to properties and applications of advanced functional</td>
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<td></td>
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<td></td>
<td>materials, such as nanostructured materials and biomaterials.</td>
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<tr>
<td>PHY</td>
<td>6446</td>
<td>Lasers and Applications</td>
<td>3</td>
<td>PR: PHY 4324 and PHY 4604</td>
<td>Optical modes, optical resonator theory, gain saturation, theory of laser</td>
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<td>oscillators, specific laser systems, Q-switching and mode-locking, optical</td>
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<td>waveguides.</td>
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<tr>
<td>PHY</td>
<td>6447</td>
<td>Physics of Lightwave Devices and Applications</td>
<td>3</td>
<td></td>
<td>Nonlinear optics including optical phase conjugation, second harmonic and</td>
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<td>sum frequency generation, and stimulated Raman scattering. Selected</td>
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<td>applications of lasers and nonlinear optics.</td>
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<tr>
<td>PHY</td>
<td>6536</td>
<td>Statistical Mechanics</td>
<td>3</td>
<td>PR: PHY 6645</td>
<td>Kinetic theory, configuration and phase space. Boltzmann theorem, Liouville</td>
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<td></td>
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<td>theorem, ensemble theory, quantum statistics.</td>
</tr>
<tr>
<td>PHY</td>
<td>6645</td>
<td>Quantum Mechanics I</td>
<td>3</td>
<td>CR: PHZ 5115; PR: PHY 4604 or PHZ 5115</td>
<td>Hilbert space, continuous spectrum, matrix and wave mechanics, quantum</td>
</tr>
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<td>dynamics, symmetries, angular momentum, perturbation methods</td>
</tr>
<tr>
<td>PHY</td>
<td>6646</td>
<td>Applied Quantum Mechanics</td>
<td>3</td>
<td>PR: PHY 6645</td>
<td>Approximation and perturbation methods, hydrogen fine structure, scattering,</td>
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<td></td>
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<td>identical particles, second quantization, Dirac equation.</td>
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<tr>
<td>PHY</td>
<td>6753</td>
<td>Measurement and Instrumentation</td>
<td>3</td>
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<td>Measurement, signals and noise; analog/digital conversion; data</td>
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<td>communication; digital signal processing. LabVIEW programming, instrument</td>
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<td>control, data acquisition through RS232 and GPIB interface. Familiarity</td>
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<td>with electronic circuits recommended.</td>
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<tr>
<td>PHY</td>
<td>6909</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
<td>Independent study in which student must have a contract with an instructor.</td>
</tr>
<tr>
<td>PHY</td>
<td>6911</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td>An individual investigation of a research topic under the supervision of an instructor.</td>
</tr>
<tr>
<td>PHY</td>
<td>6935</td>
<td>Graduate Seminar</td>
<td>1</td>
<td></td>
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<tr>
<td>PHY</td>
<td>6938</td>
<td>Selected Topics in Physics</td>
<td>1-10</td>
<td></td>
<td>Each topic is a course in directed study under the supervision of a faculty member.</td>
</tr>
<tr>
<td>PHY</td>
<td>6940</td>
<td>Supervised Teaching</td>
<td>3</td>
<td></td>
<td>Laboratory teaching under the direction of a Physics Department faculty member.</td>
</tr>
<tr>
<td>PHY</td>
<td>6971</td>
<td>Thesis: Master’s</td>
<td>2-19</td>
<td></td>
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</tr>
<tr>
<td>PHY</td>
<td>7910</td>
<td>Directed Research</td>
<td>1-9</td>
<td></td>
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<tr>
<td>PHY</td>
<td>7980</td>
<td>Dissertation: Doctoral</td>
<td>2-9</td>
<td></td>
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<tr>
<td>PHZ</td>
<td>5115</td>
<td>Methods of Theoretical Physics I</td>
<td>3</td>
<td>PR: MAP 2302 or PHZ 3113</td>
<td>Applications of mathematical techniques to classical and modern physics. Vector spaces including Hilbert space, orthogonal functions, generalized functions, Fourier analysis, transform calculus, and variational calculus.</td>
</tr>
<tr>
<td>PHZ</td>
<td>5116</td>
<td>Methods of Theoretical Physics II</td>
<td>3</td>
<td>PR: PHZ 5115</td>
<td>Applications of mathematical techniques to classical and modern physics. Selected topics in complex analysis, differential and integral equations, numerical methods, and probability theory.</td>
</tr>
<tr>
<td>PHZ</td>
<td>5154C</td>
<td>Introduction to Computational Physics</td>
<td>3</td>
<td></td>
<td>Introduction to the use of computers for solving problems in physics. No programming experience required.</td>
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<td>SUB</td>
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<tr>
<td>PHZ</td>
<td>5156C</td>
<td>Computational Physics I</td>
<td>3</td>
<td>PR: COP 5016, PHZ 5154, PHZ 4151, or CI</td>
<td>C or Fortran programming applied to science and engineering problems. Data analysis, numerical algorithms, modeling, parallel computation. Subjects: neurobiology, quantum magnetism, chaos, etc. Familiarity with programming in a compiled language assumed.</td>
</tr>
<tr>
<td>PHZ</td>
<td>5405</td>
<td>Solid State Physics I</td>
<td>3</td>
<td>PR: PHY 4605 or PHY 6645</td>
<td>Crystal structure, x-ray and electron diffraction, mechanical and thermal properties of solids, electrical and magnetic properties of metals, band theory of metals, insulators, and semiconductors. First semester of sequence PHZ 5405, PHZ 6426.</td>
</tr>
<tr>
<td>PHZ</td>
<td>5430</td>
<td>Introductory Physics of Materials</td>
<td>3</td>
<td></td>
<td>Phenomenological introduction to the structural, thermal, electrical, magnetic, mechanical, and optical properties of materials.</td>
</tr>
<tr>
<td>PHZ</td>
<td>6204</td>
<td>Atomic/Molecular Spectra</td>
<td>3</td>
<td>PR: PHY 6645</td>
<td>Hydrogen atom, one electron systems, centralfield and vector models, perturbations, Zeeman and Stark effect, hyperfinestructure, atomic structure calculations; diatomic spectra, rotational andvibration analysis, intensities, temperatures from spectra, isotope effects.</td>
</tr>
<tr>
<td>SUB</td>
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<td>HRS</td>
<td>PREREQUISITES</td>
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<td>PHZ</td>
<td>6715</td>
<td>Biophysics I</td>
<td>3</td>
<td></td>
<td>This is part one of a two-semester introductory course in biophysics designed to apply concepts from thermodynamics, statistical mechanics and electromagnetism to describe the physical behavior of macromolecules and biological membranes.</td>
</tr>
<tr>
<td>PHZ</td>
<td>6716</td>
<td>Biophysics II</td>
<td>3</td>
<td>PR: PHZ 6715.</td>
<td>This is part two of the two-semester introductory course in cellular and molecular biophysics. The course is designed to extend the concepts introduced in the prior semester to explore the connection between molecular structure and cellular functions.</td>
</tr>
<tr>
<td>PHZ</td>
<td>7940</td>
<td>Industrial Practicum</td>
<td>3</td>
<td></td>
<td>The practicum allows students first-hand experience in a non-academic-research setting.</td>
</tr>
<tr>
<td>POS</td>
<td>5159</td>
<td>Urban Policy Analysis</td>
<td>3</td>
<td></td>
<td>Application of policy framework for urban government &amp; policies. Examine forms of government and how policies such as economic development, law enforcement, community policing, neighborhood policies (with non-profit groups) can be analyzed.</td>
</tr>
<tr>
<td>POS</td>
<td>6045</td>
<td>Seminar in American</td>
<td>3</td>
<td></td>
<td>Advanced study of selected topics of institutions and processes of American national government and politics.</td>
</tr>
<tr>
<td>POS</td>
<td>6095</td>
<td>Seminar In Intergovernmental Relations</td>
<td>3</td>
<td></td>
<td>Advanced study of selected topics of institutions, processes, and behavior of American state governments and Florida government.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>POS</td>
<td>6127</td>
<td>Issues in State Government and Politics</td>
<td>3</td>
<td></td>
<td>Advanced study of selected topics in institutions, processes, and behavior of American state governments and Florida government.</td>
</tr>
<tr>
<td>POS</td>
<td>6455</td>
<td>Political Parties and Interest Groups</td>
<td>3</td>
<td></td>
<td>Analysis of statutes, functions, and characteristics of political parties and interest groups, as well as their interactions with political processes, actors, and institutions.</td>
</tr>
<tr>
<td>POS</td>
<td>6707</td>
<td>Qualitative Analysis</td>
<td>3</td>
<td>PR: POS 6736</td>
<td>Introduces graduate students to different methods of conducting qualitative empirical research in political science. Students will learn how to establish validity and reliability of findings in conducting case studies and field research.</td>
</tr>
<tr>
<td>POS</td>
<td>6735</td>
<td>Foundations of Political Inquiry</td>
<td>3</td>
<td></td>
<td>Survey of philosophical, intellectual, and theoretical issues, including historical development of political science. Topics include empirical approaches, rational choice theory, and critical approaches such as pragmatics, hermeneutics, genealogy, and critical theory.</td>
</tr>
<tr>
<td>POS</td>
<td>6736</td>
<td>Research Design</td>
<td>3</td>
<td></td>
<td>Introduces a variety of research methods, which provide students with tools to conduct their own research. It covers topics such as stating a research question; literature review; causation, hypotheses, and variables; among others.</td>
</tr>
<tr>
<td>POS</td>
<td>6746</td>
<td>Quantitative Analysis I</td>
<td>3</td>
<td></td>
<td>Provide graduate students in political science, international relations, and public policy the necessary tools for analyzing and conducting quantitative research in the discipline.</td>
</tr>
<tr>
<td>SUB</td>
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<td>TITLE</td>
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<tr>
<td>POS</td>
<td>6909</td>
<td>Independent Study</td>
<td>1-3</td>
<td></td>
<td>Specialized independent study determined by the student's needs and interests. Needs instructor's consent.</td>
</tr>
<tr>
<td>POS</td>
<td>6919</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POS</td>
<td>6933</td>
<td>Selected Topics in Political Science</td>
<td>3</td>
<td></td>
<td>Selected topics, issues, and problems in political science.</td>
</tr>
<tr>
<td>POS</td>
<td>6942</td>
<td>Field Work in Political Science</td>
<td>1-3</td>
<td></td>
<td>Application of research models now employed in governmental agencies, including development of a structured research proposal.</td>
</tr>
<tr>
<td>POS</td>
<td>6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POS</td>
<td>7910</td>
<td>Directed Independent Research</td>
<td>3</td>
<td></td>
<td>The purpose of this Independent Study Project is to provide PhD students in Government admitted into candidacy the necessary tools for developing a dissertation proposal in their chosen area of research.</td>
</tr>
<tr>
<td>POS</td>
<td>7980</td>
<td>Dissertation</td>
<td>2-19</td>
<td></td>
<td>This course will allow PhD candidates to conduct research on their dissertation topic in partial fulfillment of the requirements for the PhD in Government. This research takes place following the successful defense of a dissertation proposal.</td>
</tr>
<tr>
<td>POT</td>
<td>6007</td>
<td>Seminar in Political Theory</td>
<td>3</td>
<td></td>
<td>Provides students who are capable of independent work with the opportunity to explore advanced problems of political theory.</td>
</tr>
<tr>
<td>PPE</td>
<td>6058</td>
<td>Personality</td>
<td>3</td>
<td></td>
<td>Survey of research and theories of personality, including its relationship to the development of normal and abnormal behavior.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>PSB</td>
<td>6056</td>
<td>Physiological Psychology</td>
<td>3</td>
<td></td>
<td>Survey of data and research methods in Behavioral Neuroscience. Basic learning theories and CNS function in behavior, and disorders associated with CNS dysfunction will be covered.</td>
</tr>
<tr>
<td>PSY</td>
<td>6217</td>
<td>Research Methods and Measurement</td>
<td>2-4</td>
<td></td>
<td>Courses in research strategies, design and analysis, and measurement theory in psychological experimentation. Inferential statistics, anova, correlation methods, and interpretation.</td>
</tr>
<tr>
<td>PSY</td>
<td>6605C</td>
<td>History and Systems of Psychology</td>
<td>2</td>
<td></td>
<td>A review of the history of modern psychology with emphasis on the major systematic approaches that have influenced the current structure of psychology. Persisting polarities and common underlying issues are studied in various historical contexts.</td>
</tr>
<tr>
<td>PSY</td>
<td>6907</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
<td>Independent study in which student must have a contract with an instructor.</td>
</tr>
<tr>
<td>PSY</td>
<td>6917</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSY</td>
<td>6946</td>
<td>Practicum and Internship in Clinical Psychology</td>
<td>1-15</td>
<td></td>
<td>Supervised training in community and university settings in the application of Psychology.</td>
</tr>
<tr>
<td>PSY</td>
<td>6947</td>
<td>Graduate Instruction Methods</td>
<td>1-3</td>
<td></td>
<td>Special course to be used primarily for the training of teaching assistants.</td>
</tr>
<tr>
<td>PSY</td>
<td>6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>PSY</td>
<td>7908</td>
<td>Directed Readings in Psychology</td>
<td>1-15</td>
<td></td>
<td>An advanced reading program of selected topics in Psychology under the supervision of a Psychology faculty member. The reading program is designed to meet the individual requirements and interest of graduate students in Psychology, with selected topics chosen by the student in close collaboration with a faculty member.</td>
</tr>
<tr>
<td>PSY</td>
<td>7918</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSY</td>
<td>7931</td>
<td>Seminar in Ethics and Professional Problems</td>
<td>2</td>
<td></td>
<td>Ethical issues and professional problems in the practice of psychology.</td>
</tr>
<tr>
<td>PSY</td>
<td>7980</td>
<td>Dissertation: Doctoral</td>
<td>2-19</td>
<td></td>
<td>The study of health care policy as it relates to the policy process in the American setting.</td>
</tr>
<tr>
<td>PUP</td>
<td>5607</td>
<td>Public Policy and Health Care</td>
<td>3</td>
<td></td>
<td>The study of health care policy as it relates to the policy process in the American setting.</td>
</tr>
<tr>
<td>PUP</td>
<td>6007</td>
<td>Seminar in Public Policy</td>
<td>3</td>
<td></td>
<td>Examination of public policy from a theoretical and practical decision. Analysis will be presented in terms of their usefulness in designing policy.</td>
</tr>
<tr>
<td>PUR</td>
<td>5505</td>
<td>Introduction to Strategic Communication Theory and Practice</td>
<td>3</td>
<td></td>
<td>The course is designed to act as a bridge between undergraduate and graduate public relations and advertising education, and between professional communication practices and strategic communication scholarship.</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>SUB</th>
<th>NUM</th>
<th>TITLE</th>
<th>HRS</th>
<th>PREREQUISITES</th>
<th>DESCRIPTION</th>
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</thead>
<tbody>
<tr>
<td>PUR</td>
<td>6603</td>
<td>Strategic Communication Campaigns</td>
<td>3</td>
<td></td>
<td>A problem-solving approach emphasizing the environmental context of strategic communication problems, applied to strategic communication management in organizational settings. Nonmajors with prerequisites allowed. Not repeatable for credit.</td>
</tr>
<tr>
<td>PUR</td>
<td>6607</td>
<td>Strategic Communication Management</td>
<td>3</td>
<td></td>
<td>The focus is on the theoretical basis of public relations and advertising as a management function. These theories are applied to strategic communication management. Nonmajors allowed with necessary prerequisites. Not repeatable for credit.</td>
</tr>
<tr>
<td>QMB</td>
<td>6305</td>
<td>Managerial Decision Analysis</td>
<td>2</td>
<td></td>
<td>A study of the general concepts of interval estimation, hypothesis testing, correlation and multiple regression with an emphasis on applications, concepts and interpretation of results.</td>
</tr>
<tr>
<td>QMB</td>
<td>6358</td>
<td>Data Analytics for Business</td>
<td>2</td>
<td>PR: QMB 6305</td>
<td>This course will provide an introduction to data analytics for managers. It is targeted for MBA students and provides an overview of data collection, visualization and business dashboards, as well as classification models on customer data.</td>
</tr>
<tr>
<td>QMB</td>
<td>6375</td>
<td>Applied Linear Statistical Models</td>
<td>3</td>
<td>PR: QMB 6305 or equiv.</td>
<td>A study of multivariate data analysis techniques and their applications to problems and systems in business.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>QMB</td>
<td>6603</td>
<td>Operations Management and Quality Enhancement</td>
<td>2</td>
<td>PR: college algebra</td>
<td>Principles of managing manufacturing and service organizations. Topics include: competitive use of operations, comprehensive manufacturing strategies, production system design, material requirements planning, JIT systems, quality management, statistical process control, and project management.</td>
</tr>
<tr>
<td>QMB</td>
<td>7557</td>
<td>Research and Writing Skills for Doctoral Students</td>
<td>1</td>
<td></td>
<td>Required of all doctoral students in their first semester, this course is intended to develop skills in data collection and statistical programming and improve students ability to write for academic publication.</td>
</tr>
<tr>
<td>QMB</td>
<td>7565</td>
<td>Introduction to Research Methods</td>
<td>3</td>
<td></td>
<td>A course in research strategies, design, analysis, and measurement for business research.</td>
</tr>
<tr>
<td>QMB</td>
<td>7566</td>
<td>Applied Multivariate Statistical Methods</td>
<td>3</td>
<td></td>
<td>A course in research analysis and measurement focusing on multivariate statistical analysis techniques.</td>
</tr>
<tr>
<td>QMB</td>
<td>7939</td>
<td>Executive Issues in Operations Research &amp; Operations Mgmt</td>
<td>2-4</td>
<td></td>
<td>A research seminar for executives that explores contemporary issues in OR and operations management. The specific theme of the seminar will be determined through consultations between the instructor and the students prior to the first class meeting.</td>
</tr>
<tr>
<td>RCS</td>
<td>5035</td>
<td>Rehabilitation Counseling: Concepts and Applications</td>
<td>3</td>
<td></td>
<td>Introduction to the profession of Rehabilitation Counseling and current issues in the field. Coverage includes rehabilitation history, legislation, case management and related services for Americans with disabilities.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
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<td>PREREQUISITES</td>
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<tr>
<td>RCS</td>
<td>5080</td>
<td>Medical Aspects of Disability</td>
<td>3</td>
<td>PR: RCS 5780</td>
<td>A survey of medical conditions and disabilities encountered by rehabilitation and mental health counselors. Examines the relationship of client handicaps, physical and mental, to rehabilitation and mental health programming.</td>
</tr>
<tr>
<td>RCS</td>
<td>5780</td>
<td>Legal, Ethical, Professional Standards and Issues in Counseling</td>
<td>3</td>
<td></td>
<td>An overview of all aspects of professional functioning including history, roles, organizational structures, ethics, standards and credentialing. Contemporary and developing issues in the field of professional counseling will also be addressed.</td>
</tr>
<tr>
<td>RCS</td>
<td>5905</td>
<td>Directed Studies</td>
<td>1-4</td>
<td></td>
<td>Supervised rehabilitation studies under the direction of a faculty member.</td>
</tr>
<tr>
<td>RCS</td>
<td>6220</td>
<td>Individual Evaluation and Assessment</td>
<td>3</td>
<td>PR: RCS 5080, RCS 5780, RCS 6440.</td>
<td>Examines assessment procedures utilized in rehabilitation and mental health counseling settings and critical issues in the evaluation of people who are mentally and physically disabled.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>RCS</td>
<td>6301</td>
<td>Career and Lifestyle Assessment</td>
<td>3</td>
<td>PR: RCS 5080, RCS 5035, MHS 5020, RCS 6470, RCS 6440</td>
<td>Career development, lifestyle, and related factors with special emphasis on the needs of individuals with disabilities. Includes job placement and a survey of work requirements in different occupations and how these relate to functional limitations.</td>
</tr>
<tr>
<td>RCS</td>
<td>6407</td>
<td>Counseling Theories and Practice</td>
<td>3</td>
<td>PR: MHS 5020, RCS 5035, RCS 5080, RCS 6440</td>
<td>An extension and intensification of the rehabilitation and mental health counseling skills developed in RCS 5404. Includes the study of counseling theories and their contribution to successful counseling and rehabilitation practice.</td>
</tr>
<tr>
<td>RCS</td>
<td>6408</td>
<td>Diagnosis and Treatment of Psychopathology</td>
<td>3</td>
<td>PR: MHS 5020, RCS 6440, RCS 5080, RCS 5035</td>
<td>Psychopathology as applied to psychotherapy and case management in mental health, addictions, and other rehabilitation settings.</td>
</tr>
<tr>
<td>RCS</td>
<td>6409</td>
<td>Counseling in Community Settings</td>
<td>3</td>
<td>PR: MHS 5020</td>
<td>Course is designed to acquaint students with profession of counseling, varied settings in which rehabilitation, mental health counselors, and marriage &amp; family therapists work, pattern of service delivery, &amp; future trends in the profession. Majors only.</td>
</tr>
<tr>
<td>RCS</td>
<td>6440</td>
<td>Social and Cultural Foundations of Counseling</td>
<td>3</td>
<td>PR: RCS 5780</td>
<td>Counseling issues in a multicultural and diverse society. Special emphasis on psychosocial adjustment and counseling for individuals with physical and mental disabilities.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
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<tr>
<td>RCS</td>
<td>6456</td>
<td>Counseling Approaches for Substance Abusers</td>
<td>3</td>
<td>PR: RCS 5450.</td>
<td>The focus of this course is on deepening the student’s understanding of the practice of addictions counseling with an emphasis on biopsychosocial multidisciplinary intervention. Restricted to majors.</td>
</tr>
<tr>
<td>RCS</td>
<td>6459</td>
<td>Professional Skills for Addictions Counselors</td>
<td>3</td>
<td>PR: RCS 5450</td>
<td>The course will be a more in depth and hands on approach to the transdisciplinary foundations that are essential for the work of substance abuse professionals. Application to practice and professional readiness will be the focus.</td>
</tr>
<tr>
<td>RCS</td>
<td>6476</td>
<td>Human Sexuality Counseling</td>
<td>3</td>
<td></td>
<td>Course is designed to introduce students &amp; mental health professionals to the diverse nature and construct of human sexuality. The curriculum meets the Florida Statute 491 licensure requirement as a contact area in &quot;human sexuality theories&quot;. Majors only.&quot;</td>
</tr>
<tr>
<td>RCS</td>
<td>6510</td>
<td>Group Theories and Practice</td>
<td>3</td>
<td>PR: RCS 5035, RCS 5080, MHS 5020, RCS 6440.</td>
<td>Theoretical and empirical issues in group counseling are examined in the context of an ongoing group. Emphasis is on application to rehabilitation and mental health counseling.</td>
</tr>
<tr>
<td>RCS</td>
<td>6740</td>
<td>Research and Program Evaluation</td>
<td>3</td>
<td>PR: RCS 5780.</td>
<td>Training in the evaluation and utilization of available research studies and the development of research skills. An individual research project is required.</td>
</tr>
<tr>
<td>RCS</td>
<td>6803</td>
<td>Practicum in Counseling</td>
<td>3</td>
<td>PR: RCS 5080, MHS 5020, RCS 6440, RCS 5035.</td>
<td>Field work experience in rehabilitation mental health counseling.</td>
</tr>
<tr>
<td>SUB</td>
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<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>RCS</td>
<td>6825</td>
<td>Internship</td>
<td>3</td>
<td></td>
<td>Student placement in an approved intern setting for a minimum of 600 hours of supervised experience.</td>
</tr>
<tr>
<td>RCS</td>
<td>6906</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
<td>Independent study where the student must have a contract with a faculty member.</td>
</tr>
<tr>
<td>RCS</td>
<td>6930</td>
<td>Seminar in Rehabilitation Counseling</td>
<td>1-4</td>
<td></td>
<td>Selected issues and problems in rehabilitation counseling with subject and scope to be determined by instructor.</td>
</tr>
<tr>
<td>RCS</td>
<td>6971</td>
<td>Master’s Thesis</td>
<td>2-6</td>
<td>PR: RCS 6740</td>
<td>The Master’s Thesis for the MA in Rehabilitation and Mental Health Counseling is a research project designed to result in an original research product.</td>
</tr>
<tr>
<td>RED</td>
<td>6116</td>
<td>Current Trends in Elementary Reading Instruction</td>
<td>3</td>
<td>PR: RED 4310 or equiv.</td>
<td>Approaches, materials, and procedures in Elementary Reading instruction, with emphasis on pertinent research.</td>
</tr>
<tr>
<td>RED</td>
<td>6247</td>
<td>Supervision and Coaching in Literacy</td>
<td>3</td>
<td>PR: LAE 6315, RED 6544, RED 6545, RED 6747.</td>
<td>Planning and administering literacy programs and preparation as coaches in reading within STEM area content courses. Intensive work on individual research and projects with a focus of integrating literacy strategies in STEM area content courses.</td>
</tr>
<tr>
<td>RED</td>
<td>6316</td>
<td>Emergent Literacy: Skills, Strategies, &amp; Assessment</td>
<td>3</td>
<td></td>
<td>Understand the developmentally appropriate, research-based theories and practices that support children’s emergent literacy and language learning.</td>
</tr>
<tr>
<td>RED</td>
<td>6317</td>
<td>Intermediate Literacy: Assessment, Skills, and Strategies</td>
<td>3</td>
<td>PR: RED 6316.</td>
<td>Understand the developmentally appropriate, research-based theories and practices that support children’s literacy learning in the intermediate grade levels.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>RED</td>
<td>6365</td>
<td>Reading In Secondary And Higher Education</td>
<td>3</td>
<td></td>
<td>Designed for student and inservice teachers with appropriate B.A. degrees. Content covers secondary, community college, and university levels. Organization permits student to work on applications to individual levels and disciplines. Research paper required.</td>
</tr>
<tr>
<td>RED</td>
<td>6449</td>
<td>Literacy and Technology</td>
<td>3</td>
<td></td>
<td>Students will develop the skills and cultural competencies necessary to engage in participatory culture and develop strategies for integrating digital tools and media literacies into school and school-like settings.</td>
</tr>
<tr>
<td>RED</td>
<td>6514</td>
<td>The Reading Process in the Elementary Grades</td>
<td>3</td>
<td></td>
<td>Prepares students in the foundations of literacy including learning principles, teaching and assessment strategies for providing literacy instruction to emergent, novice, transitional, and accomplished readers and writers in the elementary grades.</td>
</tr>
<tr>
<td>RED</td>
<td>6540</td>
<td>Assessment in Literacy</td>
<td>3</td>
<td>PR: LAE 6315, RED 6544, RED 6545, RED 6747.</td>
<td>RED 6540 is a three credit graduate level course which focuses on methods of analysis of children's literacy and strategies for promoting language, reading and writing development. Authentic literacy assessment in classroom and other instructional environments, informal assessment and diagnosis, and standardized tests will be utilized in evaluation of the multiple factors in reading, writing and language process and problems.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>RED</td>
<td>6544</td>
<td>Cognition, Comprehension, and Content Area Reading: Remediation of Reading</td>
<td>3</td>
<td></td>
<td>In-depth study of reading comprehension. Emphasis is placed on discussion of the concepts of cognition and learning, metacognition and comprehension of text included in the reading process. Process in the reading/writing, connection, specific reading strategies, and procedures for comprehension of text in the content areas are presented.</td>
</tr>
<tr>
<td>RED</td>
<td>6545</td>
<td>Issues in Vocabulary and Word Study</td>
<td>3</td>
<td></td>
<td>The purpose of this course is to provide students with an understanding of current theory and research about reading and writing vocabulary instruction and the interactive causes of literacy disabilities.</td>
</tr>
<tr>
<td>RED</td>
<td>6656</td>
<td>Trends in Literature in a Diverse Society</td>
<td>3</td>
<td></td>
<td>Focuses on the examination of historical and contemporary multicultural children’s literature in order to help teachers and students gain a pluralistic perspective of society. Instructional programs are designed to lead school-age children to a broader understanding, respect, and appreciation of all persons representing various cultural, ethnic, and societal groups.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>RED</td>
<td>6748</td>
<td>Teacher Research Methods In Reading</td>
<td>3</td>
<td></td>
<td>Teacher Research Methods in Reading familiarizes students with the application of classroom action research methodologies in literacy. Course content is directed toward developing understandings of the need for teacher research and a mindset for becoming a teacher researcher. Students will develop a knowledge base in quantitative, qualitative, case study and portfolio-base research methodologies for teachers.</td>
</tr>
<tr>
<td>RED</td>
<td>6749</td>
<td>History and Foundations in Reading and STEM Disciplines</td>
<td>3</td>
<td></td>
<td>Introduces historical approaches to literacy, traces the history of science/STEM movement in Education, presents connections between current research and practice and former models in literacy, and their deployment with STEM areas of curriculum.</td>
</tr>
<tr>
<td>RED</td>
<td>6846</td>
<td>Practicum in Reading</td>
<td>3</td>
<td>PR: RED 6540, RED 6544, RED 6545, RED 6749</td>
<td>Practicum in Reading is a graduate course covering topics and issues relevant to assessment and remediation of reading problems in school-aged children. It is an application course, where students work at a school site with children who are experiencing reading problems.</td>
</tr>
<tr>
<td>RED</td>
<td>6906</td>
<td>Independent Study: Reading Education</td>
<td>1-6</td>
<td></td>
<td>Independent study in which students must have a contract with an instructor.</td>
</tr>
<tr>
<td>RED</td>
<td>6971</td>
<td>Thesis: Masters/Educational Specialist</td>
<td>2-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RED</td>
<td>7048</td>
<td>Reading as a Symbolic Process</td>
<td>3</td>
<td>PR: RED 6116 or RED 6365</td>
<td>Seminar designed to develop critical thinking about the reading process and reading acquisition.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
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<tr>
<td>RED</td>
<td>7315</td>
<td>Survey of Literacy Research Methods</td>
<td>3</td>
<td></td>
<td>Students will survey current methods used in literacy research. Students will determine standards of quality and employ data collection and analysis techniques to address literacy research questions. Open to non-majors. Not repeatable for credit.</td>
</tr>
<tr>
<td>RED</td>
<td>7742</td>
<td>Research in Vocabulary and Word Study</td>
<td>3</td>
<td></td>
<td>Students will critically examine research in word acquisition, development, and instruction from preschool through the intermediate grades linguistic diversity.</td>
</tr>
<tr>
<td>RED</td>
<td>7745</td>
<td>Research in Reading Instruction</td>
<td>3</td>
<td>PR: RED 6116 or RED 6365</td>
<td>Seminar examining in depth the current research on instruction in the field of reading education.</td>
</tr>
<tr>
<td>RED</td>
<td>7798</td>
<td>Research in Transdisciplinary Texts and Teaching</td>
<td>3</td>
<td></td>
<td>The purpose of this course is to familiarize advanced graduate students with research and instructional practices utilizing a variety of texts within a “Transdisciplinary” context.</td>
</tr>
<tr>
<td>RED</td>
<td>7910</td>
<td>Directed Research in Reading/Language Arts</td>
<td>1-19</td>
<td></td>
<td>Independent student-faculty research course.</td>
</tr>
<tr>
<td>RED</td>
<td>7938</td>
<td>Advanced Graduate Seminar</td>
<td>1-3</td>
<td></td>
<td>Discussion and evaluation of current issues and research in Reading/Language Arts and related fields. Rpt. To 6 hours.</td>
</tr>
<tr>
<td>RED</td>
<td>7980</td>
<td>Dissertation: Doctoral</td>
<td>2-30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REE</td>
<td>6045</td>
<td>Real Estate Decisions</td>
<td>3</td>
<td></td>
<td>Provides an introduction to real estate with a focus on property rights (legal considerations), financial/investment analysis, and market (or location) analysis. The primary objective is to show how to make effective real estate decisions.</td>
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<td>SUB</td>
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<tr>
<td>REE</td>
<td>6207</td>
<td>Real Estate Finance</td>
<td>2</td>
<td>PR: FIN 6406, REE 6045.</td>
<td>Provides an advanced treatment of the mortgage markets, including coverage of the primary and secondary mortgage markets, the securitization of mortgages, the valuation of mortgage securities, and commercial mortgage analysis.</td>
</tr>
<tr>
<td>REE</td>
<td>6305</td>
<td>Real Estate Investment</td>
<td>2</td>
<td>PR: FIN 6406, REE 6045.</td>
<td>Introduction to the procedures and analytical methods used to evaluate real estate markets and real estate investments. It focuses on the topic of real estate investment primarily from the private investor’s (equity) perspective.</td>
</tr>
<tr>
<td>REE</td>
<td>6737</td>
<td>Real Estate Development</td>
<td>3</td>
<td>PR: REE 6305, REE 6207, GIS 5049, URP 6232.</td>
<td>This capstone course deals with the application of analytical techniques used to determine the feasibility of real estate projects. Various systems (models) that are applied for evaluating real estate investment and development proposals are covered.</td>
</tr>
<tr>
<td>REE</td>
<td>6938</td>
<td>Selected Topics in Real Estate</td>
<td>2-4</td>
<td></td>
<td>Topics to be selected by instructor and department chairperson on pertinent real estate issues.</td>
</tr>
<tr>
<td>REL</td>
<td>6906</td>
<td>Independent Study</td>
<td>1-3</td>
<td></td>
<td>Independent study in which the student must have a contract with the instructor.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>RLG</td>
<td>6035</td>
<td>Theory and Methods in Religious Studies</td>
<td>4</td>
<td></td>
<td>An introduction to and research methods used in Religious Studies proper and those of other disciplines. In the former are to be found comparative religion, religious hermeneutics, and theological analysis. Among the latter are included comparative literature, literary criticism, sociology, philosophy, and historiography.</td>
</tr>
<tr>
<td>RLG</td>
<td>6126</td>
<td>Religion in America</td>
<td>3</td>
<td></td>
<td>Studies in the history of native American religions, of the rise of American denominations, churches, and sects, of the relationship between church and state, and religious thought in America. Open to non-majors.</td>
</tr>
<tr>
<td>RLG</td>
<td>6143</td>
<td>Religion, Culture, and Society</td>
<td>3</td>
<td></td>
<td>Scholarly study of religion in its complex relationship of culture and society, including definitions and theories of religion, research methods, becoming religious, social organization, and interconnections with other social institutions.</td>
</tr>
<tr>
<td>RLG</td>
<td>6189</td>
<td>Comparative Religious Ethics</td>
<td>3</td>
<td></td>
<td>This seminar explores key issues and the diverse methodological approaches to the comparative study of religious ethics, including history of religions, social scientific, philosophical and theological approaches.</td>
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<tr>
<td>SUB</td>
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<tr>
<td>RLG</td>
<td>6196</td>
<td>Religion and Modernization</td>
<td>3</td>
<td></td>
<td>This course will explore the unique characteristics of modern and post-</td>
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<td></td>
<td></td>
<td>modern civilization, with special attention given to the secularizing</td>
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<td></td>
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<td></td>
<td>effects of modern science, technology, economics, and politics on the</td>
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<td></td>
<td></td>
<td>world’s religions and their various responses to these factors.</td>
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<tr>
<td>RLG</td>
<td>6285</td>
<td>Studies in Biblical Archaeology</td>
<td>3</td>
<td></td>
<td>A study of various problems in Biblical Archaeology including excavation</td>
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<tr>
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<td></td>
<td>techniques, principles of interpretation, problems in correlation of the</td>
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<td>text of the Bible and specific finds, chronology, reconstruction of culture</td>
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<td></td>
<td></td>
<td>from archaeological evidence, and others.</td>
</tr>
<tr>
<td>RLG</td>
<td>6327</td>
<td>Seminar: Ancient Religions and</td>
<td>3</td>
<td></td>
<td>A research seminar in some aspect of ancient religion and literature:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Literatures</td>
<td></td>
<td></td>
<td>Hebrew Bible, New Testament, Mithraism, Mystic Religions, Pseudepigrapha,</td>
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<td></td>
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<td></td>
<td>and others taught in translation.</td>
</tr>
<tr>
<td>RLG</td>
<td>6438</td>
<td>Modern Christian Thought</td>
<td>3</td>
<td></td>
<td>Examines themes, thinkers, and movements in Christian thought since the</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td>16th century.</td>
</tr>
<tr>
<td>RLG</td>
<td>6906</td>
<td>Independent Study</td>
<td>1-3</td>
<td></td>
<td>Independent study in which the student must have a contract with the</td>
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<td>instructor.</td>
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<tr>
<td>RLG</td>
<td>6911</td>
<td>Directed Research</td>
<td>1-3</td>
<td></td>
<td>Individual guidance in concentrated reading in a carefully delimited area</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>of religious studies research skills.</td>
</tr>
<tr>
<td>RLG</td>
<td>6938</td>
<td>Special Topics in Religious Studies</td>
<td>2-4</td>
<td></td>
<td>Open to non-majors. Variable titles offered on topics of special interest.</td>
</tr>
<tr>
<td>RLG</td>
<td>6940</td>
<td>Graduate Instruction Methods</td>
<td>1-4</td>
<td></td>
<td>Offered primarily for the supervision of Graduate Teaching Assistants.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
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<tr>
<td>RLG</td>
<td>6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td></td>
<td>Introduction to &amp; overview of rehabilitation sciences, emphasizing the interdisciplinary and interprofessional nature. The enablement-disablement process and literature highlighting quantitative and qualitative inquiry is highlighted.</td>
</tr>
<tr>
<td>RSD</td>
<td>6111</td>
<td>Introduction to Rehabilitation Sciences</td>
<td>3</td>
<td></td>
<td>This course provides an in-depth analysis of theoretical and methodological issues in rehabilitation science research, education and practice.</td>
</tr>
<tr>
<td>RSD</td>
<td>6112</td>
<td>Advanced Rehabilitation Sciences</td>
<td>3</td>
<td>PR: RSD 6111</td>
<td>Weekly meetings with faculty &amp; guest speaker presentations on timely topics and current research in the field. Students present results of projects in which they are involved or lead discussion of contemporary journal articles in rehabilitation sciences.</td>
</tr>
<tr>
<td>RSD</td>
<td>6920</td>
<td>Colloquium in Rehabilitation Sciences 1</td>
<td>1</td>
<td></td>
<td>Weekly meetings with faculty and guest speaker presentations on timely topics and current research in the field. Students may present results of projects in which they are involved or lead discussion of contemporary journal articles in rehabilitation sciences.</td>
</tr>
<tr>
<td>RSD</td>
<td>6921</td>
<td>Colloquium in Rehabilitation Sciences 2</td>
<td>1</td>
<td>PR: RSD 6920</td>
<td>Weekly meetings with faculty and guest speaker presentations on timely topics and current research in the field. Students may present results of projects in which they are involved or lead discussion of contemporary journal articles in rehabilitation sciences.</td>
</tr>
<tr>
<td>RSD</td>
<td>6941</td>
<td>Teaching Practicum in Rehabilitation Sciences</td>
<td>3</td>
<td></td>
<td>Covers learning theories, teaching methods, assessment techniques and curriculum construction for the adult learner. Students are paired with a teacher-mentor and serve as a teaching assistant in a course relevant to their rehabilitation discipline.</td>
</tr>
<tr>
<td>SUB</td>
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<td>HRS</td>
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<tr>
<td>RSD</td>
<td>7306</td>
<td>Rehabilitation Ethics</td>
<td>3</td>
<td></td>
<td>This course is designed to introduce the student to the social, moral and ethical dimensions of rehabilitative healthcare including informed consent, research on human subjects, health care allocation and disparities.</td>
</tr>
<tr>
<td>RSD</td>
<td>7900</td>
<td>Directed Readings in Rehabilitation Sciences</td>
<td>3</td>
<td>PR: RSD 6111 and RSD 6112</td>
<td>Individually planned readings guided by a faculty member involved in the area of students’ concentration- (a) Chronic Disease, (b) Veterans’ Health/Reintegration or (c) Neuromusculoskeletal Disability, but not currently covered by formal course work.</td>
</tr>
<tr>
<td>RSD</td>
<td>7910</td>
<td>Dissertation - Directed Research in Rehabilitation Sciences</td>
<td>3-12</td>
<td></td>
<td>Dissertation research for the Ph.D. in Rehabilitation Sciences. Under the supervision of a faculty advisor and committee students will pursue independent study of a topic, research or project relevant to contemporary rehabilitation sciences.</td>
</tr>
<tr>
<td>RSD</td>
<td>7911</td>
<td>Mentored Research Apprenticeship</td>
<td>1</td>
<td></td>
<td>Directed research in rehabilitation sciences.</td>
</tr>
<tr>
<td>RSD</td>
<td>7930</td>
<td>Research Proseminar in Rehabilitation Sciences</td>
<td>2</td>
<td>PR: RSD 6111 and RSD 6112</td>
<td>Students explore current topics in rehabilitation science research and develop in-depth analysis in a research area related to the concentration. Students will gain experience in presenting, facilitating and discussing the research of interest to them.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>RSD</td>
<td>7931</td>
<td>Special Topics in Chronic Disease</td>
<td>3</td>
<td>PR: RSD 6111 and RSD 6112</td>
<td>Creates a framework for understanding rehabilitation for individuals with chronic health conditions. Application of validated rehabilitation examination and intervention approaches or strategies that are consistent with evidence-based practice.</td>
</tr>
<tr>
<td>RSD</td>
<td>7932</td>
<td>Special Topics in Neuromusculoskeletal Disability</td>
<td>3</td>
<td>PR: RSD 6111 and RSD 6112</td>
<td>Understanding rehabilitation for neuromusculoskeletal disability. Focuses on the application of validated rehabilitation examination and intervention approaches or strategies that are consistent with evidence-based practice.</td>
</tr>
<tr>
<td>RSD</td>
<td>7933</td>
<td>Special Topics in Veteran's Health/Reintegration</td>
<td>3</td>
<td>PR: RSD 6111 and RSD 6112</td>
<td>Understanding rehabilitation for veterans directed toward successful reintegration, long-term health, and holistic care. Application of validated rehabilitation examination and intervention approaches consistent with evidence-based practice.</td>
</tr>
<tr>
<td>SCE</td>
<td>5325</td>
<td>Methods of Middle Grades Science Education</td>
<td>3</td>
<td></td>
<td>Prepare 5-9 sci teachers to tch sci skills, content; interrelationship, applications of sci as a human endeavor; nature of sci; instructional methods; nature scientific inquiry; development of sci process skills; integration of subj areas; &amp; assessment.</td>
</tr>
<tr>
<td>SCE</td>
<td>5337</td>
<td>Methods of Secondary Science Education</td>
<td>3</td>
<td></td>
<td>Course concentrates on goals, subject matter teaching strategies for high school curricula; assessment and using data to improve student achievement; and development pedagogical content knowledge as it pertains to the teaching and learning of science.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
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<td>HRS</td>
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<tr>
<td>SCE</td>
<td>5564</td>
<td>Reading and Communication in Science Education</td>
<td>3</td>
<td></td>
<td>This course prepares secondary science teachers to teach literacy practices in science. It includes methods for selecting appropriate reading and language approaches. Communication in science and functional aspects of scientific literacy are examined.</td>
</tr>
<tr>
<td>SCE</td>
<td>5937</td>
<td>Selected Topics in Science Education</td>
<td>1-4</td>
<td></td>
<td>Topics in the biological and physical sciences appropriate for teaching in elementary school programs. Analysis of modern curriculum materials used in presenting science as a process of inquiry.</td>
</tr>
<tr>
<td>SCE</td>
<td>6115</td>
<td>Trends in Science Instruction</td>
<td>3</td>
<td>PR: SCE 4310</td>
<td>Topics in the biological and physical sciences appropriate for teaching in elementary school programs. Analysis of modern curriculum materials used in presenting science as a process of inquiry.</td>
</tr>
<tr>
<td>SCE</td>
<td>6315</td>
<td>Teaching Elementary (K-5) School Science</td>
<td>3</td>
<td></td>
<td>This course addresses the concepts, materials, methods around elementary school science and immerses you in learning experiences that provide a robust understanding of science teaching and learning from the perspective of both learner and teacher.</td>
</tr>
<tr>
<td>SCE</td>
<td>6347</td>
<td>Methods for Interpretive &amp; Transformative Standards Based Education</td>
<td>3</td>
<td></td>
<td>Current theories from research in brain physiology, cognitive psychology and science education explaining how humans of all ages learn to make meaning from experiences are translated into practice to bridge the gap between information and understanding.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>SCE</td>
<td>6444</td>
<td>Community Resources for Environmental Education</td>
<td>3</td>
<td></td>
<td>Identify, access, and acquire community resources (media; business/industry); prof. natural science, engineering and social science societies; government and non-government agencies; civic groups, universities) to incorporate into learning opportunities for diverse audiences at all school levels.</td>
</tr>
<tr>
<td>SCE</td>
<td>6645</td>
<td>Mathematics and Science Education Policy, Change, and School Improvement</td>
<td>3</td>
<td>PR: EDF 7655</td>
<td>Knowledge, skills, and strategies are developed to become a facilitator of change for mathematics and science school improvement. Original change initiatives are designed and implemented.</td>
</tr>
<tr>
<td>SCE</td>
<td>6646</td>
<td>Environmental Site Explorations</td>
<td>3</td>
<td></td>
<td>On-site experiences at informal science institutions (ISI) provide first hand opportunity to construct a holistic view of informal education industry, its organization, career paths, management concerns, niches, nature and relationships among programs.</td>
</tr>
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<tr>
<td>SCE</td>
<td>6738</td>
<td>Trends in STEM Education for Middle Grade Teachers</td>
<td>3</td>
<td></td>
<td>This course will help students to develop an understanding of the theoretical frameworks and familiarity with literature on the multiple perspectives underpinning Science, Technology, Engineering, Math (STEM) education.</td>
</tr>
<tr>
<td>SCE</td>
<td>6744</td>
<td>Survey Update of Environmental Research Management Policies</td>
<td>3</td>
<td></td>
<td>Current &amp; future scientific research topics of long term importance are explored providing an integrated update in science. Complex connections among the various natural, math, &amp; social science; agriculture; psychology; &amp; engineering are emphasized.</td>
</tr>
<tr>
<td>SCE</td>
<td>6865</td>
<td>Technology: Solving Societal Problems</td>
<td>3</td>
<td></td>
<td>Specific examples of mathematics/science/technology/society interaction are provided for integration into school-based mathematics and natural science courses.</td>
</tr>
<tr>
<td>SCE</td>
<td>6866</td>
<td>Understanding Mathematics, Science, and Technology: Human Enterprises</td>
<td>3</td>
<td></td>
<td>Science, mathematics, and technology are presented as one multifaceted, dynamic, human-made enterprise responding to the human search for an understanding of the realities of the world. Different &quot;Ways of Knowing&quot; are compared.</td>
</tr>
<tr>
<td>SCE</td>
<td>6906</td>
<td>Independent Study in Science Education</td>
<td>1-6</td>
<td></td>
<td>Independent Study in which students must have a contract with the instructor. Rpt. S/U</td>
</tr>
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<tr>
<td>SCE</td>
<td>6938</td>
<td>Topics in Science Education: Field Practicum</td>
<td>3</td>
<td></td>
<td>This seminar provides teacher candidates with opportunities to interact with peers, public school faculty and university faculty regarding classroom and related school-based experiences. This course is restricted to science education majors.</td>
</tr>
<tr>
<td>SCE</td>
<td>6947</td>
<td>Internship in Secondary Education for Social Sciences</td>
<td>6</td>
<td></td>
<td>Students will work with a cooperating teacher and university supervisor to complete their internship requirements in a classroom setting assigned by the university.</td>
</tr>
<tr>
<td>SCE</td>
<td>7076</td>
<td>Historical, Social, and Epistemological Foundations of Science Education</td>
<td>3</td>
<td></td>
<td>This course is to provide students with an interactive forum to review, analyze, evaluate and discuss topics related to historical, social and epistemological foundations in science education.</td>
</tr>
<tr>
<td>SCE</td>
<td>7345</td>
<td>Theories and Practices of Science Teaching and Learning</td>
<td>3</td>
<td></td>
<td>This course will address historical and contemporary theoretical frameworks for teaching and learning and how they inform science teaching and science education research.</td>
</tr>
<tr>
<td>SCE</td>
<td>7636</td>
<td>Advanced Trends in Science Education</td>
<td>3</td>
<td></td>
<td>The purpose of this course is to provide students with an advanced forum for interactive discussions of seminal and recent trends as they are conceptualized in contemporary science education research literature and realized in practice.</td>
</tr>
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<tr>
<td>SCE</td>
<td>7697</td>
<td>Socioscientific Issues in Science Education</td>
<td>3</td>
<td></td>
<td>The purpose of this course is to provide students with an interactive forum to review, analyze, evaluate and discuss topics related to the role of socioscientific issues in science education.</td>
</tr>
<tr>
<td>SCE</td>
<td>7740</td>
<td>Doctoral Research in Science Education</td>
<td>3</td>
<td></td>
<td>This course prepares students for proposal writing including review of successful proposals and literature, developing research questions and objectives, presenting preliminary results and developing a research program. Required for Sci Ed PhD students.</td>
</tr>
<tr>
<td>SCE</td>
<td>7895</td>
<td>Philosophy and Nature of Science</td>
<td>3</td>
<td></td>
<td>This course focuses on the philosophy and nature of science, including how science and scientists function, the ontological and epistemological foundations of science, and the reciprocal role between science and society.</td>
</tr>
<tr>
<td>SCE</td>
<td>7910</td>
<td>Directed Research in Science Education</td>
<td>1-19</td>
<td></td>
<td>This course permits a doctoral student to conduct advanced research and to pursue specific areas of interest with a faculty member as supervisor. A contract is required with the faculty member. S/U.</td>
</tr>
<tr>
<td>SCE</td>
<td>7980</td>
<td>Dissertation</td>
<td>2-30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SDS</td>
<td>6042</td>
<td>Introduction of Student Affairs</td>
<td>3</td>
<td></td>
<td>Provides students with knowledge of the history, philosophy, organization and structure of Student Affairs, Student Affairs functions and professional competencies, and legal and ethical issues.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>SDS</td>
<td>6260</td>
<td>Assessment in Student Affairs</td>
<td>3</td>
<td>PR: EDF 6481</td>
<td>This course is available only to students in a College Student Affairs cohort, unless otherwise approved by the instructor. The purpose of this course is to teach theory and application of assessment principles and techniques necessary for the student affairs profession.</td>
</tr>
<tr>
<td>SDS</td>
<td>6411</td>
<td>Introduction to Student Personnel Work in Higher Education</td>
<td>2</td>
<td></td>
<td>Study of student personnel services in institutions of higher education. Identification of the needs of students and of the ways to respond to meet these needs. Survey of service units on a campus in terms of structure, organization, funding, etc.</td>
</tr>
<tr>
<td>SDS</td>
<td>6501</td>
<td>Group Theory and Practicum: Children</td>
<td>4</td>
<td>PR: SDS 6411</td>
<td>Experiential study of group structures, group dynamics, methodology, and leadership models applicable to counseling in the elementary schools. Skill building through supervised practicum in leading groups of elementary school children.</td>
</tr>
<tr>
<td>SDS</td>
<td>6621</td>
<td>Financial Aid Administration</td>
<td>2</td>
<td></td>
<td>The purpose of this course is to provide an overview of the history, fundamental concepts, and organization of financial aid administration. The role of financial aid in enrollment management will be addressed.</td>
</tr>
<tr>
<td>SDS</td>
<td>6624</td>
<td>Ecology of Campus Life</td>
<td>3</td>
<td></td>
<td>Provides students with an understanding of the changing demographics, environmental and developmental issues facing college students.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
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<tr>
<td>SDS</td>
<td>6641</td>
<td>Student Affairs Auxiliary Functions</td>
<td>3</td>
<td>PR: SDS 6042</td>
<td>Review of major auxiliary functions in Student Affairs. Includes strategic and operational issues in planning for and operating auxiliary facilities and technological innovations.</td>
</tr>
<tr>
<td>SDS</td>
<td>6645</td>
<td>Student Development Theory</td>
<td>3</td>
<td></td>
<td>An in-depth study of student development theories including those in the areas of cognitive, psychosocial and typology theories. Students will examine theoretical perspectives and learn how to apply them in practical situations encountered in higher education settings.</td>
</tr>
<tr>
<td>SDS</td>
<td>6648</td>
<td>Introduction to Academic Advising</td>
<td>3</td>
<td>PR: SDS 6645</td>
<td>Introduce the basic principles of academic advising.</td>
</tr>
<tr>
<td>SDS</td>
<td>6650</td>
<td>Organization and Administration of Student Affairs</td>
<td>3</td>
<td></td>
<td>Provide a solid foundation of core competencies and skills related to management. The effective student affairs administrator is able to manage staff, systems, and activities with efficiency.</td>
</tr>
<tr>
<td>SDS</td>
<td>6700</td>
<td>Advising Diverse Populations</td>
<td>3</td>
<td>PR: SDS 6645</td>
<td>This course was designed to equip advisors to work with special populations of students with specific needs.</td>
</tr>
<tr>
<td>SDS</td>
<td>6701</td>
<td>Issues in Diversity</td>
<td>2</td>
<td></td>
<td>Addresses individual and organizational issues of multiculturalism and diversity in higher education.</td>
</tr>
<tr>
<td>SDS</td>
<td>6702</td>
<td>Issues in Academic Advising</td>
<td>3</td>
<td>PR: SDS 6645, SDS 6648, SDS 6700</td>
<td>This course was designed to address special topics that may arise in an academic advising setting.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>SDS</td>
<td>6703</td>
<td>The Law and Student Affairs</td>
<td>3</td>
<td>PR: SDS6042, SDS6624, SDS6520, EDF6165</td>
<td>This course for graduate students in College Student Affairs will focus on the legal context associated with the duties of the student affairs professional. The focus will be on an understanding of constitutional, statutory, and contract law.</td>
</tr>
<tr>
<td>SDS</td>
<td>6801</td>
<td>Practicum in Counseling Children</td>
<td>4</td>
<td></td>
<td>Supervised counseling experiences for integration of knowledge and skills gained in didactic study. Focus is on working with elementary age children, parent and teachers.</td>
</tr>
<tr>
<td>SDS</td>
<td>6820</td>
<td>Internship in School Counseling</td>
<td>3-6</td>
<td></td>
<td>Field experience involving one semester of full-time participation or two semesters of part-time participation in all guidance related activities in an elementary or secondary school; classroom guidance; individual and group counseling; assessment/evaluation; staffing; record keeping; etc.</td>
</tr>
<tr>
<td>SDS</td>
<td>7640</td>
<td>Student Affairs Administration</td>
<td>4</td>
<td>PR: SDS 6042</td>
<td>Leadership, management and organizational models, perspectives and issues in administration of Student Affairs will be studied.</td>
</tr>
<tr>
<td>SDS</td>
<td>7642</td>
<td>Advanced Seminar in Student Affairs</td>
<td>1-4</td>
<td></td>
<td>This seminar will nurture students' creativity and enhance their appreciation for scholarly academic work and effective administrative practice in Student Affairs. Issues and trends in Student Affairs will also be studied.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>SDS</td>
<td>7643</td>
<td>Advanced Student Development Theories</td>
<td>4</td>
<td>PR: SDS 6645 or</td>
<td>Contemporary theories of college student development will be examined in the categories of psychosocial, cognitive-structural, and typology. Research, case analysis, and assessment instruments will be studied in translating theoretical models into programmatic interventions in Student Affairs.</td>
</tr>
<tr>
<td>SDS</td>
<td>7644</td>
<td>Enrollment Management</td>
<td>4</td>
<td></td>
<td>Introduction to and overview of a multi-faceted process of enrollment management in higher education. The breadth of theory, models, and principles that contribute to the field of enrollment management will be explored.</td>
</tr>
<tr>
<td>SDS</td>
<td>7830</td>
<td>Advanced Internship in Counselor Education</td>
<td>2-8</td>
<td></td>
<td>Supervised field experiences in an approved agency, educational institution, or industrial setting: counseling, consulting, supervision, applied research, administration, and evaluation of counseling/guidance services.</td>
</tr>
<tr>
<td>SDS</td>
<td>7945</td>
<td>Advanced Internship in Student Affairs Administration</td>
<td>1-6</td>
<td></td>
<td>Supervised field experiences in an approved functional area of Student Affairs in an institution of higher education that will involve administrative functions, applied research and program evaluation.</td>
</tr>
<tr>
<td>SDS</td>
<td>7980</td>
<td>Dissertation</td>
<td>2-24</td>
<td></td>
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</tr>
<tr>
<td>SLA</td>
<td>7910</td>
<td>Directed Research in Second Language</td>
<td>1-6</td>
<td></td>
<td>This course permits a doctoral student to conduct advanced research and to pursue specific areas of interest with a faculty member as supervisor. A contract is required with the faculty member. S/U.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>SLA</td>
<td>7911</td>
<td>Second Language Acquisition Research Laboratory</td>
<td>1-4</td>
<td></td>
<td>This course, offered every semester, provides students with a variety of research tools and directed research experiences that eventually lead to production of publishable materials. Classes are conducted as seminars with instructor and students sharing leadership role. S/U</td>
</tr>
<tr>
<td>SLA</td>
<td>7938</td>
<td>Advanced Seminar in Second Language Acquisition</td>
<td>3</td>
<td></td>
<td>This doctoral level seminar examines in depth the theory and research in the field of Second Language Acquisition. It builds upon the information and concepts presented in introductory SLA theory courses allowing students to more deeply and carefully explore selected topics.</td>
</tr>
<tr>
<td>SLA</td>
<td>7980</td>
<td>Dissertation</td>
<td>2-18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOP</td>
<td>6068</td>
<td>Personality and Social Psychology</td>
<td>3</td>
<td></td>
<td>This course is a survey of modern personality and social psychology. It will examine how personal attributes and social situations influence human behavior. Major contemporary theories of how personality and social variables individually and collectively affect human feelings, thoughts and actions will be presented.</td>
</tr>
<tr>
<td>SOW</td>
<td>6105</td>
<td>Foundations in Human Behavior</td>
<td>3</td>
<td></td>
<td>Introduces a systems perspective on understanding the relationships inherent in human growth and development. Special emphasis is placed on issues involving minorities, women, the disabled, various family forms, and sexual preference.</td>
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<tr>
<td>SOW</td>
<td>6124</td>
<td>Psychopathology</td>
<td>3</td>
<td></td>
<td>This third course in the behavior sequence focuses on mental and emotional disorders. Content includes broad classifications of mental and behavioral disorders and their biopsychological disorders and implications of social work practice in dealing with these disorders.</td>
</tr>
<tr>
<td>SOW</td>
<td>6126</td>
<td>Health, Illness, and Disability</td>
<td>2</td>
<td></td>
<td>This fourth course in the behavior sequence focuses on physical disorders and implications of social work practice in the area of long-term protracted chronic illnesses and the ensuing psychosocial disabilities.</td>
</tr>
<tr>
<td>SOW</td>
<td>6186</td>
<td>Foundations of Social Work Macro Practice</td>
<td>2</td>
<td></td>
<td>Introduction to the process of planned change at macro-level practice within neighborhoods, communities, and organizations. Examines development of strategic models and techniques that primarily support social change.</td>
</tr>
<tr>
<td>SOW</td>
<td>6235</td>
<td>Foundations of Social Welfare Policy</td>
<td>3</td>
<td></td>
<td>Examines historical antecedents of social welfare as an institution and current state of social welfare programs in America. Emphasis is placed on understanding social, economic, and political forces that shape policies and programs.</td>
</tr>
<tr>
<td>SOW</td>
<td>6236</td>
<td>Social Welfare Policy Development &amp; Analysis</td>
<td>3</td>
<td></td>
<td>Presents various methods of policy analysis with emphasis on distinctions among legislative, administrative, and judicial policy. Examines roles and responsibilities of the professional practitioner in the policy process.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
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<td>PREREQUISITES</td>
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<tr>
<td>SOW</td>
<td>6305</td>
<td>Foundations of Social Work Micro Practice</td>
<td>3</td>
<td></td>
<td>Describes full range of social work interventions, from micro to macro. Historical development of practice methods and survey of current techniques.</td>
</tr>
<tr>
<td>SOW</td>
<td>6342</td>
<td>Social Work Practice with Individuals</td>
<td>3</td>
<td></td>
<td>Application of clinical practice to work with individuals. Psychosocial model is emphasized. Professional laboratory develops skills in practice.</td>
</tr>
<tr>
<td>SOW</td>
<td>6348</td>
<td>Clinical Practice Perspectives on Race and Culture</td>
<td>3</td>
<td></td>
<td>Theories for clinical practice, with emphasis on the psychosocial model. Explores basic skills for clinical practice.</td>
</tr>
<tr>
<td>SOW</td>
<td>6362</td>
<td>Social Work Practice with Couples and Families</td>
<td>3</td>
<td></td>
<td>Emphasizes selection of techniques in the psychosocial model of treatment. Primary focus on family, couple, and parent-child problems. Course includes skill practice lab sessions.</td>
</tr>
<tr>
<td>SOW</td>
<td>6368</td>
<td>Social Work Practice with Groups</td>
<td>3</td>
<td></td>
<td>Focus on psychosocial model of group treatment. Comparison with individual and family modality.</td>
</tr>
<tr>
<td>SOW</td>
<td>6375</td>
<td>Advanced Social Work Macro Policy</td>
<td>3</td>
<td>PR: SOW 6426, SOW 6368, SOW 6535.</td>
<td>Studies facets of organizational environment in which clinical practice takes place; develops skills in various macro practice functions of the agency, such as supervision, program operations, and interagency relations.</td>
</tr>
<tr>
<td>SOW</td>
<td>6405</td>
<td>Foundations of Social Work Research and Statistics</td>
<td>3</td>
<td></td>
<td>This is the first of four research methods courses intended to introduce students to the various methods, designs, measurements, and statistical techniques in social work research.</td>
</tr>
<tr>
<td>SUB</td>
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<td>TITLE</td>
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<tr>
<td>SOW</td>
<td>6426</td>
<td>Field Research I</td>
<td>1</td>
<td></td>
<td>This is the third in a series of four research courses. It provides the structure for supervision of graduate research projects.</td>
</tr>
<tr>
<td>SOW</td>
<td>6427</td>
<td>Field Research II</td>
<td>1</td>
<td></td>
<td>This is the fourth and final research course. It provides the mechanism for supervision of the graduate research project.</td>
</tr>
<tr>
<td>SOW</td>
<td>6438</td>
<td>Evaluation of Clinical Practice in Diverse Setting</td>
<td>3</td>
<td></td>
<td>Course builds on foundation content of SOW 6405. Program evaluation, single subject/system design, and statistical and qualitative concepts are discussed in order to facilitate the use of empirical and evidence based interventions in social work practice.</td>
</tr>
<tr>
<td>SOW</td>
<td>6534</td>
<td>Field Instruction I</td>
<td>1</td>
<td></td>
<td>Supervised field instruction in a social service agency, consisting of 20 hours per week, plus a 3-hour practice seminar.</td>
</tr>
<tr>
<td>SOW</td>
<td>6535</td>
<td>Field Instruction II</td>
<td>4</td>
<td></td>
<td>Supervised field instruction in a social service agency, consisting of 32 hours per week, plus a 2-hour practice seminar.</td>
</tr>
<tr>
<td>SOW</td>
<td>6536</td>
<td>Field Instruction III</td>
<td>2-4</td>
<td></td>
<td>Supervised field instruction in a social service agency, consisting of 20 hours per week, plus a 2-hour practice seminar. Includes integrative paper or exam.</td>
</tr>
<tr>
<td>SOW</td>
<td>6539</td>
<td>Field Instruction IV</td>
<td>4</td>
<td>PR: SOW 6534, SOW 6535, SOW 6536</td>
<td>The last field seminar course is designed to offer a structured environment in which to integrate academic course work with the field placement. Students learn advanced clinical skills in preparation for professional clinical social work practice.</td>
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<td>SUB</td>
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<tr>
<td>SOW</td>
<td>6553</td>
<td>Field Instruction Sequence IA: Part-Time</td>
<td>2</td>
<td>CR: SOW 6124.; PR: SOW 6114, SOW 6348.</td>
<td>This is the first of a series of seven field instruction courses designed to provide students with opportunities to develop beginning clinical social work competency in applying knowledge to practice situations.</td>
</tr>
<tr>
<td>SOW</td>
<td>6554</td>
<td>Field Instruction Sequence IB: Part-Time</td>
<td>2</td>
<td>PR: SOW 6553</td>
<td>This course is the second of seven sequential courses. Each consists of 10-15 hours per week (150 hours total) of agency field learning taught by an agency field instructor with a one-hour practice seminar taught by a University-based instructor.</td>
</tr>
<tr>
<td>SOW</td>
<td>6555</td>
<td>Field Instruction Sequence IIA: Part-Time</td>
<td>2</td>
<td>PR: SOW 6554.</td>
<td>This course is the third of seven sequential courses. Each consists of 10-15 hours per week of agency field taught by an agency field instructor on a one-hour practice seminar taught by a University-based instructor.</td>
</tr>
<tr>
<td>SOW</td>
<td>6556</td>
<td>Field Instruction Sequence IIB: Part-Time</td>
<td>2</td>
<td>PR: SOW 6555.</td>
<td>This course is the fourth of seven sequential courses. Each consists of 10-15 hours per week of agency field taught by an agency field instructor on a one-hour practice seminar taught by a University-based instructor.</td>
</tr>
<tr>
<td>SOW</td>
<td>6557</td>
<td>Field Instruction Sequence IIC: Part-Time</td>
<td>2</td>
<td>PR: SOW 6556.</td>
<td>This course is the fifth of seven sequential courses. Each consists of 10-15 hours per week of agency field taught by an agency field instructor on a one-hour practice seminar taught by a University-based instructor.</td>
</tr>
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<td>SUB</td>
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<tr>
<td>SOW</td>
<td>6558</td>
<td>Field Instruction Sequence IIIA: Part-Time</td>
<td>2</td>
<td>PR: SOW 6557.</td>
<td>This course is the sixth of seven sequential courses. Each consists of 10-15 hours per week of agency field taught by an agency field instructor on a one-hour practice seminar taught by a University-based instructor.</td>
</tr>
<tr>
<td>SOW</td>
<td>6559</td>
<td>Field Instruction Sequence IIIB: Part-Time</td>
<td>2</td>
<td>PR: SOW 6558.</td>
<td>This course is the last of seven sequential courses. Each consists of 10-15 hours per week of agency field learning taught by an agency field instructor on a one-hour practice seminar taught by a University-based instructor.</td>
</tr>
<tr>
<td>SOW</td>
<td>6900</td>
<td>Independent Study</td>
<td>1-3</td>
<td></td>
<td>A reading program in selected topics under supervision of a faculty member. A formal contract must be approved by School Director.</td>
</tr>
<tr>
<td>SOW</td>
<td>6931</td>
<td>Selected Topics in Social Work</td>
<td>1-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOW</td>
<td>7417</td>
<td>Advanced Statistics in Social Work Research</td>
<td>3</td>
<td>PR: SOW 6405 or equivalent</td>
<td>This course provides students a detailed and practical understanding of Adv. Statistical techniques that are of use to Social Work Academicians, Administrators, and Researchers as they conduct critical research into policy, practice, and social issues.</td>
</tr>
<tr>
<td>SOW</td>
<td>7446</td>
<td>Evaluation of Social Work Practice/Program Evaluation</td>
<td>3</td>
<td></td>
<td>Prepares students in the development of research skills to conduct social work practice and program evaluation. Emphasis placed on the integration of knowledge from previous courses. Ethical considerations will also be examined. Ph.D. Majors only.</td>
</tr>
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<td>SUB</td>
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<tr>
<td>SOW</td>
<td>7490</td>
<td>Foundations of Social Work Research Methods</td>
<td>3</td>
<td></td>
<td>This is a doctoral level course designed to prepare students on the role of research in the profession. This course will focus primarily on understanding and applying basic research methods within a social work context.</td>
</tr>
<tr>
<td>SOW</td>
<td>7491</td>
<td>Theoretical Perspectives in Social Work Research</td>
<td>3</td>
<td></td>
<td>Systems theory will be presented as a theoretical base for developing testable hypotheses to produce empirical knowledge for the social work profession. Students will demonstrate the ability to conceptualize research topics in terms of existing theory.</td>
</tr>
<tr>
<td>SOW</td>
<td>7496</td>
<td>Qualitative Research Methods in Social Work</td>
<td>3</td>
<td></td>
<td>The course will assist the doctoral student to better understand and become equipped to fulfill a role as social work researcher. The course will consider the theoretical, scientific, and political issues related to qualitative research.</td>
</tr>
<tr>
<td>SOW</td>
<td>7497</td>
<td>Quantitative Methods in Social Work Research</td>
<td>3</td>
<td></td>
<td>This course provides the student with a broad overview of Quantitative Methods of use to those during research in Social Work. It also serves as a review of basic quantitative methods for the Advanced Statistics course offered later in the program.</td>
</tr>
<tr>
<td>SOW</td>
<td>7616</td>
<td>Advanced Clinical Practice with Complex Problems</td>
<td>3</td>
<td></td>
<td>Challenges the participants to access and utilize the most advanced evidence based knowledge to assess and recommend intervention for complex social problems. PR: Ph.D. Majors only.</td>
</tr>
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<td>SUB</td>
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<tr>
<td>SOW</td>
<td>7775</td>
<td>Critical Issues in Social Work</td>
<td>3</td>
<td></td>
<td>Explores critical issues facing the profession. Themes include social work research, practice, leadership, and policy. Leading expert views will help students understand key issues driving the development of the profession. PR: Ph.D. Majors only.</td>
</tr>
<tr>
<td>SOW</td>
<td>7776</td>
<td>The Social Work Educator in the University</td>
<td>3</td>
<td></td>
<td>Further critical thinking about the role of the social work educator in the university. The doctoral candidate will be equipped to fulfill this role, consider issues related to university governance as well as social work ed. PR: majors only; Ph.D. stdt</td>
</tr>
<tr>
<td>SOW</td>
<td>7919</td>
<td>Directed Studies in Social Work Research</td>
<td>3</td>
<td></td>
<td>This course prepares students to identify a research topic, review existing literature and formulate a research question or hypothesis as the basis of the dissertation. Students will learn to prepare a scholarly manuscript to submit for publication.</td>
</tr>
<tr>
<td>SOW</td>
<td>7980</td>
<td>Dissertation Hours</td>
<td>2-4</td>
<td></td>
<td>Dissertation hours</td>
</tr>
<tr>
<td>SOW</td>
<td>7981</td>
<td>Proposal Writing I</td>
<td>3</td>
<td></td>
<td>Guides doctoral students in preparing a dissertation proposal to be presented to the committee for final approval. The process will be explored from concept formation through the preparation of a detailed written proposal. PR: Ph.D. Majors only.</td>
</tr>
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<tr>
<td>SOW</td>
<td>7982</td>
<td>Proposal Writing II</td>
<td>3</td>
<td></td>
<td>Guides doctoral students in preparing a dissertation proposal to be presented to the committee for final approval. The process will be explored from concept formation through the preparation of a detailed written proposal. PR: Ph.D. Majors Only.</td>
</tr>
<tr>
<td>SOW</td>
<td>8907</td>
<td>Capstone Project</td>
<td>1</td>
<td>PR: SOW 6124, SOW 6342, SOW 6362, SOW 6438, SOW 6236.</td>
<td>Students will complete an independent project which requires the synthesis of content from their theoretical, research, practice, field, and policy courses and the application of this content to a current field practicum case.</td>
</tr>
<tr>
<td>SPA</td>
<td>5132</td>
<td>Audiology Instrumentation</td>
<td>3</td>
<td>PR: SPA 5120, SPA 6930, SPA 5506.</td>
<td>Instruction in the use of clinical and laboratory instrumentation. Emphasis placed on electronic circuitry, signal generation, filtering, and calibration. Hands-on experience with equipment typically used in clinical auditory research will be provided.</td>
</tr>
<tr>
<td>SPA</td>
<td>5133C</td>
<td>Speech Science Instrumentation</td>
<td>3</td>
<td>PR: SPA 3011 or equivalent.</td>
<td>Underlying principles and laboratory exercises in the use of audio recording, acoustic analysis, and clinical instrumentation.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>SPA</td>
<td>5153</td>
<td>Quantitative Problem Solving in Speech Pathology and Audiology</td>
<td>3</td>
<td></td>
<td>Covers fundamental mathematical and statistical concepts underlying the field of Communication Sciences and Disorders and application of these concepts to practical and clinical problems. Not restricted to majors or repeatable for credit.</td>
</tr>
<tr>
<td>SPA</td>
<td>5204</td>
<td>Advanced Clinical Phonology</td>
<td>3</td>
<td></td>
<td>The principles of generative phonology will be applied to the assessment and treatment of phonological disorders. Emphasis is placed on making a child’s phonology more functional for communication purposes.</td>
</tr>
<tr>
<td>SPA</td>
<td>5303</td>
<td>Auditory Anatomy and Physiology</td>
<td>3</td>
<td></td>
<td>Provide a comprehensive understanding of the physiological acoustics of the auditory periphery, neuroanatomy and electrophysiology of the central auditory system, and psychoacoustic principles as they relate to clinical audiologic measurement paradigms.</td>
</tr>
<tr>
<td>SPA</td>
<td>5403</td>
<td>Language-Learning in the School-Age Years</td>
<td>3</td>
<td></td>
<td>Metalinguistic and metacognitive development are linked to the interactional demands of classroom and clinical discourse; observational tools are applied to evaluation and intervention planning.</td>
</tr>
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<tr>
<td>SPA</td>
<td>5506</td>
<td>Speech-Language Pathology and Audiology Practicum</td>
<td>1-8</td>
<td></td>
<td>Participation in speech-language pathology and audiology practicum in the University Communication Disorders Center and selected field settings.</td>
</tr>
<tr>
<td>SPA</td>
<td>5552</td>
<td>Diagnostic Principles and Practices</td>
<td>3</td>
<td></td>
<td>The administration, evaluation, and reporting of diagnostic tests and procedures used in assessment of speech and language disorders.</td>
</tr>
<tr>
<td>SPA</td>
<td>6102</td>
<td>Neuroanatomy for Speech and Hearing</td>
<td>3</td>
<td>PR: SPA 3101.</td>
<td>Neuroanatomical and neurophysiological principles, structures and functions that subserve speech, hearing, language, and cognition are studied. A case-based approach illustrates the behavioral manifestations of neuropathologies. Majors only.</td>
</tr>
<tr>
<td>SPA</td>
<td>6211</td>
<td>Advanced Vocal Disorders</td>
<td>3</td>
<td></td>
<td>Students will be familiarized with perceptual, physiological, psychological, and behavioral processes involved in voice production, and apply this knowledge to assessment and treatment of voice disorders. Restricted to majors and may not be repeated.</td>
</tr>
<tr>
<td>SPA</td>
<td>6225</td>
<td>Advanced Fluency Disorders</td>
<td>3</td>
<td></td>
<td>This course covers characteristics of people who stutter, the morphology of stuttering in children and adults, motor and linguistic processes of normal speech, theories of causes of stuttering, and methods for evaluating and treating stuttering.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>SPA</td>
<td>6232</td>
<td>Neuromotor Communication Disorders</td>
<td>3</td>
<td></td>
<td>A study of the medical, physical, occupational, speech, language, and hearing problems of the neuromotorically impaired client. Therapy techniques are reviewed and evaluated.</td>
</tr>
<tr>
<td>SPA</td>
<td>6245</td>
<td>Craniofacial Communication Disorders</td>
<td>3</td>
<td></td>
<td>An in-depth study of speech, language, and hearing problems associated with cleft lip and cleft palate and other craniofacial dysmorphologies. Consideration is given to the multidisciplinary approach to therapy and rehabilitation.</td>
</tr>
<tr>
<td>SPA</td>
<td>6305</td>
<td>Pediatric Audiology</td>
<td>3</td>
<td>PR: SPA 5506</td>
<td>Etiologies and manifestations of hearing loss within a pediatric population. Survey of procedures used in early identification and quantified measurement of hearing loss in young and non-communicative children.</td>
</tr>
<tr>
<td>SPA</td>
<td>6307</td>
<td>Speech Perception and Sensorineural Hearing Loss</td>
<td>3</td>
<td>PR: SPA 5120, SPA 5303</td>
<td>The course will provide an overview of the factors involved in quantifying speech perception ability in listeners with normal and impaired hearing.</td>
</tr>
<tr>
<td>SPA</td>
<td>6311</td>
<td>Medical Audiology</td>
<td>3</td>
<td>PR: SPA 5120, Advanced Hearing Science, Clinic Lab I</td>
<td>Anatomy &amp; patho-physiology of the auditory system, medical genetics, congenital &amp; acquired ear diseases, disorders of balance, &amp; tinnitus. These areas will be related to audiology test results; diagnostic imaging, medical &amp; surgical treatments.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>SPA</td>
<td>6314</td>
<td>Electrophysiology</td>
<td>3</td>
<td>PR: SPA 5303 and SPA 5312</td>
<td>This course focuses on the auditory brainstem response (ABR) as an essential diagnostic and screening tool. The course follows a combined lecture/laboratory mode with weekly class meetings and weekly laboratory exercise.</td>
</tr>
<tr>
<td>SPA</td>
<td>6316</td>
<td>Vestibular Evaluation and Treatment</td>
<td>3</td>
<td>PR: SPA 5303 and SPA 5312</td>
<td>Principles and clinical practices of assessing the peripheral and central components of the human vestibular system using electrical recordings of induced and spontaneous nystagmus.</td>
</tr>
<tr>
<td>SPA</td>
<td>6324</td>
<td>Aural Rehabilitation: Children</td>
<td>3</td>
<td></td>
<td>Provide information and strategies for aural habilitation intervention with hearing impaired children. Includes techniques of speech reading, auditory training, and language for hearing impaired.</td>
</tr>
<tr>
<td>SPA</td>
<td>6329</td>
<td>Educational Audiology</td>
<td>3</td>
<td></td>
<td>Provides information on consulting and collaborating with speech pathologists, teachers, and others about the relationship of hearing loss to the development of psychosocial, communicative, cognitive, physical, academic, and vocational skills of a child.</td>
</tr>
<tr>
<td>SPA</td>
<td>6340</td>
<td>Principles of Amplification I</td>
<td>3</td>
<td></td>
<td>Provide information and training concerning the design and measurement of the modern hearing aid. The history of hearing aids, types of hearing aids, hearing aid components, measurement and modification of hearing aid response, and earmold acoustics.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>SPA</td>
<td>6341</td>
<td>Principles of Amplification II</td>
<td>3</td>
<td>PR: SPA 6340.</td>
<td>The general goal of this second of three hearing aid courses is to provide information and training related to the assessment, selection, fitting, verification, and validation processes associated with the modern hearing aid.</td>
</tr>
<tr>
<td>SPA</td>
<td>6349</td>
<td>Advanced Study of Sensory Aids for Hearing Impaired</td>
<td>3</td>
<td>PR: SPA 6340, SPA 6341</td>
<td>This course is designed to supplement and expand on previous coursework through a discussion of advanced technical, clinical, and professional issues related to the design, measurement, and fitting of sensory aids.</td>
</tr>
<tr>
<td>SPA</td>
<td>6354</td>
<td>Hearing Conservation</td>
<td>3</td>
<td></td>
<td>An investigation of the hazardous properties of noise and their effects upon the human auditory systems; hearing conservation programs in industry; and the extra-aural effects and control of community noises.</td>
</tr>
<tr>
<td>SPA</td>
<td>6392</td>
<td>Profession of Audiology</td>
<td>2</td>
<td></td>
<td>Acquaint students with a basic understanding of the profession of Audiology. Topics covered include: Historical underpinnings, scope of practice, ethics, legal issues, evidence-based practice, professional organizations, and current issues.</td>
</tr>
<tr>
<td>SPA</td>
<td>6393</td>
<td>Audiology Practice Management</td>
<td>3</td>
<td></td>
<td>The foundation necessary to initiate and manage a successful practice: individual management styles, selection and appraisal of office staff, marketing, budgeting, fiscal fitness, Florida licensure laws, and certification standards.</td>
</tr>
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<td>SUB</td>
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<tr>
<td>SPA</td>
<td>6401</td>
<td>Pediatric Language Disorders</td>
<td>3</td>
<td></td>
<td>An examination of the pre-verbal and language skills of the infant and preschool child, and of the Speech-Language Pathologist’s role in the diagnosis, treatment, and as parent-trainer for these children.</td>
</tr>
<tr>
<td>SPA</td>
<td>6404</td>
<td>Language Learning Disabilities</td>
<td>3</td>
<td></td>
<td>Examination of research and clinical literature pertaining to causes and effects of atypical language and literacy learning and developmental frameworks for integrated intervention in oral and written language.</td>
</tr>
<tr>
<td>SPA</td>
<td>6410</td>
<td>Aphasia and Related Disorders</td>
<td>3</td>
<td></td>
<td>Consideration of the neurological and psychological aspects of aphasia and related disorders as they relate to communication disorders. Specific language therapy approaches are discussed and evaluated.</td>
</tr>
<tr>
<td>SPA</td>
<td>6417</td>
<td>Communication + Cognition in Traumatic Brain Injury</td>
<td>3</td>
<td></td>
<td>This course focuses on theoretical foundations of the study and management of neurocognitive disorders associated with right brain damage and traumatic brain injury, with special attention to major differences between focal and diffuse brain pathology.</td>
</tr>
<tr>
<td>SPA</td>
<td>6473</td>
<td>Multicultural Differences in Language</td>
<td>3</td>
<td></td>
<td>The focus is on developing intercultural competencies to design and implement more culturally and linguistically appropriate services for individuals with communication disorders or differences.</td>
</tr>
<tr>
<td>SPA</td>
<td>6503</td>
<td>Entry Level Practicum</td>
<td>3</td>
<td></td>
<td>Participation in speech-language pathology and audiology practicum in the University clinical laboratory.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>SPA</td>
<td>6505</td>
<td>Practicum</td>
<td>1-10</td>
<td></td>
<td>Participation in speech-language pathology and audiology practicum in the University clinical laboratory and selected field settings.</td>
</tr>
<tr>
<td>SPA</td>
<td>6508</td>
<td>Advanced Audiology Practicum</td>
<td>3-6</td>
<td>PR: SPA 6505.</td>
<td>Students are placed at a clerkship/externship site(s) and participate in a variety of clinical and professional activities to develop advanced clinical skills through direct practical experience in diagnostics, treatment, and patient management.</td>
</tr>
<tr>
<td>SPA</td>
<td>6535L</td>
<td>Audiology Clinical Laboratory I</td>
<td>3</td>
<td></td>
<td>Covers the operation of clinic equipment and test procedures used in the basic assessment of hearing sensitivity. Practice with equipment and test procedures takes place in the lab and clinical settings.</td>
</tr>
<tr>
<td>SPA</td>
<td>6536L</td>
<td>Audiology Clinical Laboratory II</td>
<td>3</td>
<td>PR: SPA 5506.</td>
<td>Covers development of skills in the assessment and management of auditory ability and function, including site of lesion; auditory processing; tinnitus; cochlear implant candidacy; and auditory (re)habilitation pediatric and adult populations.</td>
</tr>
<tr>
<td>SPA</td>
<td>6553</td>
<td>Advanced Differential Diagnosis and Treatment Planning</td>
<td>3</td>
<td></td>
<td>The interpretation of evaluation results and the integration of these data in order to make a differential diagnosis leading to an appropriate therapy plan. The administration, evaluation, and reporting of advanced evaluation techniques not covered in SPA 5552.</td>
</tr>
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<td>SUB</td>
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<tr>
<td>SPA</td>
<td>6559</td>
<td>Augmentative &amp; Alternative Communication</td>
<td>3</td>
<td></td>
<td>Listed in catalog as 6413 this course details the in-depth assessment and treatment of communication modes in nonspeaking individuals. Students will be presented with the variety of aided and unaided systems which exist for helping non-speaking persons; students gain experience in the use of these devices.</td>
</tr>
<tr>
<td>SPA</td>
<td>6564</td>
<td>Seminar in Aging, Cognition, and Communication</td>
<td>3</td>
<td></td>
<td>1. This course focuses on the interdependence of communication and cognition in older adults, emphasizing relationships among physical health, social context, cognition, and communication.</td>
</tr>
<tr>
<td>SPA</td>
<td>6565</td>
<td>Seminar in Dysphagia</td>
<td>3</td>
<td></td>
<td>The course covers normal and abnormal anatomy/physiology related to swallowing function, etiology, symptoms, and technique/instrumentation for diagnosis and management of dysphagia and procedures for analysis, treatment, and management.</td>
</tr>
<tr>
<td>SPA</td>
<td>6571</td>
<td>Ethical Practice Issues in Communication Sciences and Disorders</td>
<td>1-2</td>
<td></td>
<td>Topics include: legal and ethical issues affecting practice, licensure, and ASHA certification, the ASHA Code of Ethics, laws and regulations in healthcare and educational settings and quality assurance standards. Must be repeated for 2 total credits.</td>
</tr>
<tr>
<td>SPA</td>
<td>6645</td>
<td>Language For The Hearing Impaired</td>
<td>3</td>
<td></td>
<td>Listed in catalog as spa 6421 techniques and materials of teaching language to children with auditory disorders as well as evaluation and analysis of contemporary intervention and clinical methods.</td>
</tr>
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<td>SUB</td>
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<tr>
<td>SPA</td>
<td>6674</td>
<td>Curriculum Proced/materials For Hearing Impaired</td>
<td>3</td>
<td></td>
<td>Curricular adaptation, methods, techniques, and organization necessary for teaching the hearing impaired.</td>
</tr>
<tr>
<td>SPA</td>
<td>6675</td>
<td>Reading for the Hearing Impaired</td>
<td>2</td>
<td>PR: RED 4310</td>
<td>Techniques and materials for teaching reading to children with auditory disorders. Evaluation and analysis of contemporary programs and methods.</td>
</tr>
<tr>
<td>SPA</td>
<td>6805</td>
<td>Research Procedures in Communication Sciences and Disorders</td>
<td>3</td>
<td></td>
<td>Advanced research and experimental design techniques employed in clinical and laboratory settings in speech-language pathology and audiology.</td>
</tr>
<tr>
<td>SPA</td>
<td>6906</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
<td>Independent study in which students must have a contract with an instructor.</td>
</tr>
<tr>
<td>SPA</td>
<td>6910</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPA</td>
<td>6930</td>
<td>Selected Topics</td>
<td>3</td>
<td></td>
<td>A reading program of topics in speech pathology and/or audiology conducted under the supervision of a faculty member.</td>
</tr>
<tr>
<td>SPA</td>
<td>6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td>PR: SPA 3011 or equivalent; SPA 5150L</td>
<td>Advanced study of the acoustics, production, and perception of normal and disordered speech.</td>
</tr>
<tr>
<td>SPA</td>
<td>7150</td>
<td>Advanced Speech Science</td>
<td>3</td>
<td>PR: SPA 3011 or equivalent; SPA 5150L</td>
<td></td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>SPA</td>
<td>7330</td>
<td>Advanced Vestibular Evaluation and Treatment</td>
<td>3</td>
<td>PR: SPA 6316, SPA 6505, SPA 5132, SPA 5303 and SPA 6536L.</td>
<td>Provides students with advanced concepts, protocols, and research activity in vestibular assessment and rehabilitation.</td>
</tr>
<tr>
<td>SPA</td>
<td>7331</td>
<td>Advanced Medical Audiology</td>
<td>3</td>
<td>PR: SPA 6311, SPA 6505 and SPA 6536L.</td>
<td>This is a seminar course which will prepare audiologists to work in a medical setting. Topics will include pharmacology, medical genetics, and diagnostic imaging.</td>
</tr>
<tr>
<td>SPA</td>
<td>7332</td>
<td>Advanced Electrophysiology</td>
<td>3</td>
<td>PR: SPA 6314.</td>
<td>The purpose of this course is to provide students with the fundamentals and advanced clinical practice of human electrophysiology as it applies to audiology and hearing science. The course topics will include a review of the neural generators.</td>
</tr>
<tr>
<td>SPA</td>
<td>7346</td>
<td>Cochlear Implants</td>
<td>3</td>
<td>PR: SPA 5303, SPA 5120, SPA 5506</td>
<td>Introduction to cochlear implants (CIs) and their use as a treatment for severe-to-profound hearing loss in adults and children. Not restricted to majors or repeatable for credit.</td>
</tr>
<tr>
<td>SPA</td>
<td>7415</td>
<td>Neurolinguistic Theories of Language</td>
<td>3</td>
<td>PR: SPA 6410, SPA 6232</td>
<td>Neurolinguistic theories as appropriate to the discipline are presented and discussed in relationship to language development and disorders. Information from linguistics, psycho-linguistics, artificial intelligence, neuroanatomy, and other sciences are applied to Language Science.</td>
</tr>
<tr>
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<tr>
<td>SPA</td>
<td>7806</td>
<td>Advanced Research Design for the Communication Sciences</td>
<td>3</td>
<td>CR: EDF 7408; PR: EDF 6407</td>
<td>By deconstructing research articles from the field, students learn how various research designs (experimental vs. descriptive research, single-subject vs. group design, and qualitative vs. quantitative methods) apply in the communication sciences.</td>
</tr>
<tr>
<td>SPA</td>
<td>7811</td>
<td>Research Foundations of Speech Science</td>
<td>3</td>
<td></td>
<td>This course introduces doctoral students to fundamental topics in the area of speech science. Students will learn about the research foundations of the field directly from seminal research articles and other primary sources.</td>
</tr>
<tr>
<td>SPA</td>
<td>7812</td>
<td>Research Foundations of Hearing Science</td>
<td>3</td>
<td></td>
<td>This course introduces doctoral students to fundamental topics in the area of hearing science. Students will learn about the research foundations of the field directly from seminal research articles and other primary sources.</td>
</tr>
<tr>
<td>SPA</td>
<td>7826</td>
<td>Research Foundations of Neurocommunicative Science</td>
<td>3</td>
<td></td>
<td>This course introduces doctoral students to fundamental topics in the area of neurocommunicative science. Students will learn about the research foundations of the field directly from seminal research articles and other primary sources.</td>
</tr>
<tr>
<td>SPA</td>
<td>7834</td>
<td>Audiology Doctoral Project Seminar</td>
<td>1</td>
<td>PR: SPA 6805 or equivalent.</td>
<td>A forum for discussion of progress and resolution of problems/questions related to the Audiology Doctoral Project (ADP). Restricted to AuD majors; repeatable for credit.</td>
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<tr>
<td>SPA</td>
<td>7841</td>
<td>Research Foundations of Language Science</td>
<td>3</td>
<td></td>
<td>This course introduces doctoral students to fundamental topics in the area of language science. Students will learn about the research foundations of the field directly from seminal research articles and other primary sources.</td>
</tr>
<tr>
<td>SPA</td>
<td>7931</td>
<td>Seminar in Communication Sciences and Disorders</td>
<td>3</td>
<td></td>
<td>Addresses the central research and clinical issues related to the diagnosis and treatment of communication disorders. Content of seminars varies with instructor's expertise.</td>
</tr>
<tr>
<td>SPB</td>
<td>6116</td>
<td>Sport and Entertainment Finance</td>
<td>3</td>
<td></td>
<td>This course provides the opportunity to apply financial concepts, tools, and techniques to the global sport and entertainment industry.</td>
</tr>
<tr>
<td>SPB</td>
<td>6406</td>
<td>Sport and Entertainment Law</td>
<td>3</td>
<td></td>
<td>Identifies key legal issues in a sport context; provides an overview of areas of law that regulate the sport and entertainment industry including tort, contract, constitutional, criminal, employment, labor, antitrust and agency law.</td>
</tr>
<tr>
<td>SPB</td>
<td>6605</td>
<td>Sport and Social Issues</td>
<td>3</td>
<td></td>
<td>This course examines the social environment of sport and discusses the various diversity theories, focusing on the application of these theories to organizations in the sport business and entertainment management industry.</td>
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<td>SUB</td>
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<tr>
<td>SPB</td>
<td>6608</td>
<td>Issues in the American Sport Industry</td>
<td>3</td>
<td></td>
<td>Examines professional sport industries with regard to their role in sport as a competitive culmination point and also their role as a form of entertainment. Both of these roles will be examined in the context of the business of professional sport.</td>
</tr>
<tr>
<td>SPB</td>
<td>6706</td>
<td>Sport Business Analytics</td>
<td>3</td>
<td>PR: QMB 6305 or equivalent.</td>
<td>Students are introduced to the skills, technologies, applications and practices essential to understanding and evaluating business performance in sport and entertainment.</td>
</tr>
<tr>
<td>SPB</td>
<td>6715</td>
<td>Sales And Fundraising In The Sport Industry</td>
<td>3</td>
<td></td>
<td>Teaches students about the &quot;art&quot; and &quot;science&quot; of fundraising in the diverse industry of sports. Further, students will learn the competencies and skills essential to succeed in the sales and promotional activities commonly found in the sport industry.</td>
</tr>
<tr>
<td>SPB</td>
<td>6719</td>
<td>Sport and Entertainment Marketing Strategy</td>
<td>3</td>
<td>PR: MAR 6815.</td>
<td>Provides an historical overview of sport marketing and examines the application of marketing principles to collegiate and professional sport and sport-related organizations.</td>
</tr>
<tr>
<td>SPB</td>
<td>6735</td>
<td>Global Environment of Sport</td>
<td>3</td>
<td></td>
<td>This course examines the global economic, social, political, technological, and legal environments of sport, the marketing factors driving globalization, and the challenges of intercultural management in sport organizations.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>SPB</td>
<td>6807</td>
<td>Social Media in Sport</td>
<td>3</td>
<td></td>
<td>Examines the role of social media in building and enhancing relationships with fans and explores the opportunities and challenges in leveraging a social media strategy to transfer the consumer’s use of social media from cyberspace to the real world.</td>
</tr>
<tr>
<td>SPB</td>
<td>6816</td>
<td>Contemporary Issues in Sport and Entertainment Management</td>
<td>3</td>
<td></td>
<td>Contemporary Issues in Sport and Entertainment Management examines the historical trends, ethical concerns, and current economic, technological, and social issues in the field of sport and entertainment management.</td>
</tr>
<tr>
<td>SPB</td>
<td>6818</td>
<td>Economics of Sport</td>
<td>3</td>
<td></td>
<td>This course applies the principles of macro and micro economics to global sport organizations, including topics such as industrial organization, public financing, and labor economics.</td>
</tr>
<tr>
<td>SPB</td>
<td>6946</td>
<td>Internship in Sport and Entertainment Management</td>
<td>3</td>
<td>PR: SPB 6719, SPB 6046, SPB 6816, SPB 6706.</td>
<td>A supervised field experience, the Internship in Sport and Entertainment Management provides hands-on experience in sport, sport-related, and entertainment organizations.</td>
</tr>
<tr>
<td>SPC</td>
<td>5930</td>
<td>Topics in Discourse</td>
<td>3</td>
<td></td>
<td>Variable topics course.</td>
</tr>
<tr>
<td>SPC</td>
<td>6214</td>
<td>Ethnography of Communication</td>
<td>3</td>
<td></td>
<td>Explores ethnography as an approach to conducting research and a means of theorizing about human communication.</td>
</tr>
<tr>
<td>SPC</td>
<td>6236</td>
<td>Contemporary Rhetorical Theory</td>
<td>3</td>
<td></td>
<td>Basic texts in 20th century rhetorical theory. Readings may vary.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
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<tr>
<td>SPC</td>
<td>6238</td>
<td>Survey of Rhetorical Theory</td>
<td>3</td>
<td></td>
<td>Historical development of rhetorical theory from Plato to contemporary theorists with emphasis upon the evolution of trends and concepts in rhetorical theory.</td>
</tr>
<tr>
<td>SPC</td>
<td>6391</td>
<td>Interpersonal Communication</td>
<td>3</td>
<td></td>
<td>Study of theory and research related to interpersonal communication.</td>
</tr>
<tr>
<td>SPC</td>
<td>6432</td>
<td>Family Communication</td>
<td>3</td>
<td></td>
<td>This course examines the family in terms of the patterns of interaction through which meanings are produced. Family communication concepts and theories will be introduced as they relate to diverse family forms and experiences.</td>
</tr>
<tr>
<td>SPC</td>
<td>6645</td>
<td>Rhetoric in Society</td>
<td>3</td>
<td></td>
<td>Examination of ways in which rhetoric reflects and molds social processes, including social integration and/or alienation; social roles and identity construction; institutions and movements; ideology and social change.</td>
</tr>
<tr>
<td>SPC</td>
<td>6682</td>
<td>Rhetorical Criticism</td>
<td>3</td>
<td></td>
<td>The study of theoretical perspectives in rhetorical criticism. The application of criticism to selected rhetorical situations.</td>
</tr>
<tr>
<td>SPC</td>
<td>6726</td>
<td>Communication in Close Relationships</td>
<td>3</td>
<td></td>
<td>Interpersonal and intersubjective processes involved in the development of close personal relationships. Includes studies and personal experiences that cut across historical, therapeutic, spiritual, philosophical, literary, and cinematic perspectives.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
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<tr>
<td>SPC</td>
<td>6728</td>
<td>Communicating Grief, Loss, and Illness</td>
<td>3</td>
<td></td>
<td>How illness and loss disrupt our stories of self and relationships and lead to construction of new stories, also cultural patterns of stories. Topics include critical illness and relationships, dying, bodies, emotions, caregiving, aging, and divorce.</td>
</tr>
<tr>
<td>SPC</td>
<td>6903</td>
<td>Directed Readings</td>
<td>1-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPC</td>
<td>6913</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPC</td>
<td>6934</td>
<td>Selected Topics in Communication</td>
<td>1-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPC</td>
<td>6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPC</td>
<td>7900</td>
<td>Doctoral Research Tutorial</td>
<td>1-3</td>
<td></td>
<td>Advanced directed research.</td>
</tr>
<tr>
<td>SPC</td>
<td>7930</td>
<td>Seminar in Rhetorical Studies</td>
<td>3</td>
<td></td>
<td>Variable topics course.</td>
</tr>
<tr>
<td>SPC</td>
<td>7980</td>
<td>Dissertation: Doctoral</td>
<td>2-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPN</td>
<td>5525</td>
<td>Modern Spanish American Civilization</td>
<td>3</td>
<td>PR: SPN 3520 or equivalent</td>
<td>Advanced readings and discussions dealing with Spanish American civilization and culture, including a study of social, artistic and political trends. Text and discussion in Spanish.</td>
</tr>
<tr>
<td>SPN</td>
<td>5567</td>
<td>Modern Spanish Civilization</td>
<td>3</td>
<td>PR: SPN 3500 or equivalent</td>
<td>Advanced readings and discussions dealing with contemporary Spanish civilization and culture, including a study of recent social, artistic and political trends. Texts and discussions in Spanish.</td>
</tr>
<tr>
<td>SPN</td>
<td>6845</td>
<td>History of the Spanish Language</td>
<td>3</td>
<td></td>
<td>Traces the development of Spanish from its Latin origins to the present.</td>
</tr>
<tr>
<td>SPN</td>
<td>6846</td>
<td>Spanish Paleography and Textual Criticism</td>
<td>3</td>
<td>PR: SPN 6845</td>
<td>Analysis of Spanish historical documents, paleography, and textual criticism.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
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<tr>
<td>SPS</td>
<td>6101</td>
<td>Child and Adolescent Behavior Disorders</td>
<td>4</td>
<td></td>
<td>Theoretical and empirical identification and understanding of children and adolescents with behavior disorders. Treatment issues as they relate to school psychological services.</td>
</tr>
<tr>
<td>SPS</td>
<td>6196</td>
<td>Assessment of Child and Adolescent Personality</td>
<td>4</td>
<td></td>
<td>Conceptualizations of personality and personality assessment; perspectives of disturbed and disturbing behavior, and personality assessment measures.</td>
</tr>
<tr>
<td>SPS</td>
<td>6197</td>
<td>Psychoeducational Diagnosis and Prescription I</td>
<td>4</td>
<td></td>
<td>Content covers comprehensive diagnosis and prescription in school psychology, including critical reviews of relevant research literatures, the professional-client relationship, interviewing, client histories, pluralistic psychoeducational assessment, assessment of educational environments, synthesis and dissemination of diagnostic data, and referral procedures. Appropriate field experiences will be provided. This course must be taken during two consecutive semesters, and the grade will be awarded at the end of the sequence.</td>
</tr>
<tr>
<td>SUB</td>
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<td>PREREQUISITES</td>
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<tr>
<td>SPS</td>
<td>6198</td>
<td>Psychoeducational Diagnosis and Prescription II</td>
<td>4</td>
<td></td>
<td>Content covers comprehensive diagnosis and prescription in school psychology, including critical reviews of relevant research literatures, the professional-client relationship, interviewing, client histories, pluralistic psychosocial assessment, assessment of educational environments, synthesis and dissemination of diagnostic data, and referral procedures. Appropriate field experiences will be provided. This course must be taken during two consecutive semesters, and the grade will be awarded at the end of the sequence.</td>
</tr>
<tr>
<td>SPS</td>
<td>6700C</td>
<td>Psychoeducational Interventions With Children and Adolescents I</td>
<td>4</td>
<td>CR: SPS 6701C.</td>
<td>Content covers psychoeducational interventions for school-referred children and adolescents specific to school psychological services. This is an integrated sequence of courses addressing educational and psychological (direct and indirect) interventions with topics also including consultative service delivery, the acceptability of classroom strategies, classroom and behavior management, and the synthesis of assessment data into effective interventions all within the referral context. Appropriate field experiences will be required for Intervention I and Intervention II; therefore, concurrent enrollment in the Intervention Practicum course for these two courses only is required.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>SPS</td>
<td>6701C</td>
<td>Psychoeducational Interventions With Children and Adolescents II</td>
<td>4</td>
<td>CR: SPS 6700C.</td>
<td>Content covers psychoeducational interventions for school-referred children and adolescents specific to school psychological services. This is an integrated sequence of courses addressing educational and psychological (direct and indirect) interventions with topics also including consultative service delivery, the acceptability of classroom strategies, classroom and behavior management, and the synthesis of assessment data into effective interventions all within the referral context. Appropriate field experiences will be required for Intervention I and Intervention II; therefore, concurrent enrollment in the Intervention Practicum course for these two courses only is required.</td>
</tr>
<tr>
<td>SPS</td>
<td>6702C</td>
<td>Psychoeducational Interventions With Children and Adolescents III</td>
<td>4</td>
<td>CR: SPS 6700C</td>
<td>Content covers psychoeducational interventions for school-referred children and adolescents specific to school psychological services. This is an integrated sequence of courses addressing educational and psychological (direct and indirect) interventions with topics also including consultative service delivery, the acceptability of classroom strategies, classroom and behavior management, and the synthesis of assessment data into effective interventions all within the referral context. Appropriate field experiences will be required for Intervention I and Intervention II; therefore, concurrent enrollment in the Intervention Practicum course for these two courses only is required.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
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<td>PREREQUISITES</td>
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</tr>
<tr>
<td>SPS</td>
<td>6936</td>
<td>Graduate Seminar in School Psychology</td>
<td>1-3</td>
<td></td>
<td>Seminars to explore current matters of professional concern in school psychology, such as trends, problems, legal and ethical issues, and empirical bases of techniques.</td>
</tr>
<tr>
<td>SPS</td>
<td>6940</td>
<td>Practicum in Psychoeducational Interventions</td>
<td>1-4</td>
<td>CR: Psychoeducational Interventions with Children and Adolescents - I or II (SPS 6700C or SPS 6701C)</td>
<td>Course provides practical experiences and implementation of skills discussed and acquired in the intervention courses within settings relevant to school psychology.</td>
</tr>
<tr>
<td>SPS</td>
<td>6941</td>
<td>Practicum in Psychoeducational Interventions</td>
<td>1-4</td>
<td>CR: Psychoeducational Interventions with Children and Adolescents - I or II (SPS 6700C or SPS 6701C)</td>
<td>Course provides practical experiences and implementation of skills discussed and acquired in the intervention courses within settings relevant to school psychology.</td>
</tr>
<tr>
<td>SPS</td>
<td>6947</td>
<td>Internship</td>
<td>1-9</td>
<td></td>
<td>Involves field-based, supervised experience of 1,500 (minimum) clock hours at the Educational Specialist level and 2,000 (minimum) clock hours at the Doctoral level.</td>
</tr>
<tr>
<td>SPS</td>
<td>6971</td>
<td>Thesis: Masters/Educational Specialist</td>
<td>2-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPS</td>
<td>7090</td>
<td>Supervision Processes in School Psychology</td>
<td>4</td>
<td></td>
<td>Theory, skills, and practice of supervision in school psychology.</td>
</tr>
<tr>
<td>SPS</td>
<td>7700</td>
<td>Advanced Psychoeducational Interventions</td>
<td>2-4</td>
<td>PR: SPS 6700C/SPS 6701C and SPS 6940/SPS 6941</td>
<td>Advanced topics and techniques in psychoeducational interventions for children and adolescents referred for school psychological services.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>SPS</td>
<td>7701</td>
<td>Advanced Child and Adolescent Psychotherapy</td>
<td>2-4</td>
<td>PR: SPS 6702C</td>
<td>Covers advanced topics and techniques in child and adolescent psychotherapy relevant to school psychological services.</td>
</tr>
<tr>
<td>SPS</td>
<td>7910</td>
<td>Directed Research in School Psychology</td>
<td>1-19</td>
<td></td>
<td>A doctoral research experience supervised by a faculty member.</td>
</tr>
<tr>
<td>SPS</td>
<td>7936</td>
<td>Advanced Seminar in School Psychology</td>
<td>1-3</td>
<td></td>
<td>Exploration of current issues and trends in school psychology, as it relates to research and professional practice, and the history and systems of education and psychology.</td>
</tr>
<tr>
<td>SPS</td>
<td>7980</td>
<td>Dissertation</td>
<td>2-30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPW</td>
<td>5135</td>
<td>Colonial Spanish American Literature</td>
<td>3</td>
<td>PR: SPW 4131.</td>
<td>Introduction to Colonial Spanish American Literature from the discovery through the Romantic Period.</td>
</tr>
<tr>
<td>SPW</td>
<td>5339</td>
<td>Golden Age Drama</td>
<td>3</td>
<td>PR: SPW 4100.</td>
<td>Lope de Vega, Alarcon, Tirso, Calderon, and others.</td>
</tr>
<tr>
<td>SPW</td>
<td>5387</td>
<td>Spanish American Prose</td>
<td>3</td>
<td>PR: SPW 4131.</td>
<td>Emphasis on the gaucho theme and contemporary prose fiction.</td>
</tr>
<tr>
<td>SPW</td>
<td>5405</td>
<td>Medieval Literature</td>
<td>3</td>
<td>PR: SPW 4100 or equiv.</td>
<td>Course gives an in-depth study of principal works and authors of the period such as El Poema de Mio Cid, Libro de Buen Amor, and La Celestina.</td>
</tr>
<tr>
<td>SPW</td>
<td>5597</td>
<td>Latin American Culture in Fantastic Literature and Film</td>
<td>3</td>
<td></td>
<td>A panoramic view of Spanish American fantastic and science fiction literature and film in order to analyze their relationship to historical, philosophical and cultural trends from the end of the 19th century to the beginning of the 21st century.</td>
</tr>
<tr>
<td>SUB</td>
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<td>TITLE</td>
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<tr>
<td>SPW</td>
<td>5605</td>
<td>Cervantes</td>
<td>3</td>
<td></td>
<td>Cervantes’ masterpiece Don Quijote de la Mancha.</td>
</tr>
<tr>
<td>SPW</td>
<td>5725</td>
<td>Generation of 1898</td>
<td>3</td>
<td>PR: SPW 4101.</td>
<td>The major figures of the period and their main followers.</td>
</tr>
<tr>
<td>SPW</td>
<td>5934</td>
<td>Selected Topics</td>
<td>3</td>
<td></td>
<td>Study of an author, movement, or theme.</td>
</tr>
<tr>
<td>SPW</td>
<td>6427</td>
<td>Golden Age Novel</td>
<td>3</td>
<td></td>
<td>Realistic prose-fiction of the Renaissance and Golden Age.</td>
</tr>
<tr>
<td>SPW</td>
<td>6485</td>
<td>Post Civil War Literature</td>
<td>3</td>
<td>PR: SPW 4101.</td>
<td>The drama and novel since 1936.</td>
</tr>
<tr>
<td>SPW</td>
<td>6775</td>
<td>Caribbean Literature</td>
<td>3</td>
<td>PR: SPW 4131.</td>
<td>Emphasis on contemporary Cuban and Puerto Rican literature.</td>
</tr>
<tr>
<td>SPW</td>
<td>6806</td>
<td>Introduction to Hispanic Graduate Studies</td>
<td>3</td>
<td></td>
<td>Introduce students to speaking, reading and writing at the graduate level and provide an overview of the MA in Spanish at USF.</td>
</tr>
<tr>
<td>SPW</td>
<td>6910</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPW</td>
<td>6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SSE</td>
<td>5331</td>
<td>Foundations, Curriculum &amp; Instruction of Social Science Education</td>
<td>3</td>
<td></td>
<td>Social studies curriculum, methods of instruction and social, philosophical and psychological foundations are examined. Students are expected to plan and present instructional plan(s) appropriate to middle and secondary school levels demonstrating command of the course content.</td>
</tr>
<tr>
<td>Sub</td>
<td>Num</td>
<td>Title</td>
<td>Hrs</td>
<td>Prerequisites</td>
<td>Description</td>
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<tr>
<td>SSE</td>
<td>5332</td>
<td>Methods &amp; Strategies in Social Science Education</td>
<td>3</td>
<td></td>
<td>Social studies methods and strategies are examined with an emphasis on the secondary school environment. The teaching profession, school settings, and current issues are examined. Students are expected to plan and present instructional plan(s) appropriate to senior high school demonstrating command of the course content.</td>
</tr>
<tr>
<td>SSE</td>
<td>5641</td>
<td>Reading and Basic Skills in the Content Area</td>
<td>3</td>
<td></td>
<td>Reading skills and the other basic skills as applied to the social studies are examined. Students are expected to plan and present instructional plan(s) appropriate to the social studies classroom demonstrating command of the course content. Fieldwork in a middle school is required.</td>
</tr>
<tr>
<td>SSE</td>
<td>5946</td>
<td>Practicum in Social Science Education</td>
<td>3</td>
<td>PR: SSE 5331.</td>
<td>The course is a practicum course in which pre-service teachers apply the knowledge, skills, and dispositions learned in prerequisite program courses to teach the social studies themes adopted by the National Council for the Social Studies.</td>
</tr>
<tr>
<td>SSE</td>
<td>6617</td>
<td>Trends in K-6 Social Science Education</td>
<td>3</td>
<td></td>
<td>This course focuses on theoretical foundations and strategies employed by effective social studies teachers in motivating K-6 aged youth to acquire the information, skills, and reasoning unique to the social sciences. Students also conduct research.</td>
</tr>
<tr>
<td>SUB</td>
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<td>TITLE</td>
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<td>PREREQUISITES</td>
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<tr>
<td>SSE</td>
<td>6636</td>
<td>Trends in Secondary Social Science Education</td>
<td>3</td>
<td>PR: SSE 4333, SSE 4334, SSE 4335</td>
<td>This course is designed for graduate students to research the history, theory, practices and current trends of social science education and to develop a personal, academic social science philosophy.</td>
</tr>
<tr>
<td>SSE</td>
<td>6906</td>
<td>Independent Study in Social Sciences Education</td>
<td>1-6</td>
<td></td>
<td>An opportunity for advanced graduate students to examine a specific issue or topic in the field of social science education.</td>
</tr>
<tr>
<td>SSE</td>
<td>6932</td>
<td>Selected Topics in Social Science Education</td>
<td>3</td>
<td></td>
<td>Readings and discussions organized around an in-depth examination of selected social studies education topics selected by professors.</td>
</tr>
<tr>
<td>SSE</td>
<td>6947</td>
<td>Internship in Secondary Education for Science</td>
<td>6</td>
<td></td>
<td>Students will work with a cooperating teacher and university supervisor to complete their internship requirements in a classroom setting assigned by the university.</td>
</tr>
<tr>
<td>SSE</td>
<td>7700</td>
<td>Social Science Curriculum and Instruction Issues</td>
<td>4</td>
<td></td>
<td>This advanced graduate course investigates current trends and new directions in the social science curriculum, leading theories and practices related to instructional methodology, and implications of significant research and developments in the field.</td>
</tr>
<tr>
<td>SSE</td>
<td>7710</td>
<td>Research in Social Science Education</td>
<td>4</td>
<td></td>
<td>This course prepares doctoral students in social science education to be active scholars. Students engage in a preliminary research study, examine theoretical, technical, ethical and practical issues related to conduct of research in education.</td>
</tr>
<tr>
<td>SUB</td>
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<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>SSE</td>
<td>7720</td>
<td>Social Science Education Technological Innovations</td>
<td>4</td>
<td></td>
<td>This course examines the use of technology in the social science classroom, barriers to integration, unrealized potential of technology and consequences of technological development on children and youth.</td>
</tr>
<tr>
<td>SSE</td>
<td>7730</td>
<td>Philosophy of Social Science Education</td>
<td>4</td>
<td></td>
<td>This advanced graduate course allows students to research the philosophical and theoretical underpinnings of a social science education and the role of a university as well as to develop a personal, philosophical construct.</td>
</tr>
<tr>
<td>SSE</td>
<td>7740</td>
<td>History of the Social Studies Since 1880</td>
<td>4</td>
<td></td>
<td>This course is a historical investigation of the development of the secondary school history/social studies curriculum, including questions related to objectives, content, and methods of instruction.</td>
</tr>
<tr>
<td>SSE</td>
<td>7910</td>
<td>Directed Research in Social Sciences Education</td>
<td>1-9</td>
<td></td>
<td>This course permits a doctoral student to conduct advanced research and to pursue specific areas of interest with a faculty member as supervisor. A contract is required with the faculty member. S/U</td>
</tr>
<tr>
<td>SSE</td>
<td>7945</td>
<td>Applied Research in Social Science Education</td>
<td>2</td>
<td></td>
<td>This course provides doctoral students in social science education with the opportunity to teach post-secondary courses, engage in sustained research, pursue external funding, and participate in professional activities.</td>
</tr>
<tr>
<td>SSE</td>
<td>7980</td>
<td>Dissertation in Social Science Education</td>
<td>2-24</td>
<td></td>
<td>Rpt.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
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<td>HRS</td>
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<tr>
<td>STA</td>
<td>5166</td>
<td>Statistical Methods I</td>
<td>3</td>
<td>PR: STA 4321</td>
<td>Statistical analysis of data by means of statistics package programs. Regression, ANOVA, discriminant analysis, and analysis of categorical data. Emphasis is on inter-relation between statistical theory, numerical methods, and analysis of real life data.</td>
</tr>
<tr>
<td>STA</td>
<td>5326</td>
<td>Mathematical Statistics I</td>
<td>3</td>
<td>PR: STA 5446.</td>
<td>Sample distribution theory, point &amp; interval estimation, optimality theory, statistical decision theory, and hypothesis testing.</td>
</tr>
<tr>
<td>STA</td>
<td>5446</td>
<td>Probability Theory I</td>
<td>3</td>
<td>PR: STA 4442 and MAA 4212</td>
<td>Axioms of probability, random variables in Euclidean spaces, moments and moment generating functions, modes of convergence, limit theory for sums of independent random variables.</td>
</tr>
<tr>
<td>STA</td>
<td>6206</td>
<td>Stochastic Processes</td>
<td>4</td>
<td>PR: STA 5446.</td>
<td>Poisson processes, renewal theorems, Markov chains on a countable state space, continuous-time Markov processes with a countable state space, birth and death processes, branching processes, introduction to Brownian motion.</td>
</tr>
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<tr>
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<th>DESCRIPTION</th>
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<tr>
<td>STA</td>
<td>6208</td>
<td>Linear Statistical Models</td>
<td>3</td>
<td>PR: STA 5167 or STA 5326</td>
<td>Distribution theory, estimation, and hypothesis testing for the general linear model. Experimental designs, including randomized block and incomplete block designs. Multiple regression, ANOVA, and ANCOVA.</td>
</tr>
<tr>
<td>STA</td>
<td>6447</td>
<td>Probability Theory II</td>
<td>3</td>
<td>PR: STA 5446 and MAA 5306</td>
<td>Characteristic functions, central limit theorem, martingale inequalities and convergence theorems, optional stopping, ergodic theorems and applications.</td>
</tr>
<tr>
<td>STA</td>
<td>6746</td>
<td>Multivariate Analysis</td>
<td>3</td>
<td>PR: STA 5326</td>
<td>Multivariate normal distribution; its properties and inference; matrix random variables; multiple and partial correlation; discriminant analysis, principle components and factor analysis; multivariate ANOVA; analysis of covariance; applications using computers.</td>
</tr>
<tr>
<td>SYA</td>
<td>6126</td>
<td>Contemporary Sociological Theory</td>
<td>3</td>
<td>PR: Undergraduate course in sociological theory</td>
<td>Emphasizes logical and conceptual dimensions of theory and theory construction.</td>
</tr>
<tr>
<td>SYA</td>
<td>6205</td>
<td>Social Construction of Reality</td>
<td>3</td>
<td></td>
<td>Evolution of the concept of social construction; emphasizes the consequences of understanding lived experiences and discursive representations as social constructions. Topics include depression, child abuse, masculinity/femininity, and sexual harassment.</td>
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<tr>
<td>SYA</td>
<td>6305</td>
<td>Methods of Research</td>
<td>3</td>
<td>PR: Undergraduate course in sociological research methods</td>
<td>Logic and practice of research; problems of observation and data collection, data processing, and evaluation.</td>
</tr>
<tr>
<td>SYA</td>
<td>6315</td>
<td>Qualitative Research Methods</td>
<td>3</td>
<td>PR: Undergraduate course in sociological research methods</td>
<td>Designed to introduce students to qualitative research methods, such as participant observation and intensive interviewing that require the researcher to get close to the social situation of interest.</td>
</tr>
<tr>
<td>SYA</td>
<td>6316</td>
<td>Ethnography</td>
<td>3</td>
<td></td>
<td>Examine the theoretical and practical issues in ethnographic research and various styles of ethnography. Provides hands-on training in ethnographic data collection and qualitative data analysis.</td>
</tr>
<tr>
<td>SYA</td>
<td>6405</td>
<td>Sociological Statistics</td>
<td>3</td>
<td>PR: Undergraduate statistics course</td>
<td>Logic and application of parametric and nonparametric statistical analysis for sociological data.</td>
</tr>
<tr>
<td>SYA</td>
<td>6909</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
<td>Independent study in which student must have a contract with an instructor.</td>
</tr>
<tr>
<td>SYA</td>
<td>6912</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SYA</td>
<td>6933</td>
<td>Special Topics-Sociology</td>
<td>3</td>
<td></td>
<td>Content varies according to interests of students and instructor.</td>
</tr>
<tr>
<td>SYA</td>
<td>6971</td>
<td>Thesis: Master’s</td>
<td>2-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SYA</td>
<td>7357</td>
<td>Introduction to Social Network Analysis</td>
<td>3</td>
<td></td>
<td>Introduction to the methods by which properties of networks are described, quantified, and analyzed with attention to networks of interest to social scientists (such as, social, knowledge, and semantic networks).</td>
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<tr>
<td>SYA</td>
<td>7939</td>
<td>Selected Topics for Ph.D. Students</td>
<td>3</td>
<td></td>
<td>In this course, doctoral students will examine theoretical, methodological and/or substantive scholarship in a variety of areas related to identity, community and sustainability in global context.</td>
</tr>
<tr>
<td>SYA</td>
<td>7980</td>
<td>Doctoral Dissertation</td>
<td>2-20</td>
<td></td>
<td>The dissertation represents the culmination of the research experience for Sociology doctoral students and will involve the creation of an original book-length study with many interrelated parts. May be repeated for credit.</td>
</tr>
<tr>
<td>SYA</td>
<td>7988</td>
<td>Dissertation Proposal</td>
<td>1-6</td>
<td></td>
<td>This course will guide Ph.D. students toward the completion of their dissertation proposal under close supervision of their faculty mentors.</td>
</tr>
<tr>
<td>SYD</td>
<td>6605</td>
<td>City and Community</td>
<td>3</td>
<td></td>
<td>Provides training in the field of urban and community sociology. Focuses on the field’s early theoretical foundations, “classic” research, and contemporary debates. Concentrates on the U.S., although some cross-cultural comparisons will be offered.&quot;</td>
</tr>
<tr>
<td>SYD</td>
<td>6706</td>
<td>Race and Ethnicity</td>
<td>3</td>
<td></td>
<td>Introduces historical development of race, social construction of racial and ethnic identities, race-class-gender interrelationships, and various issues of immigration. Exploration of theories used to explain racial and ethnic inequality today.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>SYG</td>
<td>6936</td>
<td>Seminar in Teaching Sociology</td>
<td>3</td>
<td></td>
<td>Provides a key link for future teaching sociologists, assisting them to make the switch from consumers to educators of the sociological perspective. Places equal emphasis on theoretical and practical issues surrounding teaching sociology.</td>
</tr>
<tr>
<td>SYO</td>
<td>6255</td>
<td>Seminar in Sociology of Education</td>
<td>3</td>
<td></td>
<td>Sociological analysis of the institution of education. Primary attention directed toward class, race, and gender inequalities and educational transformations.</td>
</tr>
<tr>
<td>SYO</td>
<td>7435</td>
<td>Sociology of Disability in Urban Society</td>
<td>3</td>
<td></td>
<td>This course critically evaluates current controversies over the utility of a variety of theoretical perspectives and research methods in understanding the lived experience of disability in 21st century urban society.</td>
</tr>
<tr>
<td>SYP</td>
<td>6007</td>
<td>Constructing Social Problems</td>
<td>3</td>
<td></td>
<td>An examination of social problems using social constructionism theoretical perspectives. Topics focus on how humans create meaning and how this meaning influences reactions to conditions defined as social problems.</td>
</tr>
<tr>
<td>SYP</td>
<td>6008</td>
<td>Social Problems, Identity, and Community</td>
<td>3</td>
<td></td>
<td>An examination of social problems using social constructionist theoretical perspectives. Topics focus on how meaning is created within historically, culturally, and politically situated communities.</td>
</tr>
<tr>
<td>SYP</td>
<td>6016</td>
<td>Emotions in Everyday Life</td>
<td>3</td>
<td></td>
<td>Explores the role of emotions in the everyday lives of individuals, within the micro-social contexts of identities, interactions, and social relationships.</td>
</tr>
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<td>SUB</td>
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<tr>
<td>SYP</td>
<td>6357</td>
<td>Comparative Social Movements</td>
<td>3</td>
<td></td>
<td>Provides an overview of the various theoretical perspectives used to explain the emergence, growth, strategies and success of social movements in contemporary America and in other countries.</td>
</tr>
<tr>
<td>SYP</td>
<td>6425</td>
<td>Sociology of Consumer Culture</td>
<td>3</td>
<td></td>
<td>This course critically examines the key theories and analyses of American consumerism with special attention to inequalities of race, class, and gender.</td>
</tr>
<tr>
<td>SYP</td>
<td>6515</td>
<td>Sociology of Deviance</td>
<td>3</td>
<td></td>
<td>Develops knowledge of traditional theories of deviance as well as critiques them. Through development of alternative perspectives, challenges constructions of deviance and the mechanisms of power.</td>
</tr>
<tr>
<td>TAX</td>
<td>5015</td>
<td>Federal Taxation of Business Entities</td>
<td>3</td>
<td>PR: TAX 4001 with a grade of C or better, not C-</td>
<td>Tax issues encountered by small businesses. Includes tax planning, capital formation and preservation, tax compliance and tax alternatives.</td>
</tr>
<tr>
<td>TAX</td>
<td>6005</td>
<td>Advanced Partnership Taxation</td>
<td>3</td>
<td>PR: TAX 4001</td>
<td>A study of advanced income tax problems involving partnerships, including organization, operation, distributions, liquidations, basis, family partnerships, and sales and exchanges. The planning and business aspects of partnerships are emphasized.</td>
</tr>
<tr>
<td>TAX</td>
<td>6065</td>
<td>Contemporary Issues In Taxation</td>
<td>3</td>
<td>PR: TAX 4001 AND TAX 5015 OR EQUIVALENT</td>
<td>A study of contemporary issues in taxation with an emphasis on related computer research. Current tax issues in the areas of corporations or partnerships will be explored when appropriate, along with related tax planning techniques.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>TAX</td>
<td>6134</td>
<td>Advanced Corporate Taxation</td>
<td>3</td>
<td>PR: TAX 4001 AND TAX 5015</td>
<td>A study of advanced income tax problems involving corporations, including organization, operation, distributions, liquidations, consolidated corporate tax returns, and taxation of foreign corporations and foreign source income.</td>
</tr>
<tr>
<td>TAX</td>
<td>6445</td>
<td>Estate Planning</td>
<td>3</td>
<td>PR: TAX 4001.</td>
<td>This course covers the basics of estate, gift, and trust taxation and introduces the student to tax planning techniques to minimize the tax-burden on inter-generation transfers of wealth.</td>
</tr>
<tr>
<td>THE</td>
<td>5909</td>
<td>Directed Studies</td>
<td>1-6</td>
<td></td>
<td>Independent studies in the various areas of Theatre. Course of study and credits must be assigned prior to registration.</td>
</tr>
<tr>
<td>THE</td>
<td>5931</td>
<td>Selected Topics In Theatre</td>
<td>1-8</td>
<td></td>
<td>The content of the course will be governed by the student demand and instructor interest. May be lecture or class discussion or studio format.</td>
</tr>
<tr>
<td>THE</td>
<td>6175</td>
<td>New British Theatre and Drama</td>
<td>3</td>
<td></td>
<td>A study of contemporary theatrical practice and key dramatic texts in the British Isles. Departmental permit required of majors and non-majors.</td>
</tr>
<tr>
<td>TSL</td>
<td>5085</td>
<td>ESOL I - Theory and Practice of Teaching English Language Learners</td>
<td>3</td>
<td></td>
<td>This course is for undergraduate degree holding, preprofessional (preservice) teachers to learn about appropriate instruction, assessment and learning opportunities for Limited English Proficient (LEP) students in the content areas.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>TSL</td>
<td>5086</td>
<td>ESOL II-Secondary Language &amp; Literacy Acquisition in Children &amp; Adolescents</td>
<td>3</td>
<td>PR: TSL 5085.</td>
<td>This course is designed to provide students with a critical understanding of instructional delivery which caters for the linguistic and literacy needs of minority / heritage communities.</td>
</tr>
<tr>
<td>TSL</td>
<td>5242</td>
<td>ESOL III-Language Principles, Acquisition &amp; Assessment for English Language Learners</td>
<td>3</td>
<td>PR: TSL 5086.</td>
<td>This course provides an overview of the components of language, linking them to methods and techniques of providing comprehensible instruction to LEP students.</td>
</tr>
<tr>
<td>TSL</td>
<td>5325</td>
<td>ESOL Strategies for Content Area Teachers</td>
<td>3</td>
<td></td>
<td>Course designed for public school teachers working with limited English Proficient (foreign) students in the classroom. The new ESOL requirements specify that this course be offered to content area teachers and to ESOL teachers.</td>
</tr>
<tr>
<td>TSL</td>
<td>5326</td>
<td>L2 Reading for ESOL Students across Content Areas</td>
<td>3</td>
<td></td>
<td>This ESOL course will provide students with understanding of the linguistic and literacy needs of minority/heritage students, and will negotiate issues of second language learning, language varieties, as well as critical literacy and reading.</td>
</tr>
<tr>
<td>TSL</td>
<td>5371</td>
<td>Methods of Teaching English As A Second Language</td>
<td>3</td>
<td></td>
<td>Analysis of the methods of teaching English pronunciation and structure to speakers of other languages.</td>
</tr>
<tr>
<td>TSL</td>
<td>5372</td>
<td>ESOL Curriculum and Instruction</td>
<td>3</td>
<td></td>
<td>Analysis of the methods of teaching English pronunciation and structure to speakers of other languages.</td>
</tr>
<tr>
<td>TSL</td>
<td>5440</td>
<td>Language Testing</td>
<td>3</td>
<td>PR: TSL 5371.</td>
<td>Lecture course on testing English as a second/foreign language.</td>
</tr>
<tr>
<td>TSL</td>
<td>5525</td>
<td>Cross-Cultural Issues in ESL</td>
<td>3</td>
<td>PR: LIN 5700.</td>
<td>Lecture course on cultural issues in Teaching English as a Second/Foreign language.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>TSL</td>
<td>5940</td>
<td>ESOL Practicum</td>
<td>1-3</td>
<td>PR: FLE 5345 and FLE 5145.</td>
<td>This course is restricted to Education majors and will not be repeatable for credit. A structured field experience with Limited English Proficient students.</td>
</tr>
<tr>
<td>TSL</td>
<td>6253</td>
<td>Applied Linguistics for Teaching ESOL</td>
<td>3</td>
<td></td>
<td>Course is designed to prepare participants with linguistic concepts &amp; issues relevant to the field of applied linguistics 7 second language teaching. Course will survey sub-fields of linguistics (phonetics, phonology, morphology, semantics, and syntax).</td>
</tr>
<tr>
<td>TSL</td>
<td>6380</td>
<td>Instruct Methods &amp; Strategies For Teaching ESOL</td>
<td>3</td>
<td></td>
<td>Effective use of ESOL methods and strategies. Conceptual focus of this course is based on the teacher as self-directed, reflective practitioner and problem solver who is able to facilitate learning and change within diverse populations and environments.</td>
</tr>
<tr>
<td>TSL</td>
<td>6390</td>
<td>Instruct Methods and Strategies for Teaching ESOL</td>
<td>3</td>
<td></td>
<td>Effective use of ESOL methods and strategies. Conceptual focus of this course is based on the teacher as self-directed, reflective practitioner and problem solver who is able to facilitate learning and change within diverse populations and environments.</td>
</tr>
<tr>
<td>TSL</td>
<td>6470</td>
<td>Assessment and Progress Management for Teaching ESOL</td>
<td>3</td>
<td></td>
<td>Designed to develop knowledge 7 skills necessary to prepare students to select, adapt, design assessment instruments &amp; testing techniques reflective of instructional goals &amp; needs of linguistically &amp; culturally diverse students in ESOL or mainstream class.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>TSL</td>
<td>6700</td>
<td>ESOL for School Psychologists and School Counselors</td>
<td>3</td>
<td></td>
<td>Prepare school psychologists &amp; school counselors to provide services for Eng language learners in their schools. Provides them with current research and guidance in the areas of program development, legislative mandates, and learner characteristics.</td>
</tr>
<tr>
<td>TSL</td>
<td>6945</td>
<td>Internship</td>
<td>1-6</td>
<td>PR: TSL 5371 and TSL 5372</td>
<td>Required of all candidates for the M.A. degree in TESL. Supervised teaching of English as a second language to non-native speakers at appropriate levels and settings.</td>
</tr>
<tr>
<td>TTE</td>
<td>5205</td>
<td>Traffic Systems Engineering</td>
<td>3</td>
<td>PR: TTE 4004 or equivalent.</td>
<td>Traffics models, intersection analysis, capacity analysis, data methods collection, parking studies, volume and speed studies, freeway management, and advanced technologies.</td>
</tr>
<tr>
<td>TTE</td>
<td>5501</td>
<td>Transportation Planning and Economics</td>
<td>3</td>
<td>PR: College Algebra</td>
<td>Fundamentals of urban transportation planning: trip generation, trip distribution, modal split, traffic assignment. Introduction to environmental impact analysis, evaluation an choice of transportation alternatives.</td>
</tr>
<tr>
<td>TTE</td>
<td>5620</td>
<td>Air Transportation</td>
<td>3</td>
<td></td>
<td>This is a course for graduate students in the College of Engineering who are interested in air transportation. It covers topics such as, airport management, air traffic flow management, air transport economics, and etc. No registration restrictions.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
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<tr>
<td>TTE</td>
<td>6270</td>
<td>Intelligent Transportation Systems</td>
<td>3</td>
<td>PR: TTE 5205.</td>
<td>ITS architecture design and evaluation, simulation and modeling, advanced traffics management systems, traveler information systems, vehicle control systems, commercial vehicle operations, public transportation systems, and telecommunications.</td>
</tr>
<tr>
<td>TTE</td>
<td>6315</td>
<td>Transportation Safety</td>
<td>3</td>
<td>PR: TTE 5205.</td>
<td>Transportation safety studies, accident data analysis, traffic safety control devices, special population regiment safety, highway conflict studies, accident reconstruction, and tort and liability issues.</td>
</tr>
<tr>
<td>TTE</td>
<td>6505</td>
<td>Discrete Choice Models of Travel Behavior</td>
<td>3</td>
<td>PR: TTE 5501.</td>
<td>Theories of travel behavior; multinominal logit and nested logit models of mode choices, destination choice, and car ownership. Theory and application to travel forecasting.</td>
</tr>
<tr>
<td>TTE</td>
<td>6507</td>
<td>Travel Demand Modeling</td>
<td>3</td>
<td>PR: TTE 5501.</td>
<td>Statistical modeling of travel demand forecasting; emphasis on trip generation and trip chaining.</td>
</tr>
<tr>
<td>TTE</td>
<td>6651</td>
<td>Public Transportation</td>
<td>3</td>
<td></td>
<td>Planning, design and operation of public transportation systems; costs and productivity of transit; impacts of transit on travel behavior and urban form; ridership forecasting; public transportation policy analysis.</td>
</tr>
<tr>
<td>TTE</td>
<td>6655</td>
<td>Transportation and Land Use</td>
<td>3</td>
<td></td>
<td>Relationships between transportation and land use, coordinated transportation and land use planning, theory of urban development, urban sprawl, integrated transportation and land use models, transportation friendly urban design, and accessibility.</td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
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<tr>
<td>TTE</td>
<td>6835</td>
<td>Pavement Design</td>
<td>3</td>
<td>PR: TTE 4005 or equivalent.</td>
<td>Analysis of flexible and rigid pavements, equivalent single wheel loads, pavement material and their properties, pavement evaluation, reliability, flexible and rigid pavement design, overlay design, pavement life-cycle cost analysis.</td>
</tr>
<tr>
<td>TTE</td>
<td>6837</td>
<td>Pavement Management Systems</td>
<td>3</td>
<td>PR: TTE 4005 or equivalent.</td>
<td>Review of flexible and rigid pavement design, overlay design; pavement evaluation, pavement network delineation, condition prediction models, pavement maintenance and rehabilitation, pavement management techniques, life-cycle analysis.</td>
</tr>
<tr>
<td>TTE</td>
<td>6930</td>
<td>Graduate Transportation Seminar</td>
<td>1</td>
<td></td>
<td>Seminars, presentations, and discussions of contemporary transportation issues.</td>
</tr>
<tr>
<td>URP</td>
<td>6056</td>
<td>City and Regional Planning</td>
<td>3</td>
<td></td>
<td>A review of goals, objectives, and interrelationships between regional and city planning; intergovernmental and policy issues. Cross-listed with Political Science.</td>
</tr>
<tr>
<td>URP</td>
<td>6058</td>
<td>Community Development Planning</td>
<td>3</td>
<td></td>
<td>Course explores the process by which human communities emerge, grow, and sometimes decline and disappear. Also provides knowledge necessary to maximize use of communities' assets and minimize damage from natural or man-made features in their environment.</td>
</tr>
<tr>
<td>URP</td>
<td>6100</td>
<td>Planning Theory and History</td>
<td>3</td>
<td></td>
<td>The course is designed acquaint the student with major trends in the evolution of urban planning thought and practice and introduce the student to fundamental theories of relevance to the field of urban and regional planning.</td>
</tr>
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<td>SUB</td>
<td>NUM</td>
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<tr>
<td>URP</td>
<td>6115</td>
<td>Planning, policy and politics</td>
<td>3</td>
<td></td>
<td>Introduction to politics, government and policy making for planning students. Part of the required core for the URP program.</td>
</tr>
<tr>
<td>URP</td>
<td>6126</td>
<td>Zoning &amp; Local Economic Development</td>
<td>3</td>
<td></td>
<td>To familiarize students with the evolution and purpose of zoning as an instrument for regulating and controlling land use activities in the US. In addition, the course seeks to acquaint with the implications of zoning for local economic development.</td>
</tr>
<tr>
<td>URP</td>
<td>6201</td>
<td>Quantitative Analysis in Urban &amp; Regional Planning</td>
<td>3</td>
<td>PR: URP 6232</td>
<td>Focuses on quantitative analysis techniques and their application in urban and regional planning.</td>
</tr>
<tr>
<td>URP</td>
<td>6232</td>
<td>Research Methods for Urban and Research Planning</td>
<td>3</td>
<td></td>
<td>The course is designed to introduce students to strategies for designing research and the appropriate methods for collecting urban and regional planning data; familiarize students with social research and evaluation methods used in planning.</td>
</tr>
<tr>
<td>URP</td>
<td>6316</td>
<td>Land Use Planning</td>
<td>3</td>
<td></td>
<td>The course is designed to acquaint the student with the principles, theory and practice of land use planning. The course constitutes one of the required courses in the MURP degree.</td>
</tr>
<tr>
<td>URP</td>
<td>6406</td>
<td>Urban Environmental Policy</td>
<td>3</td>
<td></td>
<td>The purpose of this course is to examine issues related to environmental planning and policy within the context of the urban/humanly-built environment and its relation to surrounding natural environments.</td>
</tr>
<tr>
<td>SUB</td>
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<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>URP</td>
<td>6422</td>
<td>Environmental &amp; Planning Issues in Coastal Communities</td>
<td>3</td>
<td>Th</td>
<td>The content of this course will familiarize students with issues in environmental and urban planning unique to coastal communities, and explore the connections “current and potential” between the oceans and coastal urban areas.</td>
</tr>
<tr>
<td>URP</td>
<td>6549</td>
<td>Urban &amp; Metropolitan Economic Development Strategies</td>
<td>3</td>
<td></td>
<td>The course is designed to provide the student an opportunity for community service and “real world” learning. Community service learning will be employed as a pedagogical strategy to prepare students for “real-world” issues in local economic development.</td>
</tr>
<tr>
<td>URP</td>
<td>6906</td>
<td>Independent Study</td>
<td>1-6</td>
<td></td>
<td>Independent study. Student must have contract with Instructor.</td>
</tr>
<tr>
<td>URP</td>
<td>6910</td>
<td>Supervised Research</td>
<td>1-6</td>
<td></td>
<td>This course will allow graduate students to earn credits while working on an independent research project that is focused in Urban and Regional Planning.</td>
</tr>
<tr>
<td>URP</td>
<td>6930</td>
<td>Special Topics in Urban and Regional Planning</td>
<td>3</td>
<td></td>
<td>Topical issues in the study of Urban and Regional Planning. Content will vary each semester. It is repeatable for credit. There are no limits on the number of times a student can take courses listed under this title.</td>
</tr>
<tr>
<td>URP</td>
<td>6940</td>
<td>Internship in Urban and Regional Planning</td>
<td>3-6</td>
<td></td>
<td>Students will gain practical experience in planning, working on projects with local planning agencies and firms. Course is restricted to URP masters students, and can be repeated for up to 6 credits.</td>
</tr>
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<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
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<tr>
<td>URP</td>
<td>6971</td>
<td>Thesis</td>
<td>2-19</td>
<td></td>
<td>This course will allow graduate students to earn credits while working on a thesis that is focused in Urban and Regional Planning.</td>
</tr>
<tr>
<td>VIC</td>
<td>6316</td>
<td>Brand Management</td>
<td>3</td>
<td></td>
<td>This course focuses on developing an understanding of brand equity in strategic communication management. It investigates how to build, measure, and manage brand equity, including management of brands over time, geographic boundaries, and market segments.</td>
</tr>
<tr>
<td>WST</td>
<td>5308</td>
<td>Feminist Spirituality</td>
<td>3</td>
<td></td>
<td>Open to non-majors. Focuses on the many voices of contemporary feminist spirituality, emerging from women's experiences in diverse religious, ethnic and cultural traditions, and representing a range of theoretical perspectives from biblical feminism to goddess worship and wicca.</td>
</tr>
<tr>
<td>WST</td>
<td>5934</td>
<td>Selected Topics</td>
<td>1-4</td>
<td></td>
<td>Study of current research methods and scholarship on women from a multidisciplinary perspective.</td>
</tr>
<tr>
<td>WST</td>
<td>5940</td>
<td>Internship in Women's</td>
<td>3-6</td>
<td></td>
<td>Student placement in an approved intern setting for a minimum of 240 hours of supervised experience. S/U only.</td>
</tr>
<tr>
<td>WST</td>
<td>6001</td>
<td>Feminist Research and</td>
<td>3</td>
<td></td>
<td>To develop a more comprehensive understanding of the situation of women in society and to develop a theoretical basis for integrating this knowledge into the student's graduate course of study. Available to non-majors.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Methodology</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>SUB</td>
<td>NUM</td>
<td>TITLE</td>
<td>HRS</td>
<td>PREREQUISITES</td>
<td>DESCRIPTION</td>
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<tr>
<td>WST</td>
<td>6003</td>
<td>Feminist Scholarship and Pedagogy</td>
<td>3</td>
<td></td>
<td>Introduces students to techniques of feminist teaching and scholarly writing. Covers issues of professionalism, an overview of contemporary scholarly issues in feminist studies, and basic feminist pedagogy. Department Approval Required.</td>
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<tr>
<td>WST</td>
<td>6005</td>
<td>Women and Policy</td>
<td>3</td>
<td></td>
<td>Examination of policy areas such as employment, violence, welfare which have a significant impact on women. The aim is to achieve a deeper understanding of the way in which gender functions as a category of analysis in policy decision, and also examines and critiques the area from which policy is produced.</td>
</tr>
<tr>
<td>WST</td>
<td>6406</td>
<td>Women of Color: Activism and Social Change</td>
<td>3</td>
<td></td>
<td>Intensive reading and discussion of the participation of women of color in contemporary and reformist activities.</td>
</tr>
<tr>
<td>WST</td>
<td>6560</td>
<td>Advanced Feminist Theory</td>
<td>3</td>
<td></td>
<td>An in-depth exploration of current issues and debates in Feminist Theories. Topics may include: representation, essentialism, authority structures, subjectivity, identity and difference. Department Approval Required.</td>
</tr>
<tr>
<td>WST</td>
<td>6562</td>
<td>Body Politics</td>
<td>3</td>
<td></td>
<td>An in-depth feminist exploration of how the body is produced, inscribed, replicated, and often disciplined as a result of various powers at work.</td>
</tr>
<tr>
<td>WST</td>
<td>6900</td>
<td>Directed Readings</td>
<td>1-3</td>
<td></td>
<td>Supervised program of intensive readings of an interdisciplinary nature focusing on women. Student must have contract with instructor.</td>
</tr>
<tr>
<td>SUB</td>
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<tr>
<td>WST</td>
<td>6910</td>
<td>Directed Research</td>
<td>1-3</td>
<td></td>
<td>Provide graduate students with research experience in areas of specific interest utilizing feminist perspectives and research methods.</td>
</tr>
<tr>
<td>WST</td>
<td>6936</td>
<td>Selected Topics in Women's Studies</td>
<td>3</td>
<td></td>
<td>Content varies according to scholarship focus of students and instructor. Repeatable—content and instructor will vary.</td>
</tr>
<tr>
<td>WST</td>
<td>6971</td>
<td>Thesis</td>
<td>1-9</td>
<td></td>
<td>Content varies according to scholarship focus of students and instructor. Repeatable—content and instructor will vary.</td>
</tr>
<tr>
<td>ZOO</td>
<td>5456L</td>
<td>Ichthyology Lab</td>
<td>1</td>
<td>CPR: ZOO 5456</td>
<td>Laboratory portion of Ichthyology relating to evolution, systematics, structure, behavior, physiology and ecology of fishes.</td>
</tr>
<tr>
<td>ZOO</td>
<td>5463C</td>
<td>Herpetology</td>
<td>4</td>
<td></td>
<td>Major aspects of amphibian and reptilian biology emphasizing fossil history, evolutionary morphology, sensory physiology, life history and reproductive behavior. Lec.-lab. Field trip.</td>
</tr>
<tr>
<td>ZOO</td>
<td>6455</td>
<td>Advances in Ichthyology</td>
<td>1</td>
<td></td>
<td>This course discusses current topics in Ichthyology. Readings are taken from the primary literature. The course is restricted to graduate students with a background in Ichthyology.</td>
</tr>
</tbody>
</table>