# 2018-2019 USF Graduate Catalog Updates

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

<table>
<thead>
<tr>
<th>Policy</th>
<th>Revisions</th>
<th>GC Approved</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Proficiency</td>
<td>clarified proficiency requirements</td>
<td>10/2/17</td>
</tr>
<tr>
<td>Accelerated Programs</td>
<td>clarified for Bachelor's to Professional Degree Programs</td>
<td>12/4/17</td>
</tr>
<tr>
<td>Dissertation Defense</td>
<td>addressed online defenses using video conferencing</td>
<td>3/5/18</td>
</tr>
<tr>
<td>Internal Application of Credit</td>
<td>clarified language and non-degree seeking students policy</td>
<td>3/5/18</td>
</tr>
<tr>
<td>Admissions and English Proficiency</td>
<td>confirmed revisions and added additional test options</td>
<td>3/5/18</td>
</tr>
<tr>
<td>Change of Major</td>
<td>revised GPA language to allow students to change to a more suitable major</td>
<td>4/2/18</td>
</tr>
<tr>
<td>Graduate Certificates</td>
<td>revised and updated policies; courses must be from USF</td>
<td>4/2/18</td>
</tr>
<tr>
<td>Concurrent Degrees</td>
<td>re-added the ad-hoc option for students (OGS approval)</td>
<td>5/1/18</td>
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<table>
<thead>
<tr>
<th>CIP Code Change</th>
<th>Action</th>
<th>GC Approved</th>
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</thead>
<tbody>
<tr>
<td>Applied Behavior Analysis MA/MS</td>
<td>Change from 42.9999 to 42.2814 effective 201805</td>
<td>2/5/18</td>
</tr>
<tr>
<td>Advertising M.S.</td>
<td>New Degree Program CIP 09.0903 effective 201808</td>
<td>10/6/17</td>
</tr>
<tr>
<td>Learning Design &amp; Technology M.S.</td>
<td>New Degree Program CIP 13.0501 effective 201808</td>
<td>11/6/17</td>
</tr>
<tr>
<td>Cancer Chemical Biology Ph.D.</td>
<td>New Major under existing CIP 26.0911 effective 201808</td>
<td>4/16/18</td>
</tr>
<tr>
<td>Cancer Immunology and Immunotherapy Ph.D.</td>
<td>New Major under existing CIP 26.0911 effective 201808</td>
<td>4/16/18</td>
</tr>
<tr>
<td>Nurse Anesthesia D.N.P.</td>
<td>New Major under existing CIP 51.3818 effective 201808</td>
<td>9/25/17</td>
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<table>
<thead>
<tr>
<th>Programs/Majors</th>
<th>New/Changed/Terminated Concentrations</th>
<th>GC Approved</th>
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<tbody>
<tr>
<td>Rehabilitation Sciences Ph.D.</td>
<td>Degree Program Suspension – CIP 51.2314 effective 201808</td>
<td>12/4/17</td>
</tr>
<tr>
<td>Social Work M.S.W.</td>
<td>Degree Program Reactivation – CIP 44.0701 effective 201808</td>
<td>1/22/18</td>
</tr>
<tr>
<td>Engineering Science Ph.D.</td>
<td>Degree Program Termination CIP 14.0101 effective 201808</td>
<td>10/16/17</td>
</tr>
<tr>
<td>Audiology (Post-Bacc) (AUD) M.S.</td>
<td>Major Termination CIP 51.2024 effective 201808</td>
<td>9/25/17</td>
</tr>
<tr>
<td>Aural (Re)habilitation (ARH) M.S.</td>
<td>Major Termination CIP 51.2024 effective 201808</td>
<td>9/25/17</td>
</tr>
<tr>
<td>Mechanical Engineering M.M.E.</td>
<td>Major Termination CIP 14.1901 effective 201808</td>
<td>4/2/18</td>
</tr>
<tr>
<td>Accountancy M.Acc.</td>
<td>New - Corporate BAA</td>
<td>4/2/18</td>
</tr>
<tr>
<td>Management M.S.</td>
<td>New - Management Information Systems MST</td>
<td>3/5/18</td>
</tr>
<tr>
<td>Global Sustainability M.A.</td>
<td>New - Sustainability Policy GLP</td>
<td>3/5/18</td>
</tr>
<tr>
<td>Public Health DrPH</td>
<td>New - Public Health &amp; Clinical Lab Science &amp; Practice LSP</td>
<td>12/4/17</td>
</tr>
<tr>
<td>Pharmaceutical Nanotechnology M.S.P.N.</td>
<td>New - Biomedical Engineering PNB</td>
<td>4/2/18</td>
</tr>
<tr>
<td>Pharmaceutical Nanotechnology M.S.P.N.</td>
<td>New - Drug Discovery, Delivery, Dev. and Manufacturing DDD</td>
<td>4/2/18</td>
</tr>
<tr>
<td>Accountancy M.Acc.</td>
<td>Change - Audit/Systems AUS title to: Assurance ASR</td>
<td>4/2/18</td>
</tr>
<tr>
<td>Global Sustainability M.A.</td>
<td>Change - Water WTR title to Water Sustainability WSR</td>
<td>3/5/18</td>
</tr>
<tr>
<td>Public Health M.P.H.</td>
<td>Change - Biostatistics BST title to Applied Biostatistics ABT</td>
<td>12/4/17</td>
</tr>
<tr>
<td>Public Health M.S.P.H.</td>
<td>Change - Bioinformatics PBF title to: Genomics GEO</td>
<td>12/4/17</td>
</tr>
<tr>
<td>Public Health M.S.P.H.</td>
<td>Change - Environ Health PEH title to: Environ and Occ Health EO</td>
<td>12/4/17</td>
</tr>
<tr>
<td>Business Administration Ph.D.</td>
<td>Terminate - Economics ECO</td>
<td>3/5/18</td>
</tr>
<tr>
<td>Global Sustainability M.A.</td>
<td>Terminate - Coastal Sustainability COA</td>
<td>3/5/18</td>
</tr>
<tr>
<td>Public Health M.P.H.</td>
<td>Terminate - EPH; PEB; FOS; OCC; OCP; SRF; PHA; TXY</td>
<td>12/4/17</td>
</tr>
<tr>
<td>Public Health M.S.P.H.</td>
<td>Terminate - PBC; PIP; POH; POM; POS; PSH; PTX</td>
<td>12/4/17</td>
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</tbody>
</table>

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.
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 also 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 2018-2019 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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A MESSAGE FROM THE PRESIDENT, DR. JUDY GENSHAFT

Thank you for your interest in graduate education at the University of South Florida System. We invite 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 12th among universities worldwide in generating new U.S. patents.

The continuing growth of our research enterprise is among the reasons that the Board of Governors of Florida’s State University System this year designated USF as a Preeminent Public Research University. This means we meet rigorous standards and it confirms our standing as one of the state’s top institutions of higher education. Only two other Florida universities have earned this impressive designation – and they are more than 100 years older than we are.

Our strong interdisciplinary academic programs are coupled with a global focus to place USF on the leading edge of a number of disciplines, including health and critically needed science, technology, engineering and math fields. USF’s entrepreneurial spirit encourages our graduate students to have an immediate impact with their education. For example, the Student Innovation Incubator in USF’s Office of Research & Innovation is home to 25 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.

We offer a variety of opportunities for postgraduate study through our numerous 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, including 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
University of South Florida System
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

I want to welcome you to the University of South Florida and your new academic home as you prepare to embark on the challenging, yet ultimately rewarding, journey into graduate education. As a top 50 global research, USF attracts many of the world’s best and brightest students, and, today, that includes you.

Graduate school is a serious commitment, and one to which the dedicated faculty and staff at USF attach special importance. It is our sincere promise to engage you in meaningful programs and initiatives that support the educational and socio-economic wellbeing of the local, national, and global communities we serve and prepare you for life-long success in the workforce. We champion interdisciplinary inquiry and collaboration as the keys to success not only within our academic programs, but also in the global landscape of 21st century business, communications, science, and culture.

At USF, we highly encourage students and faculty to forge meaningful relationships that transcend the academic, department-centered experiences found in other graduate schools. We believe that partnerships between students, faculty, and researchers across campus, in the community, and around the world strengthen both the university and the graduate student experience by creating a “collaboration for competition” that 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 we further enhance our position as a premier research university with state, national, and global impact. Just this summer, USF was designated as a “Preeminent State Research University,” an award which recognizes our high performance and trajectory of national excellence.

The University of South Florida is a place where you can challenge yourself by contributing to your chosen discipline, your community, and the world-at-large in a meaningful and sustainable way. Whether you aspire 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
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 an array of 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. As well, it has been named as one of three designated Preeminent Universities in the Florida State University System. 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 Master’s degree programs, 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 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 50,000 students, the USF System has an annual budget of $1.7 billion and is ranked 45th 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
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. 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.

Normal inquiries about the institution, such as admission requirements, financial aid, educational programs, etc., should be addressed directly to the institution and not to the Commission's Office.

### 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 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 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

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John B. Ramil
Byron E. Shinn
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
Martin Tadlock, Ph.D.
USF Sarasota-Manatee
Karen Holbrook, Ph.D.
USF Health
Charles J. Lockwood, M.D., MHCM
College Deans

College of Arts and Sciences
College of Behavioral and Community Sciences
Muma College of Business
College of Education
College of Engineering
College of Global Sustainability
College of Graduate Studies
College of Marine Science
Morsani College of Medicine
College of Pharmacy
College of Nursing
College of Public Health
College of The Arts
Honors College
Library
Undergraduate Studies

Eric Eisenberg, Ph.D.
Julianne Serovich, Ph.D.
Moez Limayem, Ph.D.
Robert C. Knoeppel, Ph.D.
Robert Bishop, Ph.D., P.E.
Govindan Parayil, Ph.D.
Dwayne Smith, Ph.D.
Jacqueline Dixon, Ph.D.
Charles J. Lockwood, MD, MHCM
Kevin Sneed, Ph.D.
Donna Petersen, Ph.D.
James Moy, Ph.D.
Charles Adams, Ph.D.
William Garrison, Ph.D.
Paul Atchley, Ph.D.

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

College of Arts and Sciences
College of Behavioral and Community Sciences
Muma College of Business
College of Education
College of Engineering
College of Global Sustainability
College of Graduate Studies
College of Marine Science
Morsani College of Medicine
Morsani College of Medicine – Graduate Studies
Morsani College of Medicine – Rehabilitation Sciences
College of Nursing
College of Nursing
College of Pharmacy
College of Public Health
College of The Arts

Bob Potter, Ph.D.
Catherine Batsche, Ph.D.
Jackie Reck, Ph.D.
Anne Cranston-Gingras, Ph.D.
José Zayas-Castro, Ph.D.
TBA
Ruth Bahr, Ph.D.
David Naar, Ph.D.
Gretchen Koehler, Ph.D.
Michael Barber, D.Phil.
Laura Swisher, Ph.D.
Catherine Gaines Ling, Ph.D.
Theresa Beckie, Ph.D.
Shyam Mohapatra
Kay Perrin, Ph.D.
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)
College of Arts and Sciences
College of Arts and Sciences
College of Arts and Sciences
College of Behavioral and Community Sciences (2)
College of Behavioral and Community Sciences
Muma College of Business (2)
Muma College of Business
College of Education (2)
College of Education
College of Engineering (2)

Lindsay Shaw
Bin Xue
Gary Daughdrill
Cecilia Nunes
TBA
TBA
Richard Plank
Patrick Wheeler
Steve Permuth, Council Chair
TBA
Rasim Guldiken
Alex Savachkin
College of Marine Science (2)  
College of Marine Science  
Morsani College of Medicine (3)  
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)  

Pamela Hallock Muller  
Brad Seibel  
Vrushank Dave  
Ingrid Bahner  
Askin Uysal  
Marcia Johansson  
Harleah Buck  
Janice Zgibor  
Russell Kirby, Council Vice-Chair  
TBA  
TBA  
TBA  

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](http://www.grad.usf.edu)

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Phone Number</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Senior Administration</strong></td>
<td>Dwayne Smith, Ph.D., Sr. Vice Provost and Dean, Office of Graduate Studies</td>
<td>(813) 974-7359</td>
<td><a href="mailto:dsmith@usf.edu">dsmith@usf.edu</a></td>
</tr>
<tr>
<td></td>
<td>Ruth Bahr, Ph.D., Associate Dean</td>
<td>(813) 974-7161</td>
<td><a href="mailto:rbahr@usf.edu">rbahr@usf.edu</a></td>
</tr>
<tr>
<td><strong>Staff</strong></td>
<td>Heidi Paintner, Executive Administrative Specialist</td>
<td>(813) 974-7359</td>
<td><a href="mailto:hpaintne@usf.edu">hpaintne@usf.edu</a></td>
</tr>
<tr>
<td></td>
<td>Olivia DeSantis, Administrative Specialist</td>
<td>(813) 974-2915</td>
<td><a href="mailto:omd@usf.edu">omd@usf.edu</a></td>
</tr>
<tr>
<td></td>
<td>Kokita Wilson, HR Liaison and Office Manager</td>
<td>(813) 974-3810</td>
<td><a href="mailto:kwilson@usf.edu">kwilson@usf.edu</a></td>
</tr>
<tr>
<td></td>
<td>Jessica Sonnenschein, Receptionist</td>
<td>(813) 974-2846</td>
<td><a href="mailto:sonnenschein@usf.edu">sonnenschein@usf.edu</a></td>
</tr>
<tr>
<td><strong>Academics</strong></td>
<td>Carol Hines-Cobb, Assistant Director, Academics</td>
<td>(813) 974-4239</td>
<td><a href="mailto:cdh@usf.edu">cdh@usf.edu</a></td>
</tr>
<tr>
<td></td>
<td>Joseph Butts, Assistant Director, Academics</td>
<td>(813) 974-3586</td>
<td><a href="mailto:tron@usf.edu">tron@usf.edu</a></td>
</tr>
<tr>
<td></td>
<td>Mathdany Clark, Academic Services Administrator</td>
<td>(813) 974-2847</td>
<td><a href="mailto:mnoel@usf.edu">mnoel@usf.edu</a></td>
</tr>
<tr>
<td></td>
<td>Lisa Wetmore, Academic Services Administrator, Cybersecurity</td>
<td>(813) 974-3689</td>
<td><a href="mailto:lwetmore@usf.edu">lwetmore@usf.edu</a></td>
</tr>
<tr>
<td><strong>Accounting</strong></td>
<td>Elizabeth Fernandez, Fiscal and Business Manager</td>
<td>(813) 974-9394</td>
<td><a href="mailto:efernand@usf.edu">efernand@usf.edu</a></td>
</tr>
<tr>
<td></td>
<td>Javier Rodriguez, Fiscal and Business Specialist</td>
<td>(813) 974-9328</td>
<td><a href="mailto:jrodriguez@usf.edu">jrodriguez@usf.edu</a></td>
</tr>
<tr>
<td><strong>Student Affairs</strong></td>
<td>Gary Oliver, Assistant Director, Student Success</td>
<td>(813) 974-7935</td>
<td><a href="mailto:goliver@usf.edu">goliver@usf.edu</a></td>
</tr>
<tr>
<td><strong>Office of Postdoctoral Affairs (OPA)</strong></td>
<td>Kiri Kirkpatrick, Ph.D., Associate Director of Postdoctoral Affairs and Graduate Student Development</td>
<td>(813) 974-0795</td>
<td><a href="mailto:kiri@usf.edu">kiri@usf.edu</a></td>
</tr>
<tr>
<td></td>
<td>Brandis Waiz., Academic Program Specialist</td>
<td>(813) 974-3655</td>
<td><a href="mailto:bwaiz@usf.edu">bwaiz@usf.edu</a></td>
</tr>
<tr>
<td><strong>Graduate and Professional Student Council</strong></td>
<td></td>
<td>(813) 974-2846</td>
<td><a href="mailto:gpsc@grad.usf.edu">gpsc@grad.usf.edu</a></td>
</tr>
<tr>
<td><strong>Office of Admissions - Graduate Admissions Contact:</strong></td>
<td>Admissions: Sean Gilmore, Interim Director</td>
<td>(813) 974-3350</td>
<td><a href="mailto:admissions@usf.edu">admissions@usf.edu</a></td>
</tr>
</tbody>
</table>
**FALL 2018 SEMESTER**
- August 20: First day of classes
- August 24: Last day to drop/add or late register
- August 24: Last day to pay fees
- September 3: Labor Day Holiday; No classes & USF offices closed
- September 21: Graduation application deadline
- October 27: Last day to drop or withdraw with "W" without academic penalty
- November 12: Veteran’s Day Holiday - USF closed
- November 22 & 23: Thanksgiving Holiday - USF closed
- November 29 & 30: Reading Days
- December 1: Last day of classes
- December 6: Fall 2018 final exams end (End of Term)
- December 7-10: Tampa Commencement

**SPRING 2019 SEMESTER**
- January 7: First day of classes
- January 11: Last day to drop/add or late register
- January 11: Last day to pay fees
- January 21: Martin Luther King JR. Holiday - USF closed
- February 1: Spring 2018 graduation application deadline
- March 11 – 17: Spring Break 2018
- March 23: Last day to drop or withdraw with "W" without academic penalty
- April 26: Last day of classes
- April 25 & 26: Designated reading days
- April 27: Final exams begin
- May 1-2: Spring 2019 final exams end (End of Term)
- May 3 & 4: Tampa Commencement (tentative)

**SUMMER 2019 SEMESTER**

**Session A and C**
- May 13: First day of classes Sessions A & C
- May 17: Last day to drop/add or late register. Tuition
- May 17: Last day to pay fees
- May 27: Memorial Day Holiday - USF closed
- June 7: Graduation application deadline
- June 8: Last day to drop or withdraw with "W" without academic penalty
- June 21: Last day of classes Session A
- July 4: Independence Day Holiday - USF closed
- July 19: Last day of classes Session C
- Aug 3: Tampa Commencement (tentative)

**Session B**
- June 7: Graduation application deadline
- June 24: First day of classes Session B
- June 29: Last day to drop/add or late register
- June 29: Last day to pay fees
- July 4: Independence Day Holiday - USF closed
- July 20: Last day to drop or withdraw with "W" without academic penalty
- Aug 2: Last day of classes Session B
- Aug 3: Tampa Commencement (tentative)
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

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

Dean of Admissions  Glenn Besterfield
Interim Director  Sean Gilmore

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 (3.00 on a 4.00 scale) or better in all work attempted while registered as an undergraduate student working for a degree, or
      ii. “B” average (3.00 on a 4.00 scale) or better in all work attempted while registered as a graduate student working for a graduate 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* as outlined in the section on English Proficiency. 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.

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/) 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
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>
<th>Admission for Summer Semester</th>
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<tbody>
<tr>
<td>• Applications received by the Priority Deadline will receive maximum consideration.</td>
<td>Refer to Specific Major</td>
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<td>Refer to Specific Major</td>
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<tr>
<td>• Applications received after the Priority deadline, but by the Final University Deadline, are considered on a space available basis.</td>
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<tr>
<td>• Applications must be complete with all required information by the stated deadline. Any application materials received after the deadline may be reviewed on a space-available basis.</td>
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Check with the Graduate Major Director for availability or to discuss options for admission in a subsequent term.

<table>
<thead>
<tr>
<th>Priority Deadline (for funding and consideration)</th>
<th>Final University Deadline Domestic Applicants</th>
<th>Final University Deadline International Applicants</th>
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<tr>
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<td>June 1</td>
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<td>October 15</td>
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<th>DOCTORATE DEGREES</th>
<th>Admission for Fall Semester</th>
<th>Admission for Spring Semester</th>
<th>Admission for Summer Semester</th>
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</table>

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.
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/
   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

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. 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 (Master Card or Visa issued from a U.S. bank), by E-Check (personal checking/savings account issued from a U.S. bank), or through Flywire 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 online 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/
*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 required and will be jointly determined by relevant major faculty, the Office of Admissions, and the Office of Graduate Studies.

4. **Test Scores**

**GRE (Graduate Record Examination)**: [http://www.gre.org](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](http://www.ets.org/s/gre/pdf/gre_guide.pdf) or [http://www.ets.org/s/gre/pdf/concordance_information.pdf](http://www.ets.org/s/gre/pdf/concordance_information.pdf)

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

Applicants whose native language is not English must demonstrate proficiency in English by submitting acceptable scores on one of the English proficiency tests listed below. Scores 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. Additional documentation may be required by the Office of Graduate Studies or the Office of Graduate Admissions. *Note – test scores are for eligibility for admissions and not to demonstrate English Proficiency for Teaching Assistant (TA) Positions.*

a. Test of English as a Foreign Language (TOEFL iBT) 79 or higher on the Internet based test

b. International English Language Testing System (IELTS) 6.5 or higher
   i. [http://www.ielts.org](http://www.ielts.org)
   ii. (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)

c. INTO English Language Assessment (IELA) 176 or higher (with minimum sub scores of 169)

d. Cambridge English First (FCE) 176 or higher (with minimum sub scores of 169)

e. Pearson Test of English Academic (PTE-A) 53 or higher

f. GRE Verbal Exam 153 (or equivalent)

g. By earning a baccalaureate or higher degree at a regionally accredited institution in the US

By successfully completing INTO USF’s Academic English Program Level 6 or the following INTO USF courses: EAP 1850 and EAP 1852 with a Satisfactory grade.

*Proof of English proficiency (additional documentation or exam scores) may be requested based upon information provided in the application.*
**English Proficiency Exemptions**

You qualify for an exemption from taking an English proficiency examination if one of the following criteria are met:

- You are a native speaker of English

- You earned a baccalaureate or higher degree at a regionally accredited institution in the U.S.

- You completed all of your undergraduate education and earned an undergraduate degree at an institution where the language of instruction is English only. Medium of Instruction must be documented on the transcript or on an official Certificate of Medium of Instruction from the Institution. Other related factors (including test scores) will also be considered.

- You completed all of your graduate education and earned a graduate degree at an institution where the language of instruction is English only. Medium of Instruction must be documented on the transcript or on an official Certificate of Medium of Instruction from the Institution. Other related factors (including test scores) will also be considered. **Note:** *If you completed a Master's degree that was strictly research and no academic classes, that degree does not meet the exemption. This type of Master's degree is generally awarded at a non-U.S. institution.*

- You are current USF student

Examples of meeting the English Proficiency Exemption criteria:

- You completed the last three years of your undergraduate degree at the University of Michigan, and in addition, earned a Master’s degree that was one and one-half years in duration at the University of London.

- You completed the last two years of your undergraduate degree at the University of Melbourne, and in addition, earned a Master’s degree from the University of Michigan.

Example of not meeting the English Proficiency Exemption criteria:

- You completed two years of an undergraduate degree program at an overseas institution (Fudan University) where the medium of instruction is a language other than English. You then transferred to an institution (Monash University) where all classes are taught exclusively in English and earned a degree from that institution.

- 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. http://www.usf.edu/admissions/international/admission-information/graduate/requirements-and-deadlines.aspx
English Proficiency for Assistantship Eligibility

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](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](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. For assistance with residency questions contact gradadmissions@usf.edu

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 (e.g. transcripts) 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 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.

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.

http://www.grad.usf.edu/
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 change to another major at the same or lower degree 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 and approval by the Office of Graduate Studies
- 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 who have less than a 3.00 as required to be in good standing may still be considered for a change of graduate major if the new graduate major is willing to accept them into the degree program.

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/](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/

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

USF Regulations:
USF 4.0010 Parking General Guidelines, Registration, Penalties and Rates:

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

Office of the Registrar

Website:  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 (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


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/
Schedule: 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 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

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/eqoa/
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/](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/](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/](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,

### 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.

VA toll free number is 1-888-442-4551.

Location/Phone: Student Services Building (SVC) 2088; (813) 974-2171
Web Address: [http://www.usf.edu/career-services/](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](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](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 instruction that is heavily tilted toward discussions, participation, and individual presentations called micro-teaching. Further, the micro-teaching lab will give each student the opportunity to present a short (7-10 minute) lecture from their discipline to fellow classmates, and receive informal feedback on their delivery. These students will also receive co-curricular transcript credit and a certificate.

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. USF Cards may be obtained at the USF Card 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. USF Cards 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.

http://www.grad.usf.edu/
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 majors 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](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](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.

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

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

Graduate Catalog

Also reference: USF Policy 10-059 University of South Florida System Catalogs

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. 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 contract 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) are intended to recruit quality students to graduate study at USF and to enhance the graduate learning experience. 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 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.

http://www.grad.usf.edu/
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-
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).

**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 submitted through E-Grades 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. Editorial Note: For students entering a doctorate after completion of a master’s degree, departments may count the structured graduate credits from the master’s toward the post-baccalaureate requirements for the doctorate. The courses must be individually evaluated and transferred in.

- 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 USF Credit
Up to 50% of graduate-level (5000-7999) structured coursework with a grade of B (3.00) or better, taken as a non-degree seeking student at USF may be applied toward their graduate degree provided the courses are required for the major.

- The 50% is calculated based on the total minimum hours of the major 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.
• Courses 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.

• Unstructured courses and courses with Pass/Fail grades are not eligible for application of credit. Grades from courses taken at USF are calculated in the USF GPA and are noted on the transcript.

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

Exceptions:

All non-degree seeking coursework that is applicable to the major, taken from USF will be applied in the following situations, pending approval of the graduate major, College, and Office of Graduate Studies.

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 Graduate Certificate student
• a degree-seeking student, where the student is approved for a Change of Major to another graduate major

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 or a Bachelor’s degree and a professional doctorate 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 Major 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 if applicable, 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 approval from the Undergraduate Council, Graduate Council, and if applicable, 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 degree.
- 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.

Concurrent Degree Curriculum Approval
A Concurrent Degree may be developed in the following ways:

- an established relationship between two majors formulated through the Department(s) and then formalized through the College(s), Office of Graduate Studies, and Graduate Council. A current list of formalized programs with Concurrent Degree designation may be found in the Graduate Catalog.

- formulated by an individual student who is interested in pursuing two majors that are not currently a formalized Concurrent Degree. Students must request approval from both majors of interest to pursue a Concurrent Degree with those majors. Any approved Concurrent Degrees must meet the minimum accreditation requirements (e.g. 60 hours combined after sharing hours). For procedures and the necessary forms, refer to the Office of Graduate Studies website. Note: when a Major has this occur more than three times, the Major should follow the process to formalize that Concurrent Degree.

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](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](http://www.grad.usf.edu/student-forms.php), 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,
• 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](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-res-main.php](http://www.grad.usf.edu/ETD-res-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\(^3\) 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

- 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.

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

**Manuscript Processing Fee**
USF Regulation USF4-0107, [http://regulationspolicies.usf.edu/regulations/pdfs/regulation-usf4.0107.pdf](http://regulationspolicies.usf.edu/regulations/pdfs/regulation-usf4.0107.pdf)
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 a 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...\(^4\)

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 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.

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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

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.

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.

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)

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\(^5\) 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.
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. Note: this format should include an introduction and conclusion.

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
- Appendixes 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.

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 (Final Oral Examination)

Scheduling and Announcement
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.) 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 College and Department may specify additional procedures for this process.

Attendance
It is desirable for all members of the final oral examination committee to be present physically during the entire examination. If this is impossible, video conferencing may be approved by the College Dean and the Office of Graduate Studies. If video conferencing is approved, the student, the Major Professor (or, if Co-Major Professors, at least one), and the Outside Chair for the defense must be physically present. Other faculty members and graduate students may physically or virtually attend the examination.

7 Include either References or a Bibliography, as specified by your style guide.
Video Conferencing
Graduate programs must adhere to the following if the final oral examination involves video conferencing. Departments can enforce stricter guidelines. Video conferencing may not be ideal in all circumstances.

Facilities and Support Requirements
The video conferencing room must allow the candidate and all members of the examination committee to see and hear one another during the entire examination. There must be appropriate software/hardware available for the transmission of any text, graphics, photographs, or writing referred to or generated during the examination.

Audio-only communications are not permitted.

Prior to the defense, the student must agree to the video conferencing set-up. The student and Major Professor must confirm in advance that the video conferencing setup is satisfactory. On the day of the defense, if the video conferencing capabilities differ significantly from the initial agreement as noted on the Request for Defense Form, then the student may cancel the examination without penalty.

Any technical support staff required to operate equipment must observe strict confidentiality.

The video conference must be scheduled for a three and a half hour time period to allow for any delays resulting from technical issues during the dissertation defense.

Should a technical failure arise, the Outside Chair in consultation with the Major Professor and other committee members will determine if the examination should continue. If the examination is cancelled, the examination will be rescheduled and there will be no penalty to the student.

All committee members must record their vote on the Successful Defense form. Off-site committee members must sign a copy of the Successful Defense form (completed within the College) and send it back to the Major Professor as soon as possible, but no later than a week after the defense date.

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 may be permissible via video conference with approval from the Office of Graduate Studies. The student and Major Professor must be in attendance in person and may not participate via remote access. 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. All committee members are expected to participate fully in questioning during the course of the examination and in the discussion of and decision on the result.
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 filled prior to publication, thereby preserving patent rights...”

To protect the University’s primary goal from undue 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.

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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”.
Section 9

Graduation Information and Post-Doctoral Affairs

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/](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](http://www.grad.usf.edu/postdoc)
Section 10

Degrees, Majors, and Concentrations

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](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:

<table>
<thead>
<tr>
<th>Degree Level</th>
<th>Number of Concentrations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master’s</td>
<td>116</td>
</tr>
<tr>
<td>Education Specialist</td>
<td>2</td>
</tr>
<tr>
<td>Professional doctoral (including M.D., D.P.T., PharmD)</td>
<td>3</td>
</tr>
<tr>
<td>Specialist level</td>
<td>199</td>
</tr>
<tr>
<td>Doctoral level</td>
<td>15</td>
</tr>
<tr>
<td>Professional level</td>
<td>89</td>
</tr>
</tbody>
</table>

USF Curriculum Definitions – also reference USF 3.038 Academic Curricular Offerings
[https://www.systemacademics.usf.edu/curriculum/definitions.php](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>M.A.</td>
<td>Master of Arts</td>
<td>✤ Adult Education&lt;br&gt;✤ Applied Anthropology&lt;br&gt;✤ Applied Behavior Analysis&lt;br&gt;✤ Art History&lt;br&gt;✤ Autism Spectrum Disorders and Severe Intellectual Disabilities&lt;br&gt;✤ Career and Technical Education&lt;br&gt;✤ Chemistry (non-thesis option)&lt;br&gt;✤ Communication&lt;br&gt;✤ Counselor Education&lt;br&gt;✤ Criminal Justice Administration&lt;br&gt;✤ Criminology&lt;br&gt;✤ Cybercrime&lt;br&gt;✤ Economics&lt;br&gt;✤ Elementary Education&lt;br&gt;✤ English&lt;br&gt;✤ Exceptional Student Education&lt;br&gt;✤ Foreign Language Education (being terminated)&lt;br&gt;✤ French&lt;br&gt;✤ Geography&lt;br&gt;✤ Gerontology&lt;br&gt;✤ Global Sustainability&lt;br&gt;✤ History&lt;br&gt;✤ Latin American, Caribbean and Latino Studies&lt;br&gt;✤ Liberal Arts&lt;br&gt;✤ Library and Information Science&lt;br&gt;✤ Linguistics&lt;br&gt;✤ Linguistics: English as a Second Language&lt;br&gt;✤ Mass Communications&lt;br&gt;✤ Mathematics&lt;br&gt;✤ Mathematics Education&lt;br&gt;✤ Music Education&lt;br&gt;✤ Philosophy&lt;br&gt;✤ Physical Education&lt;br&gt;✤ Political Science&lt;br&gt;✤ Psychology&lt;br&gt;✤ Reading Education&lt;br&gt;✤ Rehabilitation and Mental Health Counseling (Post Bacc)&lt;br&gt;✤ Religious Studies&lt;br&gt;✤ School Psychology&lt;br&gt;✤ Science Education (being terminated)&lt;br&gt;✤ Sociology&lt;br&gt;✤ Spanish&lt;br&gt;✤ Special Education, Gifted&lt;br&gt;✤ Special Education, Motor Disabilities&lt;br&gt;✤ Statistics&lt;br&gt;✤ Women’s and Gender Studies</td>
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<td>Degree Description</td>
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<td>M.A.T.</td>
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               |                                                      |  ❖ Microbiology  
               |                                                      |  ❖ Nurse Anesthesia  
               |                                                      |  ❖ Nursing  
               |                                                      |  ❖ Physics  
               |                                                      |  ❖ Speech-Language Pathology (post Bacc)  
               |                                                      |  ❖ Sport and Entertainment Management  
               |                                                      |  ❖ Biotechnology |
| M.S.B.C.B.  | Master of Science in Bioinformatics & Computational Biology |  ❖ Bioinformatics and Computational Biology |
| M.S.B.E.    | Master of Science in Biomedical Engineering        |  ❖ Biomedical Engineering  
               |                                                      |  ❖ Civil Engineering  
               |                                                      |  ❖ Chemical Engineering |
| M.S.C.E.    | Master of Science in Civil Engineering             |  ❖ Civil Engineering  
               |                                                      |  ❖ Computer Engineering |
| M.S.C.H.    | Master of Science in Chemical Engineering          |  ❖ Chemical Engineering  
               |                                                      |  ❖ Computer Engineering |
| M.S.C.P.    | Master of Science in Computer Engineering          |  ❖ Computer Engineering  
               |                                                      |  ❖ Computer Science  
               |                                                      |  ❖ Electrical Engineering  
               |                                                      |  ❖ Engineering Management  
               |                                                      |  ❖ Environmental Engineering  
               |                                                      |  ❖ Health Informatics  
               |                                                      |  ❖ Industrial Engineering  
               |                                                      |  ❖ Information Technology  
               |                                                      |  ❖ Marketing  
               |                                                      |  ❖ Mechanical Engineering  
               |                                                      |  ❖ Medical Sciences  
               |                                                      |  ❖ Materials Science and Engineering  
               |                                                      |  ❖ Public Health  
               |                                                      |  ❖ Pharmaceutical Nanotechnology  
               |                                                      |  ❖ Real Estate – Suspended for Admissions  
               |                                                      |  ❖ Social Work  
               |                                                      |  ❖ Urban and Community Design  
               |                                                      |  ❖ Urban and Regional Planning |

http://www.grad.usf.edu/
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<td>❖ Nurse Anesthesia NEW&lt;br&gt;❖ Nursing</td>
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<td>❖ Physical Therapy*</td>
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<tr>
<td>Degree Code</td>
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List is accurate as of 8/17/2018. 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

<table>
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<tr>
<th>MASTER'S</th>
<th>Degree</th>
<th>Degree Description</th>
<th>Concentrations</th>
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<td>• Tax</td>
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<td>3. Advanced Athletic Training</td>
<td>M.S.</td>
<td>Master of Science</td>
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<td>4. Advertising</td>
<td>M.S.</td>
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<td>5. Applied Anthropology</td>
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<td>Master of Arts</td>
<td>• Archaeological and Forensic Science</td>
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<td>• Bio-Cultural Medical Anthropology</td>
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<td>• Cultural Resource Management</td>
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<td>• Heritage Studies</td>
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<td>6. Applied Behavior Analysis</td>
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<tr>
<td>7. Applied Behavior Analysis</td>
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<td>10. Art History</td>
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<td>12. Autism Spectrum Disorders and Severe Intellectual Disabilities</td>
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<td>• Cell Biology, Microbiology &amp; Molecular Biology</td>
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<td>• Ecology and Evolution</td>
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<td>• Environmental and Ecological Microbiology</td>
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<td>• Physiology and Morphology</td>
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<td>• Compliance, Risk Management &amp; Anti-Money Laundering</td>
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<td>• Structures</td>
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<td>Speech-Language Pathology (Post Bacc)</td>
<td>M.S.</td>
<td>Master of Science</td>
<td>Behavioral Health, Environmental and Occupational Health, Epidemiology, Genetic Counseling, Genomics, Global Communicable Disease, Maternal and Child Health, Occupational Exposure Science, Public Health Education</td>
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<tr>
<td>Sport and Entertainment Management</td>
<td>M.S.</td>
<td>Master of Science</td>
<td>Behavioral Health, Environmental and Occupational Health, Epidemiology, Genetic Counseling, Genomics, Global Communicable Disease, Maternal and Child Health, Occupational Exposure Science, Public Health Education</td>
</tr>
<tr>
<td>Statistics</td>
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<td>Master of Arts</td>
<td>Behavioral Health, Environmental and Occupational Health, Epidemiology, Genetic Counseling, Genomics, Global Communicable Disease, Maternal and Child Health, Occupational Exposure Science, Public Health Education</td>
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<td>Master of Urban and Community Design</td>
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<td>M.U.R.P.</td>
<td>Master of Urban &amp; Regional Planning</td>
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<tr>
<td>Women’s and Gender Studies</td>
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<td>Master of Arts</td>
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*The MPAS is offered through the Morsani College of Medicine*
### EDUCATION SPECIALIST

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### Educational Leadership

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### DOCTORATE

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<td>▪ Bio-Cultural Medical Anthropology</td>
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<td>▪ Information Systems</td>
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<td>▪ Marketing</td>
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<td>▪ Environmental Engineering</td>
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<td>▪ Geotechnical</td>
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<td>▪ Structures</td>
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<td>▪ Transportation</td>
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<td>▪ Water Resources</td>
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<td>▪ Speech-Language Sciences</td>
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http://www.grad.usf.edu/
<table>
<thead>
<tr>
<th>21. Economics</th>
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<th>Science Education</th>
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<td>23. Educational Program Development</td>
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<td>24. Electrical Engineering</td>
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<td>26. Environmental Engineering</td>
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<td>27. Geography and Environmental Science and Policy</td>
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<td>Doctor of Philosophy</td>
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<td>Ecology and Evolution</td>
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<td>Doctor of Philosophy</td>
<td>Environmental and Ecological Microbiology</td>
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<td>37. Mechanical Engineering</td>
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<td>38. Medical Sciences</td>
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<td>39. Medicine*</td>
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<td>40. Music</td>
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<td>Allergy, Immunology and Infectious Disease</td>
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<td>Pathology and Laboratory Medicine</td>
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<td>Pharmacology and Therapeutics</td>
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<td>Physiology and Biophysics</td>
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<td>42. Nurse Anesthesia</td>
<td>D.N.P.</td>
<td>Doctor of Nursing Practice</td>
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<td>43. Nursing Science</td>
<td>Ph.D.</td>
<td>Doctor of Philosophy</td>
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<td>44. Pharmacy*</td>
<td>PharmD.</td>
<td>Doctor of Pharmacy</td>
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<td>Doctor of Philosophy</td>
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<td>46. Physical Therapy*</td>
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### Section 10 Degrees, Majors, and Concentrations

<table>
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<tr>
<th>47. Physics, Applied</th>
<th>Ph.D.</th>
<th>Doctor of Philosophy</th>
<th>Medical Physics</th>
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</table>
| 48. Psychology       | Ph.D. | Doctor of Philosophy | • Clinical Psychology  
|                      |       |                      | • Cognition, Neuroscience & Social Psychology  
|                      |       |                      | • Industrial Organizational Psychology |
| 49. Public Health    | Dr.P.H. | Doctor of Public Health | • Advanced Practice Leadership in Public Health  
|                      |       |                      | • Public Health and Clinical Laboratory Science and Practice |
| 50. Public Health    | Ph.D. | Doctor of Philosophy | • Biostatistics  
|                      |       |                      | • Community and Family Health  
|                      |       |                      | • Environmental and Occupational Health  
|                      |       |                      | • Epidemiology  
|                      |       |                      | • Global Communicable Disease  
|                      |       |                      | • Health Services Research |
| 51. Rehabilitation Sciences (Currently Suspended) | Ph.D. | Doctor of Philosophy | • Chronic Disease  
|                      |       |                      | • Neuromusculoskeletal Disability  
|                      |       |                      | • Veteran’s Health/Reintegration |
| 52. School Psychology | Ph.D. | Doctor of Philosophy | |
| 53. Teacher Education and Second Language Acquisition | Ph.D. | Doctor of Philosophy | |
| 54. Social Work Suspended for Admissions | Ph.D. | Doctor of Philosophy | |
| 55. Sociology        | Ph.D. | Doctor of Philosophy | |

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.

List accurate as of 8/17/18
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 minimum of 150 hours after counting the shared coursework or have SACSCOC approval for the total combined hours if less.

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<td>RX Pharmacy (PharmD)</td>
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<td>AS Biomedical Sciences (BS)</td>
<td>ED Science Education (MAT)</td>
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<tr>
<td>AS Cell and Molecular Biology (BS)</td>
<td>AS Biology (MS) – non-thesis</td>
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<tr>
<td>AS Chemistry (BS)</td>
<td>EN Biomedical Engineering (MSBE)</td>
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<tr>
<td>AS Chemistry (BS)</td>
<td>ED Science Education (MAT)</td>
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<tr>
<td>AS English (BA)</td>
<td>AS English (MA)</td>
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<tr>
<td>AS Environmental Biology (BS)</td>
<td>ED Science Education (MAT)</td>
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<tr>
<td>AS Environmental Microbiology (BS)</td>
<td>ED Science Education (MAT)</td>
</tr>
<tr>
<td>AS Environmental Science and Policy (BS)</td>
<td>PH Public Health (MPH/MSPH)</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>
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<tr>
<td>AS Interdisciplinary Natural Science (BS)</td>
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<td>AS Marine Biology (BS)</td>
<td>ED Science Education (MAT)</td>
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<td>AS Mathematics (BA)</td>
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<tr>
<td>AS Microbiology (BS)</td>
<td>AS Microbiology (MS)</td>
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<td>AS Physics (BA)</td>
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<td>BA Advertising (BS)</td>
<td>AS Mass Communications: Strategic Comm. Management Conc. (MA)</td>
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<td>BA Business Analytics &amp; Information Systems (BS)</td>
<td>BA Business Analytics and Information Systems (MS)</td>
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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.

Note: Per accreditation guidelines, Concurrent Degrees must have a combined total minimum of 60 hours after sharing credits.
Section 11

Graduate Certificate Policies

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 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

Prior to submission of a new Graduate Certificate Proposal, a Concept Proposal form must be submitted through the College Dean to the Academic Program Advisory Council (APAC) for a 14-day posting. Once cleared through APAC the faculty sponsor may proceed with submission of the proposal through normal curriculum processing procedures. 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 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 sequence of course work must offer a clear and appropriate educational objective at the post-baccalaureate level.

2. The curriculum will consist of at least two structured core graduate courses taken at USF, specific to the area of study. Substitutions to the core courses are not permitted. A minimum of nine unique credit hours is required for the certificate curriculum.

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

4. 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).

5. An appropriate number of credit hours must comprise the area of study for the certificate, with the typical range being 12-15 hours. 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 offered at USF.

6. 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.

3. 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.

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 Graduate Certificate program 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 to the department for approval and submission to the Office of Graduate Certificates for the Graduate Certificate to be awarded. Certificate-seeking students will be classified as “Graduate Certificate Students.” As such, they are not eligible for financial aid and will receive a later registration date than degree-seeking students.

• **Degree Seeking Students**
  - Admission - All degree seeking students who wish to pursue approved graduate certificates must apply for admission to the Graduate Certificate program through the Graduate Certificate Office. Students must apply for admission to the certificate prior to the deadline to apply for graduation by the fourth week of the semester in which the student plans to graduate.

**Completion**

For Graduate Certificates within the Major, students must submit the Completion form by the fourth week of the semester in which the student plans to graduate. For Graduate Certificates in a discipline outside the Major, students must submit the Completion form no later than ten years after starting the first course applied to the Certificate.

1. 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”.

2. All graduate certificate students may apply one graduate course to a maximum of two graduate certificates.

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

4. Should a graduate certificate student subsequently apply and be accepted to a graduate major, the University’s Application of Internal Credit Policy applies. Any application of such credit must be approved by the degree-granting college and must be appropriate to the major. No courses taken outside of USF may be transferred into a Graduate Certificate at USF.

5. 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.

### Accelerated Majors

<table>
<thead>
<tr>
<th>Program</th>
<th>Degree</th>
<th>Change</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics</td>
<td>M.A.</td>
<td>Termination of Accelerated Option</td>
<td>12/4/17</td>
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<tr>
<td>Liberal Arts: Film Studies</td>
<td>M.A.</td>
<td>Changes to curriculum</td>
<td>4/2/18</td>
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<tr>
<td>Liberal Arts: Film Studies</td>
<td>M.A.</td>
<td>Changes to curriculum</td>
<td>4/16/18</td>
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### Concurrent Majors

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<th>Date</th>
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<tbody>
<tr>
<td>Anthropology/Public Health</td>
<td>M.A./M.P.H.</td>
<td>Change curriculum</td>
<td>4/16/18</td>
</tr>
<tr>
<td>Anthropology/Public Health</td>
<td>M.A./Ph.D.</td>
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<td>4/16/18</td>
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<tr>
<td>Anthropology/Public Health</td>
<td>Ph.D./M.P.H.</td>
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### New Degree Program

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<tr>
<td>Advertising</td>
<td>M.S.</td>
<td>New Degree Program CIP 09.0903 (ADVT)</td>
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### New Majors

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<tr>
<td>Cancer Chemical Biology (CCB)</td>
<td>Ph.D.</td>
<td>New Major under an existing CIP (26.0911)</td>
<td>4/16/18</td>
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<tr>
<td>Cancer Immunology and Immunotherapy (CII)</td>
<td>Ph.D.</td>
<td>New Major under an existing CIP (26.0911)</td>
<td>4/16/18</td>
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### Changes to Majors

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<th>Degree</th>
<th>Change</th>
<th>Date</th>
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<tr>
<td>Anthropology</td>
<td>M.A.</td>
<td>Change deadlines; corresponding with Concurrent degrees</td>
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<tr>
<td>Anthropology</td>
<td>Ph.D.</td>
<td>Change deadlines; corresponding with Concurrent degrees</td>
<td>4/16/18</td>
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<tr>
<td>Cancer Biology</td>
<td>Ph.D.</td>
<td>Change curriculum; reformat for core, deadlines</td>
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<td>Cell and Molecular Biology</td>
<td>Ph.D.</td>
<td>Change Curriculum</td>
<td>2/5/18</td>
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<tr>
<td>Chemistry</td>
<td>M.S.</td>
<td>Change admission deadlines, add courses</td>
<td>3/5/18</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Ph.D.</td>
<td>Change admission deadlines, add courses</td>
<td>3/5/18</td>
</tr>
<tr>
<td>Chemistry (non-thesis)</td>
<td>M.A.</td>
<td>Change admissions deadlines; add courses</td>
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<td>Intelligence Studies</td>
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<td>Non-sub changes; course number updates</td>
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<td>MA</td>
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<td>Change Film Studies Concentration Curriculum</td>
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<td>Ph.D.</td>
<td>Change Admission Deadlines, core</td>
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<tr>
<td>Physics, Applied</td>
<td>Ph.D.</td>
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<td>Psychology</td>
<td>M.A.</td>
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<td>Psychology</td>
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<td>Statistics</td>
<td>M.A.</td>
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<td>Urban and Regional Planning</td>
<td>M.U.R.P.</td>
<td>Change curriculum</td>
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<tr>
<td>Women’s and Gender Studies</td>
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### Graduate Certificates

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<tr>
<td>Digital Humanities</td>
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<tr>
<td>Leadership for Coastal Resiliency Planning</td>
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<td>New Certificate</td>
<td>4/2/18</td>
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<tr>
<td>Non-Profit Management</td>
<td></td>
<td>Change title to Management of Non-Governmental and Non-Profit Organizations</td>
<td>3/19/18</td>
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</table>

[http://www.cas.usf.edu/](http://www.cas.usf.edu/)
University of South Florida
College of Arts and Sciences
4202 E. Fowler Ave BEH107
Tampa, FL 33620

Web address:  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

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:

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) - 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)
Master of Science (M.S.)
Advertising (ADVT)
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)
Cancer Chemical Biology (CBI)
Cancer Immunology and Immunotherapy (CII)
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)
Mathematics (MTH)
  - Pure & Applied (PAA)
  - Statistics (STT)
Philosophy (PHI)
  - Philosophy and Religion (PHR)
Physics (Applied) (APD)
  - Medical Physics (MDP)
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.
ADVERTISING

Master of Science (M.S.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
- Fall: June 1
- Spring: October 15
- Summer: no admission

Minimum Total Hours: 36
Level: Masters
CIP Code: 09.0903
Dept. Code: MCM
Major/College Codes: ADVT/ AS
Effective: 201808

CONTACT INFORMATION

College: Arts and Sciences
Department: Zimmerman School of Advertising and Mass Communications
Contact Information: www.grad.usf.edu

The M.S. in Advertising provides in-depth training in extracting, analyzing and utilizing analytics associated with advertising media and how those analytics shape strategy and creative content. It is useful both for mid-career professionals and those seeking entry-level advertising positions.

Major Research Areas: Advertising, Mass Communications, Marketing, Communication, Media

ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements, as well as requirements for admission to the major, listed below.

- Appropriate bachelor’s degree from a regionally-accredited institution (e.g. Mass Communications, Communication, Marketing)
- 153V (60th percentile), 144Q (18th percentile) preferred on the GRE
- a resume
- three letters of recommendation (academic recommendations preferred)
- a strong cover letter of intent
- Students who lack an appropriate background in the selected concentration may be required to take additional courses to meet concentration minimums.

http://www.cas.usf.edu/
CURRICULUM REQUIREMENTS

Total Minimum Hours: 36

Core Requirements - 24 hours
MMC 6447 3 Quantitative Research Methods in Mass Communications
ADV 5825 3 Advertising Pro-seminar
ADV 6602 3 Advanced Advertising Management
ADV 6505 3 Advertising Research
MMC 6449 3 Advertising Analytics
ADV 5508 3 Return on Advertising Investment
ADV 5005 3 Advertising Planning
ADV 6305 3 Advertising Media Strategies

Applied Research – 6 hours
MMC 6950 6 Applied Research Project

Marketing Courses – 6 hours
MAR 6815 3 Marketing Management
MAR 6555 3 Consumer Behavior Insights

Comprehensive Exam
Requires successful completion of an Applied Research Project in lieu of a comprehensive exam.

Non-Thesis
This is a non-thesis major.

COURSES
See http://www.ugs.usf.edu/course-inventory/
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 M.A. 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; bioarcheology; cultural resource management; public archeology.

**ADMISSION INFORMATION**
Must meet University Admission and English Proficiency requirements 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**

- ANG 6705 3 Foundations of Applied Anthropology I
- ANG 5486 3 Quantitative Methods in Anthropology (or equivalent in another department)

**Required Track - 24 hours**

Students select from one of the following Tracks:

**Archaeology Track**

- ANG 6198 3 Regional Problems in Methods of Public Archaeology
- ANG 6110 3 Archaeological Theory and Current Issues
- ANG 6197 3 Public Archaeology
- Electives 6 Two electives in Archaeology
- Electives 3 One elective in Biological Anthropology
- Electives 3 One elective from any graduate seminar in Anthropology
- Seminar 3 One graduate seminar outside the Department
**Biological Anthropology Track**

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<th>Credits</th>
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<tr>
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<td>ANG 6766</td>
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<td>ANG 6511</td>
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<td>ANG 6469</td>
<td>3</td>
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<tr>
<td>ANG 6585</td>
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<td>Seminars</td>
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**Cultural Anthropology Track**

<table>
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<td>3</td>
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<tr>
<td>Seminars</td>
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**Medical Anthropology Track**

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<td>ANG 6469</td>
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<td>Seminars</td>
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**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

<table>
<thead>
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<th>Course</th>
<th>Credits</th>
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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.

**Concurrent Degree Option**

Students may apply to pursue one of the Concurrent Degree Options. Applicants must meet University Admission and English Proficiency Requirements, as well as the requirements for each major. Refer to the individual listings the admission and curriculum requirements specific for that major. Admission into one major does not guarantee admission in the other major.

**Concurrent M.A. /M.P.H.**

- M.A. in Applied Anthropology (ANT)  - total minimum hours - 40  
  - with a concentration in  
    Bio-cultural Medical Anthropology (BCM)

- M.P.H. in Public Health*  – total minimum hours – 42  
  - with concentration in:  
    Epidemiology (EPY)  Maternal and Child Health (PMC)  Public Health Education (PHN)  Global Health Practice (GLO)

**Shared Courses-12 Credit Hours:**

Students must fulfill all the requirements for both majors, with the following exceptions: Students can share up to 15% of their courses between concurrent degrees (up to 12 credits). The shared courses for the concurrent degree need to be approved by both Colleges at the time of graduation certification. The number of shared hours cannot exceed 15% of the combined degree total.

http://www.cas.usf.edu/
In consultation with their major advisors, students will select two courses as electives in Anthropology and two courses as electives in Public Health. The two courses in Public Health will be selected from a concentration listed above. The two courses in Anthropology will be selected from electives.

The student may choose from the following list of courses. Other courses may be selected in consultation with the advisor.

**Anthropology**

ANG 6585  Theories in Applied Bioanthropology  
ANG 6469  Theory and Method in Medical Anthropology  
ANG 6570  Nutritional Assessment  
ANG 6730  Socio Cultural Aspects of HIV/AIDS  
ANG 6733  Issues in Migrant Health  
ANG 6735  Reproductive Health  
ANG 6533  Anthropology of Human Growth and Development  
ANG 6731  Health and Disasters  
ANG 6732  Global Health from an Anthropological Perspective

**Public Health**

PHC 6053  Categorical Data Analysis  
PHC 6701  Computer Applications for Public Health Research  
PHC 6764  Global Health Principles and Contemporary Issues  
PHC 6761  Global Health Assessment Strategies  
PHC 6505  Program Planning in Community Health  
PHC 6412  Health Disparities and Social Determinants of Health  
PHC 6725  Focus Group Research Strategies  
PHC 6530  Issues and Concepts in Maternal and Child Health  
PHC 6532  Women’s Health Issues in Public Health

Total combined hours after sharing: 70

For all other curriculum requirements, including Thesis/non-Thesis, Internship, Comprehensive Examination, etc., refer to the Applied Anthropology or Public Health section of the Graduate Catalog listing for that major.

**Concurrent Degree Admission Information**

The two majors review applicants independently and admission to one major in no way guarantees admission into the other major. In choosing which major to apply to first, students should take into consideration the following: major requirements differ between Anthropology and Public Health; the student’s interests and future career plans. Students must be admitted and in good standing when applying for the concurrent degree. Concurrent degree students in Anthropology select a track and an optional concentration in Bio-Cultural Medical Anthropology. Concurrent degree students in Public Health select one of the above concentrations. Upon completion of all requirements for the concurrent degree major, 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 M.A. /Ph.D.**

M.A. in Applied Anthropology (ANT) - total minimum hours - 40  
- with a concentration in  
  Bio-cultural Medical Anthropology (BCM)

Ph.D. in Public Health* – total minimum hours – 55 post master’s  
- with concentration in:  
  Community and Family Health (CFH)  
  Epidemiology (EPY)  
  Global Communicable Disease (TCD)
Shared Courses-12 Credit Hours:
Students must fulfill all the requirements for both majors, with the following exceptions: Students can share up to 15% of their courses between concurrent degrees (up to 12 credits). The shared courses for the concurrent degrees need to be approved by both Colleges at the time of graduation certification. The number of shared hours cannot exceed 15% of the combined degree total.

In consultation with their major advisors, students will select two courses as electives in Anthropology and two courses as electives in Public Health. The two courses in Public Health will be selected from a concentration listed above. The two courses in Anthropology will be selected from electives.

The student may choose from the following list of courses. Other courses may be selected in consultation with the advisor.

**Anthropology**
- ANG 6585 Theories in Applied Bioanthropology
- ANG 6469 Theory and Method in Medical Anthropology
- ANG 6570 Nutritional Assessment
- ANG 6730 Socio Cultural Aspects of HIV/AIDS
- ANG 6733 Issues in Migrant Health
- ANG 6735 Reproductive Health
- ANG 6533 Anthropology of Human Growth and Development
- ANG 6731 Health and Disasters
- ANG 6732 Global Health from an Anthropological Perspective

**Public Health**
- PHC 6053 Categorical Data Analysis
- PHC 6701 Computer Applications for Public Health Research
- PHC 6764 Global Health Principles and Contemporary Issues
- PHC 6761 Global Health Assessment Strategies
- PHC 6505 Program Planning in Community Health
- PHC 6412 Health Disparities and Social Determinants of Health
- PHC 6725 Focus Group Research Strategies
- PHC 6530 Issues and Concepts in Maternal and Child Health
- PHC 6532 Women’s Health Issues in Public Health

Total combined hours after sharing: 83

For all other curriculum requirements, including Thesis/non-Thesis, Internship, Comprehensive Examination, etc., refer to the Catalog listing for that major.

**Concurrent Degree Admission Information**
The two majors review applicants independently and admission to one major in no way guarantees admission into the other major. In choosing which major to apply to first, students should take into consideration the following: admissions requirements differ between Anthropology and Public Health, student interests and future career plans. Students must be admitted and in good standing when applying for the concurrent degrees. Concurrent degree students in Anthropology select a track and an optional concentration in Bio-Cultural Medical Anthropology. Concurrent degree students in Public Health select one of the above concentrations. Upon completion of all requirements for the concurrent degree majors, the student submits separate applications for graduation to Anthropology and Public Health, and is certified for graduation by both majors and receives two diplomas.

**COURSES**
See [https://www.systemacademics.usf.edu/course-inventory](https://www.systemacademics.usf.edu/course-inventory)
APPLIED ANTHROPOLOGY

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: December 15
Spring: October 15
Summer: February 15

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)

Also offered as a Concurrent Degree with Public Health

CONTACT INFORMATION

College: Arts and Sciences
Department: Anthropology
Contact Information: http://anthropology.usf.edu/graduate/

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.

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 Admission and English Proficiency requirements 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
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
ANG 6469  3  Theory and Methods in Medical Anthropology

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
ANG 6115  3  Archaeological Science
ANG 6588  3  Forensic Anthropology or ANG 6511 Forensic Science

Two elective courses (3 credits each; one may be outside Anthropology) – 6 hours
ANG 6145  3  Ancient Diets
ANG 6193  3  Ancient Trade
ANG 6511  3  Anthrogenetics
ANB 6586  3  Bioarchaeology
ANG 6588  3  Forensic Anthropology
ANG 6515  3  Intro to Forensic Science
ANG 6511  3  Advanced Methods in Forensic Anthropology
ANG 5520  3  Human Osteology
ANG 6115  3  Soils
ANG 6115  3  Technologies for Heritage Preservation

External electives that also qualify (only 1 can count towards concentration):
GIS 6038C Advanced Remote Sensing
GIS 6039  Remote Sensing Seminar
GLY 6255  Tracer Geochemistry
GLY 6285C Analytical Techniques in Geology
GLY 6475  Principles of Applied Geophysics
GLY 6739  Principles of Stable Isotope Geochemistry

Concentration in Bio-Cultural Medical Anthropology -12 hours
Four graduate medical anthropology courses with the ANG prefix:
ANG 6469  Theory and Methods in Medical Anthropology
ANG 6511  Theory and Methods of Applied Biological Anthropology
ANG 6511  Seminar in Physical Anthropology (e.g. Human Variation, Anthropology of Growth and Development, Forensic Anthropology)
ANG 6566, 6569, 6469, or 5937 (e.g. Nutritional Anthropology, Socio-Cultural Aspects of HIV/AIDS, Issues in Migrant Health, Anthropology and Development, Reproductive Health, ANG 6404 Health and Medical Systems)

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:
ANG 6197  3  Public Archaeology
ANG 6115  3  Seminar in Archaeology; Current Issues & Techniques in Cultural Resource Management

One of the following electives:
ANG 6448  Regional Problems in Urban Anthropology: Issues in Heritage Tourism
(or other as approved by Graduate Director)
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

ANG 6437  3  Selected Topics in Applied Anthropology: Issues in Heritage Studies

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 6676  3  Seminar in Anthropological Linguistics  
(When the topic is ‘Language and Culture’ or ‘Language and Racism’)

ANG 7487  3  Quantitative Research Methods

**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.

Concurrent Degree Option

Concurrent Ph.D./M.P.H.

Ph.D. in Applied Anthropology (ANT) - total minimum hours – 46 post master’s
- with a concentration in
  Bio-cultural Medical Anthropology (BCM)

M.P.H. in Public Health* – total minimum hours – 42
- with concentration in:
  -Epidemiology (EPY)
  -Maternal and Child Health (PMC)
  -Public Health Education (PHN)
  -Global Health Practice (GLO)

Shared Courses-12 Credit Hours:
Students must fulfill all the requirements for both majors, with the following exceptions: Students can share up to 15% of their courses between concurrent degrees (up to 12 credits). The shared courses for the concurrent degree need to be approved by both Colleges at the time of graduation certification. The number of shared hours cannot exceed 15% of the combined degree total.

In consultation with their major advisors, students will select two courses as electives in Anthropology and two courses as electives in Public Health. The two courses in Public Health will be selected from a concentration listed above. The two courses in Anthropology will be selected from electives.

The student may choose from the following list of courses. Other courses may be selected in consultation with the advisor.

**Anthropology**
- ANG 6585 Theories in Applied Bioanthropology
- ANG 6469 Theory and Method in Medical Anthropology
- ANG 6570 Nutritional Assessment
- ANG 6730 Socio Cultural Aspects of HIV/AIDS
- ANG 6733 Issues in Migrant Health
- ANG 6735 Reproductive Health
- ANG 6533 Anthropology of Human Growth and Development
- ANG 6731 Health and Disasters
- ANG 6732 Global Health from an Anthropological Perspective

**Public Health**
- PHC 6053 Categorical Data Analysis
- PHC 6701 Computer Applications for Public Health Research
- PHC 6764 Global Health Principles and Contemporary Issues
- PHC 6761 Global Health Assessment Strategies
- PHC 6505 Program Planning in Community Health
- PHC 6412 Health Disparities and Social Determinants of Health
- PHC 6725 Focus Group Research Strategies
- PHC 6530 Issues and Concepts in Maternal and Child Health
- PHC 6532 Women’s Health Issues in Public Health

Total combined hours after sharing: 76
For all other curriculum requirements, including Thesis/non-Thesis/Dissertation, Internship, Comprehensive Examination, etc., refer to the Catalog listing for that major.

**Concurrent Degree Admission Information**

The two majors review applicants independently and admission to one major in no way guarantees admission into the other major. In choosing which major to apply to first, students should take into consideration the following: admission requirements differ in Anthropology and Public Health, student interests and future career plans. Students must be admitted and in good standing when applying for the concurrent degrees. Concurrent degree students in Anthropology select a track and an optional concentration in Bio-Cultural Medical Anthropology. Concurrent degree students in Public Health select one of the above concentrations. Upon completion of all requirements for the concurrent degree majors, the student submits separate applications for graduation to Anthropology and Public Health, and is certified for graduation by both majors and receives two diplomas.

**COURSES**

See [https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.usf.edu/course-inventory/)
BIOLOGY

Master of Science (M.S.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: November 30
Spring: July 1

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 (MBG)
Ecology and Evolution (EEV)
Environmental and Ecological Microbiology (EVM)
Physiology and Morphology (PMY)

Also offered as an Accelerated Major

CONTACT INFORMATION

College: Arts and Sciences
Departments: Cell Biology, Microbiology, and Molecular Biology (CMMB)
Integrated Biology (IB)

Contact Information: www.grad.usf.edu

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 Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- Prospective students must apply to the Biology M.S. major with a specific concentration via the online application process through the USF Office of Graduate Admissions.

- GRE: Preferred scores of 500V, 600Q, 4.5AW prior to August 1, 2011; GRE: Preferred scores of 153V (61 percentile), 148Q (30th percentile), 4.5AW for GRE revised general test taken after August 1, 2011

- 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 M.S. 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
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 6525  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

BSC6932 – Bioinformatics 1-4
BSC6932 – Virology 1-4
PCB6525 – Molecular Genetics 3
BSC5425 – Genetic Engineering 3
PCB6236 – Advanced Immunology 4
BSC6932 – Prokaryotic Molecular Genetics 1-4

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.

BSC 5931 – Conservation Biology 3
BOT 5185 – Marine Botany 4
PCB 6455 – Statistical Ecology 3
PCB 6456 – Biometry I 4
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 – 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 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

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.

Accelerated Major:
BS in Cell and Molecular Biology and M.S. in Biology with a concentration in Cell and Molecular Biology (non-thesis).
This program allows Cell and Molecular Biology majors to take graduate courses for the elective part of the major and apply them to a non-thesis M.S. degree in Biology with a concentration in Cell and Molecular Biology. Successful students will be able to earn the M.S. degree in two additional semesters beyond the completion of the B.S. degree. Refer to the concentration listing above for more information.

COURSES
For updated list of courses see: https://www.systemacademics.usf.edu/course-inventory/
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 Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- Extensive background in field of biology or chemistry
- GRE required for full consideration
- Advanced coursework and research experience preferred

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.
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.

Total Minimum Hours: 96 credit hours
- Core Courses – 12 hours
- Other Required Courses – 12 hours
- Additional Requirements – 14 hours
- Dissertation – 24 hours
- Other Requirements – 34 hours

Required Core Courses 12 hours
- PCB 6230 Basics of Molecular Oncology 3
- PCB 6932 Bioethics for Cancer Researchers 1
- PCB 6930 Current Topics in Oncology 8

Other Required Courses 12 hours
- PCB 6231 Cancer Immunology 4
- BSC 6457 Cancer Research Techniques 2
- PCB 6205 Cancer Genomics and Drug Discovery 3
- PCB 6521 Cancer Genetics 3

Additional Requirements 14 hours
- PCB 6910 Cancer Laboratory Rotations 1-3
- BSC 7911 Directed Research 4-8
- PCB 6931 Advances in Cancer Biology 4-12

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
- 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 34 hours
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.

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.

COURSES - See https://www.systemacademics.usf.edu/course-inventory/
CANCER CHEMICAL BIOLOGY

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall:
Domestic: December 15

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

Minimum Total Hours: 96
Level: Doctoral
CIP Code: 26.0911
Dept. Code: BIO
Major/College Codes: CII AS
Approved: 2001

CONTACT INFORMATION

College: Arts and Sciences
Department: Cell Biology, Microbiology, and Molecular Biology (CMMB)
Contact Information: www.grad.usf.edu

The Cancer Chemical Biology Major consists of focused training in Cancer Medicinal Chemistry and Chemical Biology. Students will also receive interdisciplinary training in the broader field of chemistry & biology through coursework and immersion in the Moffitt Cancer Center’s research endeavors. Cancer drug design and discovery will be the key component of the curriculum. The research focuses are (1) design and synthesis of chemical probes to modulate oncogenic targets and pathways, and development of selective chemical probes into novel anticancer drug candidates; and (2) to identify, validate, and characterize targets with therapeutic relevance in refractory and metastatic malignancies.

This Major will provide students a unique foundation of knowledge and practical experience in the rapidly advancing arena of cancer chemical biology. Students will also train alongside individuals studying other areas of cancer biology, providing a unique opportunity to study in a multidisciplinary and highly translational research environment. Graduates of this major will be positioned to enter the technological workforce ready to discover novel probes to unravel the mechanisms underlying oncogenesis and develop innovative anticancer drugs.

The Major is a joint endeavor between the Moffitt Cancer Center and the University of South Florida. Moffitt Cancer Center is located on the campus of the University of South Florida and 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.

ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- Extensive background in field of chemistry, medicinal chemistry, biochemistry, or pharmaceutical sciences
- GRE required for full consideration
- Advanced coursework and research experience preferred

Stipends
All Cancer Chemical 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.
CURRICULUM REQUIREMENTS

All students are required to successfully complete the required 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. In such instances, the student will be required to take an equal number of other credits in lieu of the waived requirement. Students are required to achieve a minimum GPA of B in all Core courses and maintain an overall GPA of 3.00 (B) in order to remain in good standing.

Total Minimum Hours: 96 credit hours
- Required Core Courses – 12 hours
- Other Required Courses – 8 hours
- Electives – 3 hours
- Additional Requirements – 15 hours
- Dissertation - 24 hours
- Other Requirements – 34 hours

Required Core Courses 12 hours
- PCB 6230 Basics of Molecular Oncology 3
- PCB 6932 Bioethics for Cancer Researchers 1
- PCB 6930 Current Topics in Oncology 8

Other Required Courses 8 hours
- BCS 6939 Selected Topics in Cancer Drug Discovery 3
- BSC 6457 Cancer Research Techniques 2

Electives 3 hours
- CHM 6250 Advanced Organic Chemistry: Synthesis 3
- BCH 6746 Structural Biology 3

Additional Requirements: 15 hours
- PCB 6910 Cancer Laboratory Rotations 1-3
- BSC 7911 Directed Research 4-8
- BCS 6939 Selected Topics in Advances in Cancer Chemical Biology and Cancer Res. 4-12

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
- 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 34 hours
Remaining credit hours required to meet the 96 hour minimum for graduation will consist of additional Dissertation hours (BSC7980), Selected Topics in Cancer (BCS6939), and/or Program approved electives.

During the first year, students will be required to complete laboratory rotations according to their interest. Laboratory rotations are 10 weeks each. 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.

COURSES - See https://www.systemacademics.usf.edu/course-inventory/
CANCER IMMUNOLOGY AND IMMUNOTHERAPY

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall:
Domestic: December 15

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

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

The Cancer Immunology and Immunotherapy Major consists of focused training in tumor immunology and cancer immunotherapy. Students will also receive interdisciplinary training in the broader field of cancer biology through coursework and immersion in the Moffitt Cancer Center’s research endeavors. The study of tumor immunology has led to major advances in the understanding of how tumors evade the immune system, resulting in multiple new immunotherapeutic modalities approved by the FDA for the treatment of cancer patients. Students will have the opportunity to conduct innovative research at the molecular and cellular level to reveal opportunities to alter the course of tumor progression.

This Major will provide students a unique foundation of knowledge and practical experience in the rapidly advancing arena of cancer immunotherapy. Students will also train alongside individuals studying other areas of cancer biology, providing a broad base of understanding of cancer and increasing the potential for interdisciplinary research. Graduates of this major will be positioned to enter the technological workforce ready to discover and implement immunological advances that will have a key impact on cancer patient therapy.

The Major is a joint endeavor between the Moffitt Cancer Center and the University of South Florida. Moffitt Cancer Center is located on the campus of the University of South Florida and 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.

ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements, as well as requirements for admission to the major, listed below.

- Extensive background in field of biology, immunology, or chemistry
- GRE required for full consideration
- Advanced coursework and research experience preferred

Stipends
All Cancer Immunology and Immunotherapy 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.
CURRICULUM REQUIREMENTS

All students are required to successfully complete the required Core Courses and the required Elective hours. 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. In such instances, the student will be required to take an equal number of other credits in lieu of the waived requirement. Students are required to achieve a minimum GPA of B in all Core courses and the required elective course, and maintain an overall GPA of 3.00 (B) in order to remain in good standing.

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<td>BCS 6939 Selected Topics in Advances in Tumor Immunology and Cancer Research</td>
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Qualifying Exam
The required qualifying exam consists of a written research proposal and an oral defense of the proposal by the student.

Dissertation
BSC 7980 Dissertation 24 hours
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
Remaining credit hours required to meet the 96 hour minimum for graduation will consist of additional Dissertation hours (BSC 7980), Selected Topics in Cancer (BCS 6939), and/or Program approved electives.

During the first year, students will be required to complete laboratory rotations according to their interest. Laboratory rotations are 10 weeks each. 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.

COURSES - See [https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.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

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 Research Areas: Cell Biology, Molecular Biology, Cancer Biology, Signal Transduction and Gene Regulation, Developmental Biology, Applied and General Microbiology

ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- GRE: 57th percentile Verbal, 35th percentile Quantitative, 73rd percentile AW
- 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 – 6 hours
Other courses – 5 hours
Electives – 3 hours
Dir Research – 43 hours
Dissertation – 32 hours
Seminar – 1 hour
Core Requirements

- PCB 6525 Molecular Genetics 3
- PCB 6956 Scientific Grant Writing 3

Other Required Courses

- PCB 6920 Advances in Cellular and Molecular Biology 1
- BSC 6930 Lectures in Contemporary Biology (1) taken four times 4

Electives*

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

- BSC 7910 Directed Research 43 hours minimum
- BSC 7980 Dissertation Research 32 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 32. Students not admitted to candidacy are not eligible to enroll in BSC 7980.

Dissertation Requirements

- BSC 7980 Dissertation Research 38 hours minimum
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 USF Office of Graduate Studies (http://www.grad.usf.edu/thesis.asp).

**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**

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall year 1</td>
<td>BSC7910</td>
<td>Directed Research (4)</td>
<td>Research Req.</td>
</tr>
<tr>
<td></td>
<td>PCB6920</td>
<td>Advances in Cellular &amp; Molecular Biology (1)</td>
<td>Other Required</td>
</tr>
<tr>
<td></td>
<td>BSC6930</td>
<td>Lectures in Contemporary Biology (1)</td>
<td>Other Required</td>
</tr>
<tr>
<td></td>
<td>PCB6525</td>
<td>Molecular Genetics (3)</td>
<td>Core</td>
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<td>Spring year 1</td>
<td>BSC7910</td>
<td>Directed Research (5)</td>
<td>Research Req.</td>
</tr>
<tr>
<td></td>
<td>BSC6956</td>
<td>Scientific Grant Writing (3)</td>
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<tr>
<td></td>
<td>BSC6930</td>
<td>Lectures in Contemporary Biology (1)</td>
<td>Other Required</td>
</tr>
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<td>Summer year 1</td>
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<td>Directed Research (6)</td>
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<tr>
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</tr>
<tr>
<td>Spring year 2</td>
<td>BSC7910</td>
<td>Directed Research (8)</td>
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<td>Lectures in Contemporary Biology (1)</td>
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<td>Research Req.</td>
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<td>Research</td>
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<td>Spring year 3</td>
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<td>Research</td>
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<td>Fall year 4</td>
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<td>Spring year 4</td>
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<td>Doctoral Dissertation (8)</td>
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<tr>
<td></td>
<td>BSC7936</td>
<td>Ph.D. Seminar (1)</td>
<td>Research</td>
</tr>
</tbody>
</table>

*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.

*Students are expected to finish in their 4th year but some may require additional time

**COURSES**
For an updated list of course offerings see: [https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.usf.edu/course-inventory/)
CHEMISTRY (NON-THESIS OPTION)

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: December 5
Spring: August 15

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/graduate/

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 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 Admission and English Proficiency requirements 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).
- At least three letters of recommendation from professionals familiar with the student’s academic background.

CURRICULUM REQUIREMENTS

Total Minimum Hours – 30 Credit Hours (Post-Baccalaureate)

Twenty-six hours of formally structured (graded) 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 graduate 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. Courses include, but are not limited to, the following:

- BCH 5045  3 credits  Biochemistry Core Course
- BCH 5105  1-3 credits  Biochemistry Laboratory Rotations
- CHM 5225  3 credits  Intermediate Organic Chemistry I
- CHM 5226  3 credits  Intermediate 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 6480  3 credits  Advanced Quantum Mechanics I
- CHM 6810  3 credits  Methods of Instruction in Higher Ed Chemistry
- CHM 6811  3 credits  Classroom Assessment Practices in Chemistry
- CHM 6907  1-19 credit(s)  Independent Study
- 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
- CHM 6946  1-4 credit(s)  Graduate Instruction Methods

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 USF Office of Graduate Studies.

COURSES
See https://www.systemacademics.usf.edu/course-inventory/
CHEMISTRY

Master of Science (M.S.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: December 5
Spring: August 15

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: CHM AS
Approved: 1965

CONTACT INFORMATION

College: Arts and Sciences
Department: Chemistry
Contact Information: www.grad.usf.edu
Other Resources: http://chemistry.usf.edu/graduate/

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 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.

- 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).
- A minimum of a 3.00 grade point average (based on a 4.00 scale) in all undergraduate coursework, as verified by a transcript from the applicant’s undergraduate institution.
- At least three letters of recommendation from professionals familiar with the student’s academic background.
CURRICULUM REQUIREMENTS

Total Minimum Hours – 30 Credit Hours (Post-Baccalaureate)

Core – 10 credit hours
Electives – 18 credit hours
Thesis – 2 credit hours

Twenty hours must be in formally structured (graded) courses of which sixteen hours must be at the 6000 level, as approved by the student’s Supervisory Committee.

Core Requirements – 10 Credit 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 graduate 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. Courses include, but are not limited to, the following:

BCH 5045  3 credits  Biochemistry Core Course
BCH 5105  1-3 credits  Biochemistry Laboratory Rotations
CHM 5225  3 credits  Intermediate Organic Chemistry I
CHM 5226  3 credits  Intermediate 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
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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
CHM 6946  1-4 credit(s)  Graduate Instruction Methods

Comprehensive Exam
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.

Thesis – 2 credit hour
CHM 6971  2 credit  Thesis

COURSES
See https://www.systemacademics.usf.edu/course-inventory/
CHEMISTRY

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: December 5
Spring: August 15

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

Minimum Total Hours: 72 (Post-Baccalaureate)
42 (Post-Master’s)
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
Other Resources: http://chemistry.usf.edu/graduate

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 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 Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- A Bachelor of Arts or Bachelor of Science 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).
- 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-Master’s)

Core requirements – 9 hours minimum
Additional Coursework – 61 (post-Baccalaureate) or 31 (post-masters) hours minimum
Dissertation – 2 hours minimum

Core Requirements – 9 Credit Hours
CHM 6935 6 Graduate Seminars in Chemistry
CHM 6978 3 Advanced Research in Chemistry

Electives - 61 (Post-Baccalaureate) or 31 (post-masters)
Students may select from graduate 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. Courses include, but are not limited to, the following:

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<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
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<td>1-4</td>
<td>Graduate Instruction Methods</td>
</tr>
<tr>
<td>CHM 7820</td>
<td>varies</td>
<td>Directed Research</td>
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</table>

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 50th percentile of national norms.

Promotion to Candidacy
Before the end of the third semester (excluding summers), 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. 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 before the end of the 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 https://www.systemacademics.usf.edu/course-inventory/
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 Admission and English Proficiency requirements 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)
- Transcripts
- CV or resume

**CURRICULUM REQUIREMENTS**

<table>
<thead>
<tr>
<th>Total minimum hours</th>
<th>36 credit hours</th>
</tr>
</thead>
</table>

**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 https://www.systemacademics.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: 09.0101
Dept. Code: SPE
Major/College Codes: SPE AS
Approved: 1990

CONTACT INFORMATION

College: Arts and Sciences
Department: Communication
Contact Information: www.grad.usf.edu

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 Admission and English Proficiency requirements 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)
- 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  
6 hours
COM 6001 Theories and Histories of Communication (3)
COM 7325 Seminar in Communication Research Methods (3) - either Qualitative Methods OR Critical Methods Course

Requirements  
33 hours
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  
6 hours
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  
6 credit hours minimum
SPC 7980 Dissertation
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 https://www.systemacademics.usf.edu/course-inventory/
CREATIVE WRITING

Master of Fine Arts (M.F.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: January 1
Fall admission only

Minimum Total Hours: 45
Level: Masters
CIP Code: 23.1302
Dept. Code: ENG
Major/College: CWR AS
Approved: 2008

Concentrations:
Fiction (CFI)
Poetry (CPO)

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 Admission and English Proficiency requirements 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 with 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:

CRW 6130 Fiction Writing 3*
CRW 6331 Poetry Writing 3*
CRW 6236 Non-fiction Writing 3*

*may be taken up to three times for a maximum of 9 credits.

CRW 6164 The Craft of Fiction 3
Required for students admitted to the fiction concentration, optional for others.

CRW 6352 The Craft of Poetry 3
Required for students admitted to the poetry concentration; optional for others.

CRW 6025 The Craft of Nonfiction 3
Required for students admitted to the nonfiction track, optional for others.

CRW 6025 Special Topics in Creative Writing 3
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 3 hours minimum

ENG 6009 Introduction to Graduate Studies 3
Must be taken in the student’s first or second semester of graduate studies.

Other Course requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENC 6745</td>
<td>Practice in Teaching Composition</td>
<td>3</td>
</tr>
<tr>
<td>CRW 6025</td>
<td>Practice in Teaching Creative Writing</td>
<td>3</td>
</tr>
<tr>
<td>LIT 6934</td>
<td>Selected Topics: Literary Editing and Publishing</td>
<td>3</td>
</tr>
</tbody>
</table>

Other Course requirements

5 courses (15 credits) in any combination of the courses below:

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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AML 6017</td>
<td>Studies in American Literature to 1860</td>
<td>3</td>
</tr>
<tr>
<td>AML 6018</td>
<td>Studies in American Literature 1860-1920</td>
<td>3</td>
</tr>
<tr>
<td>AML 6027</td>
<td>Studies in Modern American Literature</td>
<td>3</td>
</tr>
<tr>
<td>AML 6608</td>
<td>Studies in African-American Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENL 606</td>
<td>Studies in Old English</td>
<td>3</td>
</tr>
<tr>
<td>ENL 6216</td>
<td>Studies in Middle English</td>
<td>3</td>
</tr>
<tr>
<td>ENL 6226</td>
<td>Studies in Sixteenth-Century British Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENL 6228</td>
<td>Studies in Seventeenth-Century British Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENL 6236</td>
<td>Studies in Restoration and Eighteenth-British Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENL 6246</td>
<td>Studies of the English Romantic Period</td>
<td>3</td>
</tr>
<tr>
<td>ENL 6256</td>
<td>Studies in Victorian Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENL 6276</td>
<td>Studies in Modern British Literature</td>
<td>3</td>
</tr>
<tr>
<td>LIT 6096</td>
<td>Studies in Contemporary Literature</td>
<td>3</td>
</tr>
<tr>
<td>LIT 6105</td>
<td>Studies in Continental Literature</td>
<td>3</td>
</tr>
<tr>
<td>LIT 6934</td>
<td>Selected Topics in English Studies</td>
<td>3</td>
</tr>
</tbody>
</table>

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 https://www.systemacademics.usf.edu/course-inventory/
ECONOMICS

Master of Arts (M.A.) 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: 30
Level: Masters
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

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.

- 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.
- 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. 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>

**Electives**

18 hours

- 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 6936</td>
<td>Behavioral Economics</td>
<td>3</td>
</tr>
<tr>
<td>ECO 6936</td>
<td>Forecasting and Time Series Analysis</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 6205</td>
<td>Labor Economics II</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 7207</td>
<td>Labor Economics II</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, at most two unrestricted elective courses may be satisfied by graduate-level courses offered by any department within the University.

**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.

**COURSES**

See [https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.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

The Doctor of Philosophy in Economics prepares students for careers as professional economists in academia, business and government.


ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- 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.
- 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:
ECP 6536  Economics of Health Care I  3
ECP 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 M.A. Degrees in Economics from External Institution
Students who already hold an M.A. 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 choose 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
See: https://www.systemacademics.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

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 Admission and English Proficiency requirements 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:

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**

Minimum Hours - 33 Credit Hours

Core Requirements – 3 hours
Concentration – 27 hours (Literature) / 36 hours (Rhetoric)

**CORE REQUIREMENTS - 3 hours**

ENG 6009  
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  
Studies in Criticism and Theory I

**OR**

ENG 6019  
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  
   - Studies in Old English
   - ENL 6216  
   - Studies in Middle English
   - ENL 6226  
   - Studies in Sixteenth-Century British Literature
   - ENL 6228  
   - Studies in Seventeenth-Century British Literature

2. 18th Century (Either British tradition or Literature of the Americas)
   - AML 6017  
   - Studies in American Literature to 1860
   - ENL 6236  
   - Studies in Restoration and Eighteenth-Century British Literature

3. 19th Century (Either British tradition or Literature of the Americas):
   - AML 6017  
   - Studies in American Literature to 1860
   - AML 6018  
   - Studies in American Literature to 1860 to 1920
   - ENL 6246  
   - Studies of the English Romantic Period
   - ENL 6256  
   - Studies in Victorian Literature

4. 20th Century (Either British traditions or Literature of the Americas):
   - AML 6027  
   - Studies in Modern American Literature
   - ENL 6276  
   - Studies in Modern British Literature
   - LIT 6934  
   - Selected Topics in English Studies

**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  
  - Studies in African American Literature
- ENG 6018  
  - Studies in Criticism and Theory I
- ENG 6019  
  - Studies in Criticism and Theory II
- ENG 6067  
  - History of the English Language
- LIT 6934  
  - 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 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 MAJOR

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 https://www.systemacademics.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

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 Admission and English Proficiency requirements 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.

CU...
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)

Rhetoric & Composition Concentration
32 hours

Requirements
12 credits
ENC 6700 Studies in Composition Theory 3
ENC 6720 Studies in Composition Research 3
ENC 6421 Studies in Rhetoric and Technology 3
ENC 6336 Studies in the History of Rhetoric 3

ENG 7939 Doctoral Seminar
8 credits
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

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 Advanced Technical Writing 3
ENC 6261 Professional and Technical Communication 3
ENC 6333 Contemporary Rhetorics 3
ENC 6422 New Media Production 3
ENC 6740 Theory and Development of Writing Programs 3
LAE 6375 Contemporary Composition Studies 3

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/

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 https://www.systemacademics.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

ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements 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.

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)

Students must take two courses from the following list. At least one class must be an EVR course.
EVR 6934  Seminar in Environmental Science (varying special topics)  -  
EVR 6937  Seminar in Environmental Science and Policy 3  
   (varying special topics)  
EVR 6216  Advances in Water Quality Policy and Management 3  
EVR 6101  Geomorphology for Environmental Scientists 3  
EVR 6408  Wildlife Ecology 3  
GEO 6347  Natural Hazards 3  
GEO 6288  Hydrologic Systems 3  
GEO 6286  Advances in Water Resources 3  
GEO 6263  Soils Seminar 3  
GEO 6217  Karst Geomorphology Seminar 3  
GEO 6215  Geomorphology Seminar 3  
GEO 6209C  Physical Geography Seminar 3  
GEO 6345  Technological Hazards and Environmental Justice 3  
PHC 6712  Air Pollution Research Seminar 1

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 elective 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 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.

http://www.cas.usf.edu/
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 https://www.systemacademics.usf.edu/course-inventory/
FRENCH

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

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

CONTACT INFORMATION

College: Arts and Sciences
Department: World Languages
Contact Information: www.grad.usf.edu

ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements 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
FRW6405 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

http://www.cas.usf.edu/
FRW5415  3  Literature of the Middle Ages
FRW5425  3  Literature of the Renaissance
FRW5445  3  18th Century Literature
FRW5535  3  Romanticism and Early Realism
FRW5556  3  Naturalism and Realism
FRW5745  3  French Literature of Quebec
FRW5755  3  African and Caribbean Literature
FRW5829  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.

Concurrent Degree Information

Concurrent M.A./M.A.

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.

COURSES
See https://www.systemacademics.usf.edu/course-inventory/
GEOGRAPHY

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15 (GA Application)
      Fall Admission Only

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

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

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.
ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements 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.

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
- 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 [https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.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

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

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

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 Admission and English Proficiency requirements 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

- 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.

- 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
EVR 6936 Seminar in Environmental Science
EVR 6937 Seminar in Environmental Policy
GEA 6195 Seminar in Advanced Regional Geography
GEA 6215 Seminar in North American Geography
GEA 6252  Seminar in the Geography of the American South
GEA 6406  Seminar in Latin American and Caribbean Geography
GEA 6504  Seminar in European Geography
GEA 6745  Asian Geography Seminar
GEO 6115  Field Techniques
GEO 6209  Physical Geography Seminar
GEO 6215  Geomorphology Seminar
GEO 6217  Karst Geomorphology
GEO 6255  Weather, Climate, and Society
GEO 6263  Soils Seminar
GEO 6286  Advances in Water Resources
GEO 6288  Hydrological Systems
GEO 6347  Natural Hazards
GEO 6345  Technological Hazards and Environmental Justice
GEO 6428  Seminar in Advanced Human Geography
GEO 6475  Political Geography Seminar
GEO 6545  Economic Geography Seminar
GEO 6605  Contemporary Urban Issues
GEO 6627  Site Feasibility Analysis
GEO 6704  Transportation Geography
GEO 6908  Independent Study
GIS 5049  GIS for Non-Majors
GIS 5075  Global Positioning Systems
GIS 6038  Advanced Remote Sensing
GIS 6039  Readings in Remote Sensing
GIS 6103  Programming for GIS
GIS 6112  Spatial Database Development
GIS 6146  GIS Seminar
GIS 6306  Environmental Applications of GIS
GIS 6307  Socioeconomic Applications of GIS
GIS 6355  Water Resources Applications of GIS
GLY 6573  Fluvial Hydrology and Geomorphology
GLY 6824  Ecohydrology
GLY 6828  Ground-Water Geochemistry
CWR 6305  Urban Hydrology
CWR 6533  Water Quality Modeling
ECP 6305  Environmental Economics and Policy
IDS 6215  Seminar in Global Sustainability
PAD 6338  Urban Land Use and Policy Administration
PAD 6339  Housing and Public Policy
PCB 6933  Seminar in Ecology
PHC 6301  Water Pollution and Treatment
PHC 6312  Environmental Fate of Chemical Releases
PHC 6313  Indoor Environmental Quality
PHC 6353  Environmental Risk Assessment
POS 5159  Urban Policy Analysis
URP 6056  City and Regional Planning
URP 6100  Planning Theory and History
URP 6115  Planning, Policy and Politics
URP 6232  Research Methods for Urban and Research Planning
URP 6930  Special Topics in Urban and Regional Planning
URP 6940  Internship in Urban and Regional Planning

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 https://www.systemacademics.usf.edu/course-inventory/
GEOLOGY

Master of Science (M.S.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15
Spring: October 15*
Fall admission only
*Spring admission available only for students entering the Professional Science Master's Degree option

International applicant deadlines: [http://www.grad.usf.edu/majors](http://www.grad.usf.edu/majors)

Minimum Total Hours: 30
Level: Masters
CIP Code: 40.0601
Dept. Code: GLY
Major/College Codes: GLY A5
Approved: 1976

CONTACT INFORMATION

College: Arts and Sciences
Department: Geology

Contact Information: [www.grad.usf.edu](http://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.

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 Admission and English Proficiency requirements 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
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:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLY 5786</td>
<td>Geological Field Excursion</td>
<td>2</td>
</tr>
<tr>
<td>GLY 5865</td>
<td>Statistical Models in Geology</td>
<td>3</td>
</tr>
<tr>
<td>GLY 5932</td>
<td>Selected Topics in Geology</td>
<td>1-4</td>
</tr>
<tr>
<td>GLY 6075</td>
<td>Greenhouse-icehouse Earth</td>
<td>3</td>
</tr>
<tr>
<td>GLY 6156</td>
<td>Geology of North America</td>
<td>2</td>
</tr>
<tr>
<td>GLY 6246</td>
<td>General Geochemistry</td>
<td>3</td>
</tr>
<tr>
<td>GLY 6248</td>
<td>Sedimentary Geochemistry</td>
<td>3</td>
</tr>
<tr>
<td>GLY 6255</td>
<td>Tracer Geochemistry</td>
<td>3</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
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</tr>
<tr>
<td>GLY 6285C</td>
<td>Analytical Techniques in Geology</td>
<td>3</td>
</tr>
<tr>
<td>GLY 6345</td>
<td>Sedimentary Petrography</td>
<td>3</td>
</tr>
<tr>
<td>GLY 6395C</td>
<td>Topics in Igneous and Metamorphic Petrology</td>
<td>2-4</td>
</tr>
<tr>
<td>GLY 6424</td>
<td>Global Tectonics</td>
<td>2</td>
</tr>
<tr>
<td>GLY 6475C</td>
<td>Principles of Applied Geophysics</td>
<td>4</td>
</tr>
<tr>
<td>GLY 6492</td>
<td>Hydrogeology Internship Project</td>
<td>3</td>
</tr>
<tr>
<td>GLY 6573</td>
<td>Fluvial Hydrology and Geomorphology</td>
<td>3</td>
</tr>
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<td>Coastal Sedimentation</td>
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<tr>
<td>GLY 6828</td>
<td>Ground-Water Geochemistry</td>
<td>3</td>
</tr>
<tr>
<td>GLY 6836</td>
<td>Numerical Modeling of Hydrogeologic Systems</td>
<td>3</td>
</tr>
<tr>
<td>GLY 6905</td>
<td>Independent Study</td>
<td>1-19</td>
</tr>
</tbody>
</table>

**Thesis Option:**

- **Thesis**
  - GLY 6971 Thesis 6 hours

**Professional Science Masters (PSM) Degree Option**

- GLY 6xxx Introduction to Professional Geology 3
- GLY 6492 Professional Internship Research Project 3

The Professional Internship projects are typically supervised by a Professional Geologists (PG) and must receive prior approval by the internship coordinator. The student must submit an Internship Project Report approved by the supervising PG. The student must then present the results of their projects at an evening public meeting hosted by the Geology Alumni Society typically at the Southwest Florida Water Management District (SWFWMD) Tampa office.

**Comprehensive Exam**

For students in the thesis option, the thesis defense serves as the comprehensive exam. For students in the Professional Science Master’s Degree option, the comprehensive exit exam is based on coursework and an internship project. Before the exam, the student must submit an Internship Project Report approved by the supervising PG. The internship committee determines the format of the exam. Normally, it is an oral examination following the student’s presentation of the results of the internship project to the hydrogeology internship committee.

**Other Information:**

The curriculum for a Geology graduate student varies depending on the area of research interest. Specific course work for the degree is determined via consultation between the student, his/her primary advisor and his/her student advisory committee. Other pertinent information regarding graduate study is contained in the Department’s Graduate Student Handbook, which is available upon request.

All degree candidates are required to maintain satisfactory academic progress at all times. Satisfactory academic progress in this major is defined as progress in course and thesis work. Evidence of academic progress includes timely completion of departmental requirements such as selecting a primary advisor, forming a student advisory committee, completion of any prerequisites or deficiencies, timely progress toward completion of the thesis, maintaining a satisfactory GPA, defending a thesis proposal, and making a public presentation. A schedule for meeting these requirements is contained in the Department’s Graduate Student Handbook.

**COURSES**

See [https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.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.

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 Admission and English Proficiency requirements 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 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
### COURSES

See [https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.usf.edu/course-inventory/)

## Geology (Ph.D.)

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<td>Independent Study</td>
<td>1-19</td>
</tr>
</tbody>
</table>

### 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 enrollment. While meeting the residency requirements, candidates must be full-time students in good academic standing.
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

ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements 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
- 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 administered 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 https://www.systemacademics.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

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 Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

• **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):**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIS 6939</td>
<td>3</td>
</tr>
<tr>
<td>HIS 6925</td>
<td>3</td>
</tr>
</tbody>
</table>

**Minor Field (6 hours – any combination of the following):**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIS 6939</td>
<td>3</td>
</tr>
<tr>
<td>HIS 6925</td>
<td>3</td>
</tr>
</tbody>
</table>

**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 administered 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 [https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.usf.edu/course-inventory/)
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 Admission and English Proficiency requirements 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 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 periods 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.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANG 5486</td>
<td>Quantitative Methods in Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>EDF 6407</td>
<td>Statistical Analysis in Educational Research</td>
<td>4</td>
</tr>
<tr>
<td>LIN 7639</td>
<td>Quantitative Methods in Applied Linguistics</td>
<td>3</td>
</tr>
<tr>
<td>POS 6736</td>
<td>Political Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>MAT 5932</td>
<td>Selected Topics</td>
<td>3</td>
</tr>
<tr>
<td>Or other graduate course approved by Graduate Director</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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 https://www.systemacademics.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

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

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

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.
- 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.
- On Campus Interview
- Personal Statement
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.
- 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 – ECOimmunology 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
24 hours minimum
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: https://www.systemacademics.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

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 Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- 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 hours (Strategic Intelligence Only)
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 5802  3 Information Analytics (using R)
LIS 5937  3 Advanced Information Retrieval or Open Source Intelligence (OSINT)
LIS 6260  3 Foundations of Information Science and Technology
LIS 6937  3 Project Management
ENC 5937  3 Advanced Professional and Technical Communication for Analysts

Concentrations
Students select from the following Concentrations:

Strategic Intelligence - 12hours
LIS 6703  3 Core Concepts in Intelligence
LIS 6702  3 Advanced Intelligence Analytic Methods
An additional 6 hours chosen with consultation from the Graduate Director

Cyber Intelligence - 12 hours
LIS 6703  3 Core Concepts in Intelligence
LIS 6702  3 Advanced Intelligence Analytic Methods
LIS 6709  3 Cyber Intelligence
LIS 6670  3 Advanced Cyber Intelligence

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 https://www.systemacademics.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

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

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

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 Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- three letters of recommendation
- statement of purpose
- resume
- GRE not required, but suggested for full financial consideration
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)
- LAS 6220   3  Issues and Perspectives in Latin American Studies
- LAS 6936  3  Seminar in Latin American Studies
- Methods  3  (the methods class must be approved by the Graduate Director)

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:
- AFA 6932  3  Topics in Africana Studies
- AFA 6120  3  Social Theory and Social Thought
- AMS 6156  3  Theories and Methods of Cultural Studies
- ANG 6701  3  Contemporary Applied Anthropology
- HIS 6939  3  Seminar in History
- HUM 6801  3  Theories and Methods of Cultural Studies
- INR 6690  3  Research Seminar in Globalization
- PHC 6934  1-6 Selected Topics in Public Health
- POS 6933  3  Selected Topics in Political Science
USF Graduate Catalog 2018-2019

Latin American, Caribbean, and Latino Studies (M.A.)

SYA 6933  3  Selected Topics - Sociology
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 https://www.systemacademics.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
*for full financial consideration

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

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 Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- GRE Recommended. Contact department for advising
- Writing Sample
- Personal Statement
- Letters of Recommendation are recommended
- Students must select a concentration at the time of application

http://www.cas.usf.edu/
CURRICULUM REQUIREMENTS

Total Minimum Hours - 33
Core requirements – 6 hours
Concentration – 9 hours
Electives – 12 hours
Thesis / Non-Thesis Project – 6 hours

Core Requirements - 6 hours
HUM 6814  3 Introduction to Graduate Study
HUM 6815  3 Research Seminar

Concentration Requirements
Students select from the following concentrations:

Africana Studies Concentration – 9 hours
AFA 6120  3 Social Theory and Social Thought
AFA 6108  3 Social Construction of Race and Racism
AFA 6932  3 Topics in Africana Studies

American Studies Concentration – 9 hours
AMS 6156  3 Theories and Methods
 AMS 6254  3 Cultural Era
AMS 6805  3 Enduring Questions in American Culture

Film Studies Concentration - 9 hours*
HUM 6586  3 Film Theory or Theories and Methods of Cultural Studies
HUM 6583  3 Global Cinema and New Media to 1960
HUM 6584  3 Global Cinema and New Media since 1960
*Students entering the MA program from the USF BA in Humanities, Film Studies Concentration, who have already taken these courses at the undergraduate level may have these requirements waived and will instead complete graduate electives in place of HUM 6586, HUM 6583, and HUM 6584.

Humanities Concentration – 9 hours
HUM 6801  3 Theories and Methods

Students select 6 hours from the following:
HUM 6939  3 Selected Topics in Humanities
HUM 6588  3 Themes and Genres in Film and New Media
HUM 6475  3 Studies in Contemporary Arts & Letters
Or other courses approved by the Graduate Director

Social and Political Thought Concentration – 9 hours
ANG 6701  3 Seminar in History
INR 6690  3 Research Seminar in Globalization
WST 6560  3 Advanced Feminist Theory
SPW 5135  3 Colonial Spanish American Literature
PHH 6266  3 Continental Philosophy II: Political Theory and Continental Social Theory
PHH 6267  3 Continental Philosophy III: From Structuralism to Deconstructionism
PHI 6425  3 Seminar in the Philosophy of Social Science
PHM 6105  3 Seminar in Social Philosophy
PHM 6305  3 Seminar in Political Philosophy
PHM 6406  3 Seminar in the Philosophy of Law
PHM 6506  3 Seminar in the Philosophy of History
PHP 6624  4 Adorno
PHP 6640  4 Foucault
POT 6007  3 Seminar in Political Theory
Or other courses approved by the Graduate Director
Electives – 12 hours
Graduate coursework in the Concentration area and/or related departments, selected in consultation with the Graduate Director. No more than six hours from any one related department may be credited toward the Major without written consent from the Graduate Director.

Note for Africana Studies electives may include:
- AFA 6387  3  Seminar on Genocide and Human Rights
- AFA 6207  3  African American Historiography
- AFA 6805  3  African Historiography
- AFA 6355  3  African American Community Research
- AFA 6945  3  Internship
Or other courses approved by the Graduate Director

Thesis/Non-Thesis – 6 hours minimum

Thesis
Upon nearing the completion of coursework, each student will select a thesis topic and constitute a thesis committee. The thesis committee must approve proposals before students embark on their thesis. The student will then write and orally defend a thesis. During the proposal and thesis writing stage, students are required to enroll for at least 6 hours of Thesis credit.

- AFA 6971  6  Thesis: Master’s (Africana Studies Concentration)
- AMS 6971  6  Thesis: Master’s (American Studies Concentration)
- HUM 6971  6  Thesis: Master’s (Film Studies and Humanities Concentrations)
Or other thesis course approved by the Social and Political Thought Graduate Director

Non-Thesis
Students in the Africana Studies concentration may request a non-thesis option. Non-thesis students will be required to complete an additional six hours of graduate course work at the 6000 level, selected in consultation with the Graduate Director. The non-thesis student is required to demonstrate competency by successfully completing a substantial literature review of approximately 50 pages in the Concentration Area.

Comprehensive Exam
For students in the thesis option, successful submission and defense of the thesis proposal or final 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.

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. 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 – 12 credit hours
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 3077</td>
<td>HUM 6584</td>
<td>Global Cinema and New Media since 1960 (3)</td>
</tr>
<tr>
<td>HUM 4581</td>
<td>HUM 6586</td>
<td>Film Theory or HUM 6801 Theories and Methods of Cultural Studies (3)</td>
</tr>
</tbody>
</table>

An additional six (6) 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
See above

COURSES
See https://www.systemacademics.usf.edu/course-inventory/
LIBRARY AND INFORMATION SCIENCE

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: School of Information</td>
</tr>
<tr>
<td>Summer: February 15</td>
<td>Contact Information: <a href="http://www.grad.usf.edu">www.grad.usf.edu</a></td>
</tr>
</tbody>
</table>

International applicant deadlines:
[http://www.grad.usf.edu/majors](http://www.grad.usf.edu/majors)

Minimum Total Hours: 39
Level: Masters
CIP Code: 25.0101
Dept. Code: LIS
Major/College Codes: LIS AS
Approved: 1988

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/](http://si.usf.edu/ma/library-program/)

**ADMISSION INFORMATION**

Must meet University Admission and English Proficiency requirements 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 (73rd percentile) on the Verbal section and 450 (10th percentile) 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.

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:

- LIS 5020 3 Foundations of Library and Information Science OR  
- LIS 6260 3 Information Science in Librarianship  
- LIS 6271 3 Research Methods in Library and Information Science  
- LIS 6409 3 Introduction to Library Administration  
- LIS 6511 3 Collection Development and Maintenance  
- LIS 6603 3 Basic Information Sources and Services  
- LIS 6711 3 Organization of Knowledge OR  
- LIS 6735 3 Technical Services in Libraries

**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:

- LIS 5268 3 Microcomputer Applications Library and Information Centers  
- LIS 5315 3 Instructional Graphics  
- LIS 5333 3 TV in Schools and Libraries  
- LIS 5418 3 Health Informatics for Medical Librarians  
- LIS 5566 3 Multicultural Literature for Children and Young Adults  
- LIS 5937 4 Selected Topics in Library Studies  
- LIS 6110 3 History of Libraries  
- LIS 6111 3 History of Children's Literature  
- LIS 6206 3 Adult Services in Libraries  
- LIS 6212 3 Reading Guidance Programs in Libraries and Classrooms  
- LIS 6225 3 Storytelling  
- LIS 6303 3 Preparing Instructional Media  
- LIS 6316 3 Visualization of Knowledge  
- LIS 6402 3 Advanced Library Administration  
- LIS 6432 3 Seminar in Academic Libraries  
- LIS 6445 3 Seminar in Public Libraries
LIS 6455  3 Organization and Administration of the School Media Center
LIS 6463  3 Library Networks and Systems
LIS 6464  3 Library Systems Analysis and Planning
LIS 6472  3 Seminar in Special Libraries
LIS 6473  3 Law Librarianship
LIS 6475  3 Health Sciences Librarianship
LIS 6773  3 Digital Curation
LIS 6482  3 Web Archiving
LIS 6542  3 The Curriculum and Instructional Technology
LIS 6554  3 Books and Related Materials for Young Adults
LIS 6564  3 Materials for Children
LIS 6609  3 Online Information Sources and Services
LIS 6610  3 Information Sources and Services in the Humanities
LIS 6620  3 Information Sources and Services in the Social Sciences
LIS 6624  3 Information Sources and Services in Business and Law
LIS 6630  3 Information Sources and Services in Science and Technology
LIS 6661  3 Government Documents
LIS 6724  3 Classification and Cataloging of Non-Book Materials
LIS 6726C  3 Indexing and Abstracting
LIS 6712  3 Organization of Knowledge II
LIS 6514  3 Digital Libraries
LIS 6906  3 Independent Study
LIS 6946  3 Supervised Fieldwork
LIS 6949  2-6 Practicum in Archives and Special Collections

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 https://www.systemacademics.usf.edu/course-inventory/ or http://si.usf.edu/
Linguistics (M.A.)

Master of Arts (M.A.) Degree

<table>
<thead>
<tr>
<th>DEGREE INFORMATION</th>
<th>CONTACT INFORMATION</th>
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<tr>
<td>Priority Admission Application Deadlines:</td>
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<tr>
<td>Closed for new admissions</td>
<td>Department: World Languages</td>
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<tr>
<td>Minimum Total Hours: 33</td>
<td>Contact Information: <a href="http://www.grad.usf.edu">www.grad.usf.edu</a></td>
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<tr>
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<td>Dept. Code: WLE</td>
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<tr>
<td>Major/College Codes: LIN AS</td>
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</table>

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

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

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

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, and second language learning and teaching.

ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements 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)

Applicants should note that proficiency in a second language is required by the time of graduation.
# CURRICULUM REQUIREMENTS

<table>
<thead>
<tr>
<th>Total Minimum Hours:</th>
<th>36 hours</th>
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<tbody>
<tr>
<td><strong>Core Requirements</strong></td>
<td>24 hours</td>
</tr>
<tr>
<td>LIN 5700 Applied Linguistics</td>
<td>3</td>
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<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>
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<tr>
<td>TSL 5371 Methods of TESL</td>
<td>3</td>
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<tr>
<td>TSL 5372 ESL Curriculum and Instruction</td>
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<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>
</tbody>
</table>

**Electives**

Nine hours of approved electives. Students select electives in consultation with the graduate adviser.

**Internship**

TSL 6945 – Internship

**Non-Thesis**

Applied Linguistics (TESL) is a non-thesis track.

**Comprehensive Exam**

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 & 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.

## Concurrent Degree Options

**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: Methods of Teaching English as a Second Language (required for Linguistics; elective for French)
- LIN 5700: Applied Linguistics (required for Linguistics; elective for French)
- FRW 5829: 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.

**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: Methods of Teaching English as a Second Language (required for Linguistics; elective for Spanish)
- LIN 5700: Applied Linguistics (required for Linguistics; elective for Spanish)
- SPW 6806: 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.

COURSES
See https://www.systemacademics.usf.edu/course-inventory/
LINGUISTICS AND APPLIED LANGUAGE STUDIES

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: January 15th

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

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 Admission and English Proficiency requirements 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: 4.00.
• GPA of 3.50 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 M.A. thesis, or an M.A. course paper.
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 https://www.systemacademics.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)

Also available as an Accelerated Major

CONTACT INFORMATION

College: Arts and Sciences
Department: Zimmerman School of Advertising and Mass Communications
Contact Information: www.grad.usf.edu

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 Journalism Studies Concentration focuses on storytelling through the integration of different delivery platforms, and on management issues in converged newsrooms.

ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- 153V (61st percentile), 144Q (17th percentile) preferred on the GRE
- a resume
- three letters of recommendation (academic recommendations preferred)
- a strong letter of intent
- 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 12 hours
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 12 hours
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
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.
Accelerated Major

B.S. in Advertising / M.A. 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 M.A. 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 M.A. 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:

- B.S. in Advertising
- M.A. 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 https://www.systemacademics.usf.edu/course-inventory/
MATHEMATICS

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 1
Spring: October 1

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

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)

Also offered as an Accelerated Major

CONTACT INFORMATION

College: Arts and Sciences
Department: Mathematics and Statistics
Contact Information: www.grad.usf.edu

The MA in Mathematics offered by the Department of Mathematics and Statistics provides the experience and knowledge to understand and appreciate prior accomplishments in the discipline and develop the skills necessary for a meaningful contribution to the intellectual advancement and applications of the discipline. It prepares its graduates to pursue long-term careers in their field by providing solid and cutting-edge knowledge, as well as a technical education enabling them to take on leading positions in a modern economy.

ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements 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 55th percentile Quantitative score on the GRE; Verbal and Analytic Writing scores on the GRE are also considered.
- At least a 3.00 GPA in undergraduate math courses, and specifically in the following courses or their equivalents: Elementary Abstract Algebra, Bridge to Abstract Mathematics, and Intermediate Analysis.
- Three letters of recommendation (two of which should be from college level mathematics/statistics professors).
- A completed math department application form, including a statement of goals
- A completed departmental graduate teaching assistantship application form (if such a position is desired).

The Graduate Admissions Committee may provisionally admit applicants from other majors to the Master’s Program if they meet the GPA requirement.
CURRICULUM REQUIREMENTS

Total Minimum Hours: 30 hours
Core courses – 9 hours
Sequence Courses – 12 hours minimum
Electives – 3-9 hours minimum
Thesis (for students electing this option) – 6 hours minimum

Core Courses – 9 hours minimum
All students in the Mathematics MA program must take the following core courses:
- MAA 5306  3  Introduction to Real Analysis
- MAS 5145  3  Advanced Linear Algebra
- MAE 5177  3  Teaching College Mathematics (Proposed course)

Sequences of Courses – 12 hours minimum
The program offers coherent pairs/triples of courses, referred to as sequences, to ensure a certain balance of breadth and depth of disciplinary knowledge. The student must complete one Fundamental sequence and a total of two sequences from among the Fundamental and Elective Sequences with at least a 3.0 average in each sequence. Fundamental Sequences prepare students for Fundamental Qualifying Examinations. A student who passes a Fundamental Qualifying Examination at Ph.D. level will be considered to have completed the corresponding Fundamental Sequence. Each course may count towards only one Sequence.

Fundamental Sequences:
Algebra:  MAS 5311  Algebra I
         MAS 6312  Algebra II
Analysis: MAA 5306  Introduction to Real Analysis (taken as a core requirement)
          MAA 5307  Real Analysis I
          MAA 6616  Real Analysis II
Topology: MTG 5316  Topology I
         MTG 6317  Topology II

Elective Sequences
Applied Mathematics: one of
- MAP 5407 Methods of Applied Mathematics
- MAP 5345 Applied Partial Differential Equations
- MAA 5405 Applied Complex Analysis
- MAT 5932 Selected Topics (Numerical Analysis)
- MAP 6205 Control Theory and Optimization
- MAT 6932 Selected Topics (Dynamical Systems II)

Combinatorics: MAD 6206 Combinatorics I
               MAD 6207 Combinatorics II

Complex Analysis: MAA 6406 Complex Analysis I
                  MAA 6407 Complex Analysis II

Differential Geometry MTG 6256 Differential Geometry I
                       MTG 6257 Differential Geometry II (Proposed course)

Dynamical Systems: MAT 5932 Selected Topics (Dynamical Systems I)
                   MAT 6932 Selected Topics (Dynamical Systems II)

Functional Analysis: MAA 6506 Functional Analysis I
                     MAA 6507 Functional Analysis II
Nonlinear Analysis:  MAP 5316 Ordinary Differential Equations I
MAP 5317 Ordinary Differential Equations II

Partial Differential Equations:  MAP 5345 Applied Partial Differential Equations
MAP 6356 Partial Differential Equations

Theory of Computing:  MAD 6616 Theory of Computing
MAD 6510 Analysis of Algorithms

All sequences for the Statistics Ph.D. Concentration are also Elective Sequences for the Pure and Applied Concentration.

Electives – 3 hours minimum
Students select graduate course electives in consultation with their advisor.

Independent Study, Graduate Seminar, and Directed Research
Prior to passing two Fundamental Qualifying Examinations at Ph.D. level, students may not earn credit toward the MA or Ph.D. degrees for MAT 6908 Independent Study, MAT 6939 Graduate Seminar, and MAT 6911 / 7912 Directed Research, although they make take these course with the approval of the Concentration Graduate Director. Students must obtain the approval of the Seminar Organizer to take credit hours of MAT 6939 Graduate Seminar.

External Coursework
Graduate coursework taken from other departments may be accepted toward the minimum number of credits with prior approval from the Concentration Graduate Director.

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.

Comprehensive Exam
Each candidate for the M.A. degree must either successfully defend a thesis or pass one of the written Core Qualifying Examinations (the Exam option). For the student who elects the Thesis Option, 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. For the student who elects the Exam Option, the Comprehensive Examination is passed by passing one of the Core Qualifying Examinations at M.A. level or better. A student may repeat each examination once.

Thesis – 6 hours
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.

ACCELERATED MAJOR

Accelerated Major Option:
This program is designed for superior students having a solid background in high school mathematics and the ability to handle a fast paced, challenging program leading to a B.A. in Mathematics and M.A. in Mathematics in four to five years.

COURSES
See https://www.systemacademics.usf.edu/course-inventory/
MATHEMATICS

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Program Admission Deadlines:
Fall: February 1
Spring: October 1

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

Minimum Total Hours: 90 post-baccalaureate
60 post-masters
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

The Department of Mathematics and Statistics offers a Ph.D. in mathematics with concentrations in Pure and Applied mathematics and in Statistics. The major provides the experience and knowledge to understand and appreciate prior accomplishments in the discipline and develops the skills necessary for a meaningful contribution to the intellectual advancement and applications of the discipline. It prepares its graduates to pursue long-term careers in their field by providing solid and cutting-edge knowledge. Graduates receive training that enables them to conduct independent research and write research papers publishable in peer-reviewed journals of their discipline, as well as a technical education enabling them to take on leading positions in a modern economy.


ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- A degree from a regionally accredited institution relevant to the prospective concentration. Either
  - a Master’s degree or equivalent in mathematical sciences/statistics or a related area; or
  - a Bachelor’s degree or equivalent in mathematical sciences/statistics or related area with a strong record of undergraduate/graduate courses related to prospective concentration.
- At least a 55th percentile Quantitative score on the GRE; Verbal and Analytic Writing scores on the GRE are also considered.
- At least a 3.50 GPA in graduate and/or upper undergraduate mathematics/statistics courses.
- Three letters of recommendation (two of which should be from college level mathematics/statistics professors)
- A completed departmental application form, including a statement of goals.
• A completed departmental graduate teaching assistantship application form (if such a position is desired).

Applicants to the Ph.D. program may be offered admission to the M.A. program and move to the Ph.D. program after establishing a record of success in graduate courses. Graduate Teaching and Research Assistantships are available on a competitive basis. Contact the Department for recommended prerequisites for each concentration.

CURRICULUM REQUIREMENTS

Total Minimum Hours: 90 hours post-baccalaureate
60 hours post-masters

Post-master’s hours:
Core courses – 9 hours
Concentration – 9 hours minimum
Sequence Courses – 24-27 hours depending on concentration
Electives – 2 hours minimum
Dissertation – 16 hours minimum

Core Courses
All students in the Mathematics Ph.D. program must take the following core courses:
MAA 5307 3 Real Analysis I
MAS 5145 3 Advanced Linear Algebra
MAE 5177 3 Teaching College Mathematics (Proposed course)

Concentrations
Students select from one of the concentrations below. Each concentration requires a number of courses to ensure breadth of disciplinary knowledge. Substitutions may be allowed with prior approval of both the Concentration Director and Concentration Graduate Committee.

Pure and Applied Concentration – 9 hours
The student must complete at least one course from each of the following groups:
Group 1 – Algebra:
MAS 5311 Algebra I
MAS 6312 Algebra II

Group 2 – Complex Analysis:
MAA 6406 Complex Analysis I
MAA 6407 Complex Analysis II

Group 3 – Topology:
MTG 5316 Topology I
MTG 6317 Topology II

Statistics Concentration – 18 hours
The student must complete the following courses:
STA 5446 Probability Theory I
STA 6447 Probability Theory II
STA 5526 Nonparametric Statistics
STA 6746 Multivariate Analysis
STA 6876 Time Series Analysis
MAT 5932 Special Topics (Survival Analysis)

Choose three of the following seven courses: 9 hours
STA 6206 Stochastic Processes
MAT 6932 Special Topics (Stochastic Dynamic Modeling)
MAT 5932 Special Topics (Time Series Analysis II)
MAT 5932 Special Topics (Nonlinear Time Series Analysis)
MAT 5932 Special Topics (Multivariate Iterative Processes with Applications)
MAT 6908 Independent Study (preapproval required)
MAT 5932 Special Topics Courses (preapproval required)
Sequences of Courses - 24 hours minimum
Each concentration offers coherent pairs/triples of courses, referred to as sequences, to ensure a certain depth of disciplinary knowledge. The student must complete two Fundamental sequences and a total of four sequences from among the Fundamental and Elective Sequences with at least a 3.00 average in each sequence. Fundamental Sequences prepare students for Fundamental Qualifying Examinations, of which students must pass two. A student who passes a Fundamental Qualifying Examination at Ph.D. level will be considered to have completed the corresponding Fundamental Sequence. Prior to offering, the Mathematics Graduate Committee may approve a pair of courses to be an elective sequence. Each course may count towards only one sequence.

**Fundamental Sequences for the Pure and Applied Mathematics concentration**

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**Algebra:**
- MAS 5311 Algebra I
- MAS 6312 Algebra II

**Real Analysis:**
- MAA 5306 Introduction to Real Analysis
- MAA 5307 Real Analysis I (taken as a core requirement)
- MAA 6616 Real Analysis II

**Topology:**
- MTG 5316 Topology I
- MTG 6317 Topology II

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**Elective Sequences for the Pure and Applied Mathematics concentration**

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**Applied Mathematics**
- one of MAP 5407 Methods of Applied Mathematics
- one of MAA 5405 Applied Complex Variables
- and one of MAA 5307 Real Analysis I (taken as a core requirement)
- MAP 6205 Control Theory and Optimization
- MAT 6932 Special Topics (Dynamical Systems II)

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**Combinatorics**
- MAD 6206 Combinatorics I
- MAD 6207 Combinatorics II

**Complex Analysis**
- MAA 6406 Complex Analysis I
- MAA 6407 Complex Analysis II

**Differential Geometry**
- MTG 6256 Differential Geometry I
- MTG 6257 Differential Geometry II (Proposed course)

**Dynamical Systems**
- MAT 5932 Special Topics (Dynamical Systems I)
- MAT 6932 Special Topics (Dynamical Systems II)

**Functional Analysis**
- MAA 6506 Functional Analysis I
- MAA 6507 Functional Analysis II

**Harmonic Analysis**
- MAT 6932 Special Topics (Harmonic Analysis)
- MAP 6356 Partial Differential Equations

**Nonlinear Analysis**
- MAP 5316 Ordinary Differential Equations I
- MAP 5317 Ordinary Differential Equations II

**Partial Differential Equations**
- MAP 5345 Applied Partial Differential Equations
- MAP 6356 Partial Differential Equations

**Theory of Computing**
- MAD 6616 Theory of Computing
- MAD 6510 Analysis of Algorithms

All sequences for the Statistics Concentration are Elective Sequences for the Pure and Applied Concentration.
**Fundamental Sequences for the Statistics Concentration**

Statistical Methods:  
STA 5166 Statistical Methods I  
STA 6167 Statistical Methods II  
STA 6208 Linear Statistical Models

Mathematical Statistics:  
STA 5326 Mathematical Statistics I  
STA 6326 Mathematical Statistics II

**Elective Sequences for the Statistics Concentration**

Linear Models and Multivariate Analysis:  
STA 6208 Linear Models  
STA 6746 Multivariate Analysis

Probability:  
STA 5446 Probability I  
STA 6447 Probability II

Stochastic Processes and Time Series Analysis:  
STA 6876 Time Series Analysis  
STA 6206 Stochastic Processes

**Electives – 2 hours minimum**

Students select graduate course electives in consultation with their advisor.

**Independent Study, Graduate Seminar, and Directed Research**

Prior to passing two Fundamental Qualifying Examinations at Ph.D. level, students may not earn credit toward the MA or Ph.D. degrees for MAT 6908 Independent Study, MAT 6939 Graduate Seminar, and MAT 6911 / 7912 Directed Research, although they may take these courses with the approval of the Concentration Graduate Director. Students must obtain the approval of the Seminar Organizer to take credit hours of MAT 6939 Graduate Seminar.

**External Coursework**

Graduate coursework taken from other departments may be accepted toward the minimum number of credits with prior approval from the Concentration Graduate Director.

**Qualifying Examinations**

A Qualifying Examination based on a Fundamental Sequence is called a Fundamental Qualifying Examination. The student is required to pass two Fundamental Qualifying Examinations at the Ph.D. Level. The student is expected to pass both within 17 months after entering the Ph.D. unless an extension is granted by the Concentration Graduate Committee. Students may repeat an examination only once unless additional attempts are granted by the Concentration Graduate Committee. The syllabus for each examination is available from the Department. Fundamental Qualifying Examinations are offered in January, May and August.

After passing two Fundamental Qualifying Examinations, the student will select a Dissertation Advisor, who will convene a Specialty Examination Committee. The Specialty Examination Committee will prepare a syllabus for the student’s Specialty Examination on background material for the student’s intended research. The syllabus for the Specialty Examination and the names of two examiners from the Faculty, must be approved by the Concentration Graduate. The student is expected to complete the Specialty Examination within 25 months after entering the Ph.D. unless an extension is granted by the Concentration Graduate Committee.

Passing two Fundamental Qualifying Examinations and the Specialty Examination at the Ph.D. level is considered passing the Doctoral Qualifying Examination. After passing the Doctoral Qualifying Examination, the student should form their Doctoral Dissertation Committee and apply for Doctoral Candidacy. Once admitted to Doctoral Candidacy, the student may enroll in Doctoral Dissertation hours.

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.
Dissertation - 16 credit hours minimum
MAT 7980  16  Doctoral 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 candidate will conduct original and significant research which is worthy of publication. The research will be described in the doctoral dissertation. Research towards the dissertation typically forms the major part of the work required for the Ph.D. in Mathematics. The Doctoral Dissertation Defense shall consist of an oral presentation of the research in the dissertation to the supervisory committee.

Handbook
The student is responsible for familiarizing themselves with the additional program requirements and expectations listed in the program handbook, particularly those concerning timely progress.

COURSES
See https://www.systemacademics.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

Also offered as an Accelerated Major

CONTACT INFORMATION

College: Arts and Sciences
Department: Cell Biology, Microbiology and Molecular Biology (CMMB)

Contact Information: www.grad.usf.edu

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 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 Admission and English Proficiency requirements 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.
- Preferred minimum scores of 153V (500V on the old test; 61st percentile), and 148Q (600Q on the old test; 30th percentile), 4.5 AW on GRE
- 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 2015Tampa, 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 consider 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

<table>
<thead>
<tr>
<th>Required coursework</th>
<th>9 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSC 6930 Lectures in Contemporary Biology</td>
<td>1</td>
</tr>
<tr>
<td><em>Enrollment in this course is required during each semester of residency</em></td>
<td></td>
</tr>
<tr>
<td>BSC 6932 Advances in Scientific Review</td>
<td>2</td>
</tr>
<tr>
<td>PCB 6956 Scientific Grant Writing</td>
<td>3</td>
</tr>
<tr>
<td>PCB 6930 Advances in Cell and Molecular Biology</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Microbiology Electives*</th>
<th>6 hours minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCB 5206 Public Health and Pathogenic Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>MCB 5655 Applied and Environmental Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>PCB 5335 Principles of Immunology</td>
<td>3</td>
</tr>
<tr>
<td>PCB 6236 Advanced Immunology</td>
<td>4</td>
</tr>
<tr>
<td>MCB 5815 Medical Mycology</td>
<td>3</td>
</tr>
<tr>
<td>BSC 5931 Molecular Microbial Ecology</td>
<td>3</td>
</tr>
<tr>
<td>BSC 5931 Prokaryotic Molecular Genetics</td>
<td>3</td>
</tr>
<tr>
<td>MCB 5410 Cellular Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>PCB 5616 Molecular Phylogenetics</td>
<td>3</td>
</tr>
<tr>
<td>PCB 6525 Molecular Genetics</td>
<td>3</td>
</tr>
<tr>
<td>BSC 5420 Genetic Engineering and Recombinant DNA Technology</td>
<td>3</td>
</tr>
</tbody>
</table>

*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 B.S./M.S. 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**

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BSC 2010, BSC 2011 with labs</td>
<td>8</td>
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<table>
<thead>
<tr>
<th>Year 2</th>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MCB 3410-Cell Metabolism</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PCB 3063-Genetics and lab</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>PCB 3023-Cell Biology and lab</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>MCB 3032 –General Microbiology</td>
<td>4</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3</th>
<th>Courses</th>
<th>Credits</th>
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<tbody>
<tr>
<td></td>
<td>MCB 4115 Determinative Bacteriology</td>
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<tr>
<td></td>
<td>3 hour graduate elective structured course (5000)</td>
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<table>
<thead>
<tr>
<th>Year 4</th>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MCB 4320 Molecular Microbiology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>9 hours of graduate elective courses (5000 or 6000)</td>
<td>9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 5</th>
<th>Courses</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>18 hours of graduate courses</td>
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</tr>
<tr>
<td></td>
<td>9 hours of which must be derived from the list below</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BSC 6932 Virology</td>
<td></td>
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<tr>
<td></td>
<td>PCB 5525 Molecular Genetics</td>
<td></td>
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<tr>
<td></td>
<td>BSC 5420 Genetic Engineering</td>
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<td></td>
<td>PCB 6236 Advanced Immunology</td>
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<tr>
<td></td>
<td>BSC 6932 Prokaryotic Molecular Genetics</td>
<td></td>
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<tr>
<td></td>
<td>MCB 5206 Public Health &amp; Pathogenic Microbiology</td>
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<tr>
<td></td>
<td>MCB 5655 Applied &amp; Environmental Microbiology</td>
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<tr>
<td></td>
<td>MCB 5818 Medical Mycology</td>
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<td></td>
<td>BSC 6932 Immunology</td>
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<tr>
<td></td>
<td>4 hour non-structured (seminar, independent study, laboratory research)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oral exam and review paper done at the end of year 5</td>
<td></td>
</tr>
</tbody>
</table>

**COURSES**

See [https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.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

Concentrations:
Philosophy and Religion (PHR)

CONTACT INFORMATION

College: Arts and Sciences
Department: Philosophy

Contact Information: www.grad.usf.edu
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 Admission and English Proficiency requirements 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
- 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  
PHP 6420  Seminar on Leibniz’s Philosophy  
PHP 6500  Seminar on Hegals’ Philosophy  
PHP 6520  Nietzsche and the Nietzscheans  
PHP 6530  Seminar in German Idealism  
PHP 6624  Adorno  
PHP 6640  Foucault  

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  
RLG 6035  Theory and Methods in Religious Studies  

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  
RLG 6938  Formative Christianity  
RLG 6938  Early Jewish Literature  
RLG 6285  Studies in Biblical Archaeology  

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  
PHH 6205  Seminar in Medieval Philosophy  
PHP 6500  Seminar on Descartes’ Philosophy  
PHH 6435  17th Century Philosophy  
PHH 6420  18th Century Philosophy  
PHP 6415  Seminar on Kant  
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  
PHI 6634  Seminar in Biomedical Ethics  
PHI 6665  Seminar in Metaethics  
PHI 6605  Seminar in Ethics: Environmental Ethics  
RLG 6189  Comparative Religious Ethics  
RLG 6938  Buddhist Ethics  
PHH 6265  Continental Phil I: Phenomenology to Hermeneutics  
PHH 6266  Continental Phil II: Political Theory and Continental Social Theory  
PHH 6267  Continental Phil III: From Structuralism to Postmodernism  
PHI 6425  Seminar in the Philosophy of Social Science  
PHI 6808  Seminar in Aesthetics  
PHM 5125  Topics in Feminist Philosophy  
PHM 6105  Seminar in Social Philosophy  
PHM 6305  Seminar in Political Philosophy  
RLG 6126  Religion in America  
RLG 6143  Religion, Culture, and Society  
RLG 6196  Religion and Modernization  
RLG 6938  Buddhism and Postmodernism
RLG 6938 Religious Issues in the Caribbean World

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
RLG 6938 Religious Issues in the Caribbean World

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 https://www.systemacademics.usf.edu/course-inventory/
PHILOSOPHY

Doctor of Philosophy (Ph.D.) 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: 90
Level: Doctoral
CIP Code: 38.0101
Dept. Code: PHI
Major/College Codes: PHI AS
Approved: 1990

Concentration:
Philosophy and Religion (PHR)

CONTACT INFORMATION

College: Arts and Sciences
Department: Philosophy
Contact Information: www.grad.usf.edu

Major Research Areas:
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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 Admission and English Proficiency requirements 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 - 12 hours
 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 - 44 hours
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:

A. Ancient and Medieval Philosophy
B. Modern Philosophy
C. 19th and 20th Century Philosophy
D. Problems of Knowledge
E. Problems of Value Theory
F. Problems of Metaphysics

Courses are selected from the following list, or other course as approved by the Graduate Director:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHH 6100</td>
<td>Seminar in Ancient Philosophy</td>
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</tr>
<tr>
<td>PHH 6265</td>
<td>Continental Philosophy I: Phenomenology to Hermeneutics</td>
<td>3</td>
</tr>
<tr>
<td>PHH 6266</td>
<td>Continental Philosophy II: Political Theory and Continental Social Theory</td>
<td>3</td>
</tr>
<tr>
<td>PHH 6267</td>
<td>Continental Philosophy III: From Structuralism to Deconstructionism</td>
<td>3</td>
</tr>
<tr>
<td>PHH 6420</td>
<td>18th Century Philosophy</td>
<td>4</td>
</tr>
<tr>
<td>PHH 6435</td>
<td>17th Century Philosophy</td>
<td>4</td>
</tr>
<tr>
<td>PHH 6640</td>
<td>Contemporary Continental Philosophy</td>
<td>4</td>
</tr>
<tr>
<td>PHH 6938</td>
<td>Seminar in the History of Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHI 5135</td>
<td>Symbolic Logic</td>
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</tr>
<tr>
<td>PHI 5225</td>
<td>Philosophy of Language</td>
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</tr>
<tr>
<td>PHI 5934</td>
<td>Selected Topics</td>
<td>1-3</td>
</tr>
<tr>
<td>PHI 6305</td>
<td>Seminar in Epistemology</td>
<td>3</td>
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<td>PHI 6405</td>
<td>Seminar in the Philosophy of Natural Science</td>
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<td>Seminar in the Philosophy of Social Science</td>
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<tr>
<td>PHI 6506</td>
<td>Seminar in Metaphysics</td>
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<tr>
<td>PHI 6605</td>
<td>Seminar in Ethics</td>
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<td>Seminar in Biomedical Ethics</td>
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<td>PHI 6665</td>
<td>Metaethics</td>
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<tr>
<td>PHI 6706</td>
<td>Seminar in the Philosophy of Religion</td>
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</tr>
<tr>
<td>PHI 6808</td>
<td>Seminar in Aesthetics</td>
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<tr>
<td>PHM 5125</td>
<td>Topics in Feminist Philosophy</td>
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<tr>
<td>PHM 5126</td>
<td>Social Issues in Biomedical Ethics</td>
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<td>PHM 6105</td>
<td>Seminar in Social Philosophy</td>
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<td>PHM 6305</td>
<td>Seminar in Political Philosophy</td>
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<td>PHM 6406</td>
<td>Seminar in the Philosophy of Law</td>
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<td>PHM 6506</td>
<td>Seminar in the Philosophy of History</td>
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<td>PHM 6646</td>
<td>Seminar in Development Ethics</td>
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<td>PHP 6005</td>
<td>Plato</td>
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<td>PHP 6015</td>
<td>Aristotle</td>
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<td>PHP 6400</td>
<td>Seminar on Descartes Philosophy</td>
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<td>PHP 6415</td>
<td>Kant</td>
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<td>PHP 6420</td>
<td>Seminar on Leibniz’s Philosophy</td>
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<tr>
<td>PHP 6500</td>
<td>Seminar on Hegel’s Philosophy</td>
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</tr>
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</table>
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:
- 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
   - PHP 6205  Seminar in Medieval Philosophy
   - PHP 6400  Descartes
   - PHH 6435  Seminar in Seventeenth Century Philosophy
   - PHH 6420  Seminar in Eighteenth Century Philosophy
   - PHP 6005  Plato
   - PHP 6015  Aristotle
   - PHP 6415  Kant
   - REL xxxx  Modern Jewish Thought
   - REL xxxx  Hermeneutics and Epistemology in Modern Religious Thought

C. Philosophy and Religion: Ethics, Politics, and Culture
   - PHI 6605  Seminar in Ethics
   - PHI 6634  Seminar in Biomedical Ethics
PHI 6665  Seminar in Metaethics
REL 6178  Comparative Religious Ethics
REL xxxx  Buddhist Ethics
REL xxxx  Comparative Philosophy of Religion
PHH 6265  Continental Phil I: Phenomenology to Hermeneutics
PHH 6266  Continental Phil II: Political Theory and Continental Social Theory
PHH 6267  Continental Phil III: From Structuralism to Postmodernism
PHI 6425  Seminar in the Philosophy of Social Science
PHI 6808  Seminar in Aesthetics
PHM 5125  Topics in Feminist Philosophy
PHM 6105  Seminar in Social Philosophy
PHM 6305  Seminar in Political Philosophy
REL 6126  Religion in America
REL 6143  Religion, Culture, and Society
REL 6195  Religion and Modernization
REL xxxx  Buddhism and Postmodernism
REL xxxx  Religious Issues in the Caribbean World
PHI xxxx  African Philosophy
REL xxxx  Buddhism
REL xxxx  Comparative Philosophy of Religion
REL xxxx  Buddhism and Postmodernism
REL xxxx  Seminar in Confucianism
REL xxxx  Medical Philosophy: Chinese, Greek, Indian
REL xxxx  Comparative Mysticism
PHM 5125  Topics in Feminist Philosophy
PHI 5934  Latin American Thought
REL 6178  Comparative Religious Ethics
REL xxxx  Buddhist Ethics
REL xxxx  Religious Issues in the Caribbean World

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 https://www.systemacademics.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

ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements 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 https://www.systemacademics.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 credit hours
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

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 Admission and English Proficiency requirements 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.

Applicants for admission to the Ph.D. program must indicate whether they are requesting the medical-physics concentration option.

Students Entering with Prior Master’s Degrees from Other Institutions
Some prior coursework toward the requirements outlined below may be counted. However, at least six courses 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

Core courses in theoretical and applied areas 15 hours
General Option or Concentration Option 18 hours
Dissertation Research (PHY 7980) 24 hours
Core courses – 15 hours

- PHZ 5115 3 Methods of Theoretical Physics I
- PHY 6346 3 Electromagnetic Theory I
- PHY 6645 3 Quantum Mechanics I
- PHY 6646 3 Applied Quantum Mechanics
- PHY 6536 3 Statistical Mechanics

General Option – 18 hours

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 four (4) graduate-level classes, of which at least two (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

Medical-Physics Concentration Option – 18 hours

The Medical-Physics Concentration is administered jointly by the Department of Physics of the University of South Florida and the Medical Physics Faculty Group of the Moffitt Cancer Center. The Ph.D. degree program in “Applied Physics with an emphasis in medical-physics” has been accredited since 2015 by the Commission on the Accreditation of Medical Physics Education Programs, CAMPEP.

Students in the medical-physics concentration must:
1. Fulfill the course requirements for a Ph.D. in applied physics;
2. Fulfill the course requirements for medical physics per CAMPEP; and
3. Perform medical physics research leading to a dissertation and a minimum of two papers submitted to peer-reviewed journals before graduation.

For the medical physics concentration, the Radiotherapy Physics Clinical Practicum substitutes for the Industrial Practicum. Instead of the four electives for the general Ph.D. in Applied Physics, students take the following medical physics core courses, automatically satisfying the requirements in computation and laboratory experience (credit hours in parentheses):

- PHY 6938 (3) Selected Topics in Physics: Radiation Therapy Physics (proposed RAD 6628)
- PHY 6938 (3) Selected Topics in Physics: Radiation Physics and Dosimetry (proposed PHZ 6736)
- PHY 6938 (3) Selected Topics in Physics: Radiobiology for Physicists (proposed PHZ 6730)
- EEL 6935 (3) Selected Electrical Topics: Biomedical Image Processing
- PHC 7935 (3) Special Topics in Public Health: Radiation Health Principles
- GMS 6605 (3) Basic Medical Anatomy
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: Doctoral
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 [https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.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 (AFA)

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 Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- GRE required
- Three (3) letters of recommendation, preferably from an academic source
- A 500-word statement of academic interest
- Official transcripts
- 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</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CPO 5934</td>
<td>Selected Topics in Comparative Politics</td>
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<tr>
<td>CPO 6091</td>
<td>Seminar in Comparative Politics</td>
<td>3</td>
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<tr>
<td>CPO 6077</td>
<td>Social Movements</td>
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<td>INR 5012</td>
<td>Globalization</td>
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<td>INR 5086</td>
<td>Issues in International Relations</td>
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<td>INR 6007</td>
<td>Seminar in International Relations</td>
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<tr>
<td>INR 6036</td>
<td>Seminar in International Political Economy</td>
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<tr>
<td>INR 6107</td>
<td>American Foreign Policy</td>
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<td>LAS 6933</td>
<td>Seminar in Latin American Studies</td>
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<td>POS 5159</td>
<td>Urban Policy Analysis</td>
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<td>POS 6045</td>
<td>Seminar in American Government and Politics</td>
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<td>POS 6127</td>
<td>Issues in State Government and Politics</td>
<td>3</td>
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<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>
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<tr>
<td>POS 6746</td>
<td>Quantitative Analysis I</td>
<td>3</td>
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<tr>
<td>POS 6735</td>
<td>Foundations of Political Inquiry</td>
<td>3</td>
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<tr>
<td>POS 6909</td>
<td>Independent Study</td>
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<tr>
<td>POS 6919</td>
<td>Directed Research</td>
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<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>
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</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 https://www.systemacademics.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

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.


Methodological offerings across areas include Research Design and Statistics, Regression, Analysis of Variance, Psychometrics, Factor Analysis, Meta-analysis, Structural Equation Modeling.

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
Individual concentrations may require more than 30 hours for accreditation.
Students are required to earn B- or better for each required course

Core – 7 hours
Concentrations – 17 hours minimum
Thesis – 6 hours

Core requirements – 7 hours
PSY 6217  4 Research Methods and Measurement (Regression and Analysis of Variance)
PSY 6065  3 Introduction to Advanced Psychology

Students select from the following Concentrations:

Clinical Psychology Concentration – 19 hours minimum
Required Courses:
CLP 6166  3 Psychopathology
CLP 6438  3 Psychological Assessment: Theory and Research
CLP 7379  3 Graduate Seminar in Clinical Psychology (Evidence-Based Assessment)
CLP 7188  3 Clinical Psychological Interventions (Theory and Research)
PSY 6946  2 Practicum and Internship in Clinical Psychology (Clinical Skills for Psychological Intervention)
PSY 7931  2 Seminar in Ethics and Professional Problems

In addition, students select at least one of the following, chosen in consultation with the major professor
EDF 7484  3 Statistical Analysis for Educational Research III
GEY 6403  3 Multivariate Statistical Analyses for Aging Research
PSY 6217  3 Research Methods and Measurement (Psychometrics)
PSY 6217  3 Research Methods and Measurement (Experimental Design & ANOVA)
EDF 7437  3 Advanced Educational Measurement I
SOP 6058  3 Personality and Social Psychology (Social Psychology)
EXP 6608  3 Cognitive Psychology
EXP 7099  3 Graduate Seminar in Experimental Psychology (The Nature of Emotion)
CLP 7379  3 Graduate Seminar in Clinical-Community Psychology (Emotion and its Disorders)
PSB 6056  3 Physiological Psychology
CLP 6937  3 Topics in Clinical Psychology (Human Neuropsychology/Cognitive Neuroscience)
3 One other elective Method/Statistics course, chosen in consultation with major professor

Cognition, Neurosciences, & Social Psychology (CNS) Concentration – 17 hours minimum
Required Courses
PSY 6217  4 Research Methods and Measurement (Experimental Design & ANOVA)

A minimum of two of the following:
EXP 6608  3 Cognitive Psychology
PSB 6056  3 Physiological Psychology
SOP 6058  3 Personality and Social Psychology (Social Psychology)

A minimum of two three-credit CNS seminars:
EXP 7099  6 Graduate Seminar in Experimental Psychology

Students in the CNS concentration may be allowed to substitute advanced three-hour courses in cognition, neuroscience, or social psychology for one or more of the content requirements with the written permission of the CNS Area Director.

A minimum of at least one of the following:
PSY 6917  1 Directed Research
PSY 6907  1 Independent Study
Industrial-Organizational Psychology Concentration – 18 hours minimum
PPE 6058  3  Personality
INP 6935  3  Topics in Industrial-Organizational Psychology (Personnel Psychology)
INP 6935  3  Topics in Industrial-Organizational Psychology (Organizational Psychology)
PSY 7931  3  Seminar in Ethics and Professional Problems
PSY 6217  3  Research Methods and Measurement (Psychometrics)
INP 6935  3  Topics in Industrial-Organizational Psychology (Organizational Research Methods)

Other information:
Procedures and guidelines for the different concentrations are described in detail in the Psychology Graduate Student Handbook: http://psychology.usf.edu/policies/students.aspx.

COURSES
See https://www.systemacademics.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: 50 (Post-Masters)
                        80 (Post Bachelors)

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

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

Methodological offerings across areas include Research Design and Statistics, Regression, Analysis of Variance, Psychometrics, Factor Analysis, Meta-analysis, Structural Equation Modeling.

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 Admission and English Proficiency requirements 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 3.40 or better.

CURRICULUM REQUIREMENTS

Post-Bachelor’s - Total Minimum Hours: 80 hours

Students must successfully complete all requirements noted in the Catalog section for the M.A. in Psychology, or its equivalent, with a minimum GPA of 3.00. In addition, students must successfully complete the following post-Masters requirements. The 30 hours from the Master’s degree is then added to the post-Masters minimum of 50 hours for the 80 hour total.

Post-Master’s – Total Minimum Hours: 50 hours

Individual concentrations may require more hours for accreditation. A minimum GPA of 3.00 is required for all courses within the Ph.D. Degree

Core – Completed as part of the Masters requirements
Doctoral Concentration – 30 hours minimum
Additional Courses – 8 hours
Dissertation – 12 hours minimum

Concentration Requirements:
Students apply to and enroll in one of the following concentrations:

Clinical Psychology – 18 hours
SOP 6058 3 Personality and Social Psychology (Social Psychology)
EXP 6608 3 Cognitive Psychology

One of the following:
EXP 7099 3 Graduate Seminar in Experimental Psychology (The Nature of Emotion)
CLP 7379 3 Graduate Seminar in Clinical-Community Psychology (Emotion and its Disorders)

One of the following:
PSB 6056 3 Physiological Psychology
CLP 6937 3 Topics in Clinical Psychology (Human Neuropsychology/Cognitive Neuroscience)

PSY 6946 6 Practicum and Internship in Clinical Psychology

Cognition, Neuroscience, and Social Psychology - 6 hours
A minimum of two of the following, or alternative graduate advanced courses or seminars, (in addition to the Masters requirements), selected in consultation with major professor:
EXP 6608 3 Cognitive Psychology
PSB 6056 3 Physiological Psychology
SOP 6058 3 Personality and Social Psychology (Social Psychology)
PPE 6058 3 Personality
EXP 7099 3 Graduate Seminar in Experimental Psychology (The Nature of Emotion)
EXP 7099 3 Graduate Seminar in Experimental Psychology (Judgment & Decision Making)
EXP 7099 3 Graduate Seminar in Experimental Psychology (The Self)
Industrial-Organizational Psychology – 21 hours
A minimum of seven of the following, or alternative graduate courses, selected in consultation with major professor:
- INP 7937  3 Psychology and Technology
- INP 7937  3 Work and Family
- INP 7937  3 Performance Measurement/Criterion Development
- INP 7937  3 Occupational Health Psychology
- INP 7937  3 Job Attitudes
- INP 7937  3 Assessment Centers
- INP 7937  3 Teams

Tools of Research:
Students complete tools of research in the area of the concentration:

Clinical – 6 hours
One of the following:
- EDF 7484  3 Statistical Analysis for Educational Research III
- GEY 6403  3 Multivariate Statistical Analyses for Aging Research

One of the following:
- PSY 6217  3 Research Methods and Measurement (Psychometrics)
- EDF 7437  3 Advanced Educational Measurement I

Cognition, Neuroscience, and Social Psychology – 9 hours
A minimum of three of the following, or alternative graduate methods courses, selected in consultation with major professor:
- PSY 6217  3 Research Methods and Measurement (Psychometrics)
- PSY 6217  3 Research Methods and Measurement (Meta-Analysis)
- PSY 6217  3 Research Methods and Measurement (Bayesian Statistics I)
- PSY 6217  3 Research Methods and Measurement (Bayesian Statistics II)
- EDF 7437  3 Advanced Educational Measurement I
- EDF 7484  3 Statistical Analysis for Educational Research III
- GEY 6403  3 Multivariate Statistical Analyses for Aging Research

Industrial-Organizational Psychology – 6 hours
A minimum of two of the following, or alternative graduate methods courses, (in addition to the graduate methods courses from the Masters requirements), selected in consultation with major professor:
- PSY 6217  3 Research Methods and Measurement (Meta-Analysis)
- PSY 6217  3 Research Methods and Measurement (Bayesian Statistics I)
- PSY 6217  3 Research Methods and Measurement (Bayesian Statistics II)
- PSY 6217  3 Research Methods and Measurement (Experimental Design & ANOVA)
- EDF 7437  3 Advanced Educational Measurement I
- EDF 7484  3 Statistical Analysis for Educational Research III
- GEY 6403  3 Multivariate Statistical Analyses for Aging Research

Electives: 3 to 12 hours

Clinical Elective Courses – 12 hours
Choice of at least three other graduate courses, chosen in consultation with major professor

Cognition, Neuroscience, and Social Psychology Research/Elective Courses – 9 hours
A minimum of nine hours from the following, or acceptable alternatives, selected in consultation with major professor:
- PSY 6907  0-9 Independent Study
- PSY 7908  0-9 Directed Readings in Psychology
- PSY 7918  0-9 Directed Research
Industrial-Organizational Psychology – 3 hours
Research/Elective Courses - A minimum of three hours from the following, or acceptable alternatives, selected in consultation with major professor:

- PSY 6907 0-3 Independent Study
- PSY 7908 0-3 Directed Readings in Psychology
- PSY 7918 0-3 Directed Research

Internship and Specialization Requirements:

External Internship
Students in the Clinical Psychology Concentration are required to complete a one-year, full-time, APA-approved (or CPA approved) internship in a training facility approved by the Department.

Specialization - 6 hours
Students in the Cognition, Neuroscience, and Social Psychology Concentration are required to complete a specialization. A minimum of two three-credit graduate courses (often from outside of the concentration or department), selected in consultation with major professor.

Qualifying Examination:
Successful completion of the Ph.D. Comprehensive Qualifying Exam (CL, CNS, IO) or major area paper (CL, CNS) for Admission to Candidacy

Dissertation: – 12 hours minimum
Dissertation (PSY 7980) – 12 hours minimum

Additional information is available in the Graduate Student Handbook: http://psychology.usf.edu/policies/students.aspx

COURSES
See https://www.systemacademics.usf.edu/course-inventory/
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 (GCPM) or a Graduate Certificate in Management of Non-Governmental and Non-Profit Organizations (GCNM). 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 program. The M.P.A. degree program also serves pre-service students who have recently completed a bachelor’s degree and wish to gain entry to a professional career track.

**Accreditation:**
Accredited by the Network of Schools of Public Policy, Affairs, and Administration (NASPAA).

**ADMISSION INFORMATION**

Must meet University Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

Admission decisions to the M.P.A. degree program 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) and performance as an undergraduate. Specific criteria includes:

- 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 M.P.A. Graduate Director’s approval, letters from other sources will be accepted.
• The submission of a 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 60th percentile in verbal, 25th percentile in quantitative, and 4.0 in analytical writing. This provision applies to all applicants, including those who have already completed courses in the M.P.A. curriculum. Regardless of GPA, those who score below the 20th percentile on either the verbal or the quantitative sections of the GRE are required to retake the exam. However, at the discretion of the M.P.A. faculty, it may be waived under certain conditions. Examples where GRE requirements may be waived include:
  o Applicant already possesses a graduate degree from a regionally accredited university;
  o Applicant has a 3.25, or higher, undergraduate GPA;
  o Five years or more of practical, professional experience at a senior level (to be determined upon review of documentation by the admissions committee);
  o Documentation of past experience through letters of recommendation from senior management; or
  o Completion of the Graduate Certificate in Public Management or Graduate Certificate in Nonprofit Management with a grade point average of 3.00/4.00 or better in the certificate and no certificate course grade less than a B-.

CURRICULUM REQUIREMENTS

Total Minimum Hours: 45 credit hours
Core – 27 credit hours
Electives – 15 credit hours
Capstone – 3 credit hours
Internship (if required) – 3 credit hours

Core Requirements – 27 credit hours
PAD 5700  3  Research Methods in Public Administration
PAD 6060  3  Public Administration Theory
PAD 6105  3  Organization Theory and Leadership
PAD 6227  3  Public Budgeting
PAD 6275  3  Political Economy for Public Managers
PAD 6307  3  Policy Design and Implementation
PAD 6417  3  Human Resources Management
PAD 6703  3  Quantitative Analysis in Public Administration
PAD 6710  3  Public Information Management

Performance in core courses: Students will only be allowed to have a maximum of two “C” letter grades in their core courses. Any student who obtains a third “C” letter grade will be required to retake one of the applicable courses.

Elective Requirements – 15 credit hours
Each student must take 15 elective credit hours. Students should refer to the MPA website http://www.spa.usf.edu/graduate/mpa for courses approved by the department. Students wishing to take courses from outside this list must obtain approval from the MPA Director before registering. Students must maintain an overall GPA of 3.0/4.0 or better in all of their coursework during their time in the program.
Internship (if required) – 3 credit hours
PAD 6946 3 Internship in Public Administration

Pre-service students are required to complete a supervised internship in a governmental or nonprofit organization. Internships provide students the opportunity to gain valuable experience in the public sector, thereby enhancing the academic course of study. Credit must be earned while the student is in residence and before the student has completed all coursework requirements. Exceptions to this rule can only be made by the MPA 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 MPA Director may choose to waive the internship requirement.

Comprehensive Exam

Capstone (exit requirement) – 3 credit hours
PAD 6056 3 Practice of Public Management

This is the 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 throughout the M.P.A. program. 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 have already completed all of their core course requirements prior to enrolling in this course. A minimum grade of “B-” must be earned in the Capstone to pass. No other course can substitute this requirement.

COURSES
See https://www.systemacademics.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

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 Admission and English Proficiency requirements 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.

Concurrent Degree Option

Concurrent M.A./M.A.

M.A. Religious Studies – total minimum hours: 30
M.A. in Education – total minimum hours
Currently Closed for admission

COURSES
See https://www.systemacademics.usf.edu/course-inventory/
SOCIOMETRY

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 15

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

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 Admission and English Proficiency requirements 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; 61st percentile), 144Q (500Q; 17th percentile)
• Official Transcripts

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 https://www.systemacademics.usf.edu/course-inventory/
SOCIOMETRY

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

ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements 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; 86th percentile), 144Q (500Q; 17th percentile)

CURRICULUM REQUIREMENTS

Total Minimum Hours: 60 credit hours post-Masters

Pre-Requisites/M.A. Requirement 36 hours

Research Methods
Statistics
Sociological Theory
Elective Courses (21 hours)
Thesis (6 hours)

Interdisciplinary Core 6 hours

Interdisciplinary Professional Seminar (required as a first course for all students)
Capstone Interdisciplinary Seminar (Required as a final course for all students)

Disciplinary Requirements 6 hours*

SYA 7515 Advanced Research Methods and Study Design 3
SYA 7019 Advanced Sociological Theory 3

Specialty Research Methods course 3 hours
A research methods course in any discipline chosen in consultation with advisor
Electives within Sociology  
Sociology graduate courses chosen in consultation with advisor  
9 hours

Interdisciplinary Electives  
Courses in at least two departments outside Sociology chosen in consultation with faculty advisor.  
12 hours

Dissertation Proposal Preparation  
SYA 7988 Dissertation Proposal  
6 hours

Dissertation  
SYA 7980 Dissertation  
18 hours

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 https://www.systemacademics.usf.edu/course-inventory/
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 Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- 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.)
- Approval from the Graduate Director in case of degree from another discipline

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

http://www.cas.usf.edu/languages/
SPW 5387 Spanish American Prose 3
SPW 5405 Medieval Literature 3
SPW 546S 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.

Concurrent Degree Option

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.

COURSES
See [https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.usf.edu/course-inventory/)
STATISTICS

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: February 1
Spring: October 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

The Department of Mathematics and Statistics offers a Ph.D. in Mathematics with concentrations in Pure and Applied mathematics and in Statistics. The major provides the experience and knowledge to understand and appreciate prior accomplishments in the discipline and develops the skills necessary for a meaningful contribution to the intellectual advancement and applications of the discipline. It prepares its graduates to pursue long-term careers in their field by providing solid and cutting-edge knowledge. Graduates receive training that enables them to conduct independent research and write research papers publishable in peer-reviewed journals of their discipline, as well as a technical education enabling them to take on leading positions in a modern economy.

ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements 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 intermediate analysis, advanced calculus, and in statistics is strongly recommended, but not mandatory.
- At least a 55th percentile Quantitative score on the GRE; Verbal and Analytic Writing scores on the GRE are also considered. 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 2016) 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

<table>
<thead>
<tr>
<th>Core – 15 hours</th>
<th>Electives – 15 hours</th>
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<tbody>
<tr>
<td>Core Requirements</td>
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<tr>
<td>Sequences:</td>
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<tr>
<td>STA 5166 – Statistical Methods 3</td>
<td></td>
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<tr>
<td>STA 6167 – Statistical Methods II 3</td>
<td></td>
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<tr>
<td>STA 5326 – Mathematical Statistics I 3</td>
<td></td>
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<tr>
<td>STA 6327 – Mathematical Statistics II (proposed course) 3</td>
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<tr>
<td>STA 6208 – Linear Statistical Models 3</td>
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The student must earn a 3.00 average in Statistics Methods I and II and the student must earn a 3.00 average in Mathematical Statistics I, Mathematical Statistics II, and Linear Statistical Models.

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 – Special Topics (Survival Analysis) 3 |
| STA 6206 – Stochastic Processes 3 |
| STA 6823 – Stochastic Dynamic Modeling (proposed course) 3 |
| MAT 6932 – Special Topics (Time Series Analysis II) 3 |
| MAT 6932 – Special Topics (Nonlinear Time Series Analysis) 3 |
| MAT 6908 – Independent Study (as indicated by professor) 3 |
| MAT 6932 – Special Topics Courses 3 |

Non-thesis/Thesis

Students opt for either a non-thesis research project or thesis.
Non-thesis Research Project – 3 hours minimum
Completing at least 3 hours of Research Project work which is counted towards the 30 credit-hours requirement.

- Taking the course MAT 6908 – Independent Study (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.
- Passing one Qualifying Exam on Statistical Methods or Math Statistics at master’s level.

Thesis Option – 6 hours minimum
MAT 6971 Thesis  6 hours
Students may opt to complete a thesis in lieu of 6 hours of electives.

A 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.

Student’s Graduate Committee
Students working toward a thesis 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 the College. 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.

- Successful Oral Defense of the Thesis
- Final Submission of Approved Thesis.

Other requirements
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. 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. In such instances, students will be required to complete other coursework to meet the minimum hours required for the degree.

Comprehensive Examination
Graduation from the Master’s major also requires the completion of either a thesis or both written and oral examinations.

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.

COURSES
See [https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.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
www.spa.usf.edu

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. We prepare leaders in the field of urban and regional planning to meet community, national and global needs.

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 policy and politics, 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, coastal zone management, housing & community development, environmental and natural resources planning, natural hazards and resilience 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 in 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 Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- 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.
• All Students not meeting one of the above criteria will be considered for conditional admission based on the following criteria:
  o A preferred minimum score of 153 Verbal (61st percentile) and 144 Quantitative (17th percentile) on the GRE.
  o An academic writing sample.
  o 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 – 24 hours
Electives – 15-21 hours
Thesis option – 6 hours
Internship or Additional Elective – 3 hours

Core Requirement – 24 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

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:

- Land Use and Comprehensive Planning
- Community Development and Engagement
- Economic Development
- Environmental and Natural Resources Planning
- Hazard Mitigation and Resiliency 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 24 core credits, 15 elective credits, 3 credits of internship, and a minimum of 6 credit hours of thesis. The thesis must be completed and approved for these credits to be applied.

**Internship or Additional Elective - 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; in lieu of the internship, an additional elective will be completed.

**COURSES**
See [https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.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

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 Admission and English Proficiency requirements 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

Core Requirements - 12 credit hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>WST 6001</td>
<td>Feminist Research and Methodology</td>
<td>3</td>
</tr>
<tr>
<td>WST 6560</td>
<td>Advanced Feminist Theory</td>
<td>3</td>
</tr>
<tr>
<td>WST 6003</td>
<td>Feminist Scholarship and Pedagogy</td>
<td>3</td>
</tr>
<tr>
<td>WST 6936</td>
<td>Selected Topics in Women’s Studies</td>
<td>3</td>
</tr>
</tbody>
</table>
Electives - 18 credit hours
To be selected from
- Graduate courses on issues surrounding the intersection of gender/class/race/sexuality offered by other departments approved by the graduate director or student’s major professor;
- No more than one other graduate-level course approved by the graduate director.

Comprehensive Examinations
In lieu of comprehensive examination, defense of final projects is used as the culminating assessment: defense of thesis for the thesis track, defense of internship narrative for the internship track, and defense of portfolio for the non-thesis electives track.

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 5940 Internship in Women’s Studies
Students must enroll in six credit hours of WST 5940 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 and prepare a portfolio under the guidance of the major professor. The portfolio, approved by the student’s committee, will consist of 1-2 polished academic papers produced for graduate courses, academic conferences, or scholarly publication.

COURSES
See https://www.systemacademics.usf.edu/course-inventory/
Graduate Council approved the changes on the date noted.

### Terminated Majors

<table>
<thead>
<tr>
<th>Major</th>
<th>Degree</th>
<th>Status</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audiology (Post-Bacc)</td>
<td>M.S.</td>
<td>Terminate Major under existing CIP (51.0204)</td>
<td>9/25/17</td>
</tr>
<tr>
<td>Aural (Re) Habilitation</td>
<td>M.S.</td>
<td>Terminate Major under existing CIP (51.0204)</td>
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</table>

### CIP Number Changes

<table>
<thead>
<tr>
<th>Major</th>
<th>Degree</th>
<th>Change</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Behavior Analysis</td>
<td>M.A.</td>
<td>Change from 42.9999 to 42.2814</td>
<td>2/5/18</td>
</tr>
</tbody>
</table>

### Majors

<table>
<thead>
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<th>Major</th>
<th>Degree</th>
<th>Change</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aging Studies</td>
<td>Ph.D.</td>
<td>Change Major: Admissions, Curriculum</td>
<td>2/5/18</td>
</tr>
<tr>
<td>Applied Behavior Analysis</td>
<td>M.A.</td>
<td>Change Major: Admissions deadlines</td>
<td>12/4/17</td>
</tr>
<tr>
<td>Applied Behavior Analysis</td>
<td>M.A.</td>
<td>Change Major: non-sub edits</td>
<td>2/5/18</td>
</tr>
<tr>
<td>Applied Behavior Analysis</td>
<td>M.S.</td>
<td>Change Major: non-sub edits</td>
<td>2/5/18</td>
</tr>
<tr>
<td>Behavioral and Community Sciences</td>
<td>Ph.D.</td>
<td>Change Major: Admissions deadlines</td>
<td>12/4/17</td>
</tr>
<tr>
<td>Child and Adolescent Behavioral Health</td>
<td>M.S.</td>
<td>Change Major: curriculum</td>
<td>2/5/18</td>
</tr>
<tr>
<td>Criminology</td>
<td>M.A.</td>
<td>Change Major: Curriculum</td>
<td>2/5/18</td>
</tr>
<tr>
<td>Criminology</td>
<td>Ph.D.</td>
<td>Change Major: curriculum</td>
<td>12/4/17</td>
</tr>
<tr>
<td>Gerontology</td>
<td>M.A.</td>
<td>Change Major: curriculum</td>
<td>10/2/17</td>
</tr>
<tr>
<td>Social Work</td>
<td>M.S.W.</td>
<td>Change Major: non-sub edits</td>
<td>2/5/18</td>
</tr>
<tr>
<td>Social Work</td>
<td>M.S.W.</td>
<td>Change Major: grade requirement</td>
<td>4/2/18</td>
</tr>
<tr>
<td>Social Work</td>
<td>Ph.D.</td>
<td>Reactivate Program</td>
<td>1/22/18</td>
</tr>
<tr>
<td>Social Work</td>
<td>Ph.D.</td>
<td>Change Major: curriculum, core</td>
<td>4/2/18</td>
</tr>
<tr>
<td>Speech-Language Pathology (Post-Bacc)</td>
<td>M.S.</td>
<td>Change Major: admissions, curriculum</td>
<td>4/2/18</td>
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</tbody>
</table>

### Concurrent Degrees

<table>
<thead>
<tr>
<th>Major</th>
<th>Change</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Work (M.S.W.) and Public Health (M.P.H.)</td>
<td>Change curriculum</td>
<td>3/5/18</td>
</tr>
</tbody>
</table>
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 (ABB)
- 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 (APB)
- 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)

**Concurrent Degree Programs:**

**Master of Social Work - M.S.W.**
- Social Work/Public Health MSW/MPH (Maternal and Child Health; or 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

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). Students are supported with a stipend plus a tuition waiver (if funds are available), which covers tuition but not student fees, and payment of much of the premium for the student health insurance. Students who wish to apply as part-time students must contact Dr. Andel 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. Other faculty from across the university participate in the program.
ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- GPA of 3.25
- a current (within the last 5 years) GRE; scores at or above the 50th percentile on Verbal, 30th percentile on quantitative and 50th percentile on analytical writing are preferred.
- In addition, students must submit
  - their best example of a single authored writing sample
  - a summary of their career goals and past preparation for a research career
  - three letters of recommendation from individuals familiar with the student’s work and/or research

CURRICULUM REQUIREMENTS

Total 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 (recommended)
GEY 7911 1 Directed Research in Aging Studies

It is recommended that 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 should 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 in Aging Studies
GEY 7980 2-12 Dissertation

COURSES

https://www.systemacademics.usf.edu/course-inventory/
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: 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 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 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 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 Admission and English Proficiency requirements 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**

Core – 21 credit hours  
Practicum – 15 credit hours  
Directed Research – 5 credit 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>
<th>Credit Hours</th>
<th>Course Name</th>
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<tbody>
<tr>
<td>MHS 6701</td>
<td>3</td>
<td>ABA Basic Principles</td>
</tr>
<tr>
<td>MHS 6937</td>
<td>3</td>
<td>Behavior Theory</td>
</tr>
<tr>
<td>EDG 6931</td>
<td>3</td>
<td>Observational Methods and Functional Assessment</td>
</tr>
<tr>
<td>MHS 6780</td>
<td>3</td>
<td>Ethics in ABA</td>
</tr>
<tr>
<td>MHS 6201</td>
<td>3</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>
</tr>
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</table>

**Practicum Seminar -15 hours**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>MHS 6940</td>
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<td>Practicum in Behavior Analysis in Community Settings</td>
</tr>
</tbody>
</table>

**Directed Research - 5 hours**

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>MHS 6915</td>
<td>1-3</td>
<td>Directed Research</td>
</tr>
</tbody>
</table>

**Comprehensive Exam**

A comprehensive literature review in a selected area of research will serve as the comprehensive exam.

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**Course Sequence**

Below is the program of study for the Applied Behavior Analysis major.

#### Fall semester—year 1

<table>
<thead>
<tr>
<th>Semester</th>
<th>Week</th>
<th>Course Code</th>
<th>Credit Hours</th>
<th>Course Name</th>
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<tr>
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<td>MHS 6701</td>
<td>3</td>
<td>ABA Basic Principles</td>
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<td></td>
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<td>MHS 6940</td>
<td>3</td>
<td>ABA Practicum</td>
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<tr>
<td>2nd</td>
<td>8</td>
<td>EDG 6931</td>
<td>3</td>
<td>Observational Methods and Functional Assessment</td>
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<tr>
<td></td>
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<td>MHS 6940</td>
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<td>ABA Practicum</td>
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</table>

#### Spring semester—year 1

<table>
<thead>
<tr>
<th>Semester</th>
<th>Week</th>
<th>Course Code</th>
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<th>Course Name</th>
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</thead>
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<tr>
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<td>3</td>
<td>Single-Subject Design</td>
</tr>
<tr>
<td></td>
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<td>MHS 6940</td>
<td>3</td>
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<tr>
<td></td>
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<td>MHS 6915</td>
<td>2</td>
<td>Directed research</td>
</tr>
<tr>
<td>2nd</td>
<td>8</td>
<td>MHS 6780</td>
<td>3</td>
<td>Ethics in ABA</td>
</tr>
<tr>
<td></td>
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<td>MHS 6940</td>
<td>3</td>
<td>ABA Practicum</td>
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</table>

#### Summer—year 1

<table>
<thead>
<tr>
<th>Semester</th>
<th>Week</th>
<th>Course Code</th>
<th>Credit Hours</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>8</td>
<td>MHS 6937</td>
<td>3</td>
<td>Behavior Theory</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MHS 6940</td>
<td>3</td>
<td>ABA Practicum</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MHS 6915</td>
<td>3</td>
<td>Directed research</td>
</tr>
<tr>
<td>2nd</td>
<td>8</td>
<td>MHS 6201</td>
<td>3</td>
<td>ABA in Complex Community Environments</td>
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</table>

#### Fall semester—year 2

<table>
<thead>
<tr>
<th>Semester</th>
<th>Week</th>
<th>Course Code</th>
<th>Credit Hours</th>
<th>Course Name</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>MHS 6900</td>
<td>3</td>
<td>Behavior Anal and Developmental Disabilities</td>
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</tbody>
</table>

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**COURSES**

See [https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.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
Summer: n/a

Minimum Total Hours: 44
Level: Masters
CIP Code: 42.2814 –
Dept Code: CFS
Major/College Codes: APB BC
Approved: 2000

CONTACT INFORMATION

College: Behavioral & Community Sciences
Department: Child and Family Studies (CFS)
Contact Information: www.grad.usf.edu

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 BCBAs. 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 Admission and English Proficiency requirements 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
Core – 24 credit hours
Thesis and Practicum – 20 credit 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
MHS 6701  3  ABA Basic Principles
MHS 6937  3  Behavior Theory
EDG 6931  3  Observational Methods and Functional Assessment
MHS 6780  3  Ethics in ABA
MHS 6201  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
MHS 6701  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
MHS 6937  3  Behavior Theory
MHS 6780  3  Ethics in ABA
MHS 6201  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 https://www.systemacademics.usf.edu/course-inventory/
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 Admission and English Proficiency requirements 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)
- 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**
- MHS 6708 Experimental Analysis of Behavior I 3
- MHS 6709 Experimental Analysis of Behavior II 3
- MHS 6xxx Research Methods II 3
- MHS 7926 College Teaching Seminar 3

**Conceptual Foundations – choose from:**
- MHS 6937 Behavior Theory 3
- MHS 7xxx Verbal Behavior 3
- MHS 7xxx Seminar on Skinner’s Writings 3
- MHS 7xxx Relational Frame Theory 3

**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

  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 [https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.usf.edu/course-inventory/)
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
Debt Code: CSD
Major/College Codes: AYD BC
Approved: 1999

Also offered as Concurrent Degree Option

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 4.00 or better
- 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.

Concurrent Degree Option

Concurrent Au.D./Ph.D.

Doctor of Audiology (Au.D.) in Audiology (AYD)– total minimum hours – 120+ credit hours
Doctor of Philosophy (Ph.D.) in Communication Sciences and Disorders (CSD)- total minimum hours – 152 credit hours

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.

Refer to individual Majors for deadlines and details of degree requirements.

Additional Admission Requirements for the Concurrent degree option:

• Admission to the Au.D. Major
• One (1) letter of recommendation from a member of the USF Audiology research faculty.
• A 1-2 page letter of intent.
• Demonstration of competency in communication skills as determined by the chairperson or delegate.

Shared Courses –9 hours
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.
SPA 7332 Advanced Electrophys.

Degree 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:
     o SPA 7811 (3) Research Foundations in Speech Science
     o SPA 7826 (3) Research Foundations in Neurocommunicative Science
     o SPA 7841 (3) Research Foundations in Language Science

4. 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.

All other requirements of each major must be completed. Refer to the Concurrent Policy for more information.

COURSES
See https://www.systemacademics.usf.edu/course-inventory/
BEHAVIORAL AND COMMUNITY SCIENCES

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:

Domestic:
Fall: December 15
Spring: October 15
Summer: December 15

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

Minimum Total Hours: 90 post-bachelor’s
Level: Doctoral
CIP Code: 51.2212
Dept Code:
Major/College: BVC BC
Approved: Effective 2017

CONTACT INFORMATION

College: Behavioral & Community Sciences
Contact Information: www.grad.usf.edu

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 Admission and English Proficiency requirements 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.

Advanced Statistics
MHS 7748  3 Statistical Applications in Translational Research & Evaluation
GEY 6403  3 Multivariate Statistical Analysis for Aging Research
<table>
<thead>
<tr>
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<th>Credits</th>
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<tr>
<td>PHC 7054</td>
<td>3</td>
<td>Advanced Biostatistical Methods</td>
</tr>
<tr>
<td>PHC 7056</td>
<td>3</td>
<td>Longitudinal Data Analysis</td>
</tr>
<tr>
<td>EDF 7412</td>
<td>3</td>
<td>Application of Structural Equation Modeling in Education</td>
</tr>
<tr>
<td>EDF 7474</td>
<td>3</td>
<td>Applied Multilevel Modeling in Education</td>
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**Research Design**

<table>
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<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>EDF 6481</td>
<td>3</td>
<td>Foundations of Educational Research</td>
</tr>
<tr>
<td>PSY 6217</td>
<td>3</td>
<td>Research Methods &amp; Measurement</td>
</tr>
</tbody>
</table>

**Program Evaluation**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS 7740</td>
<td>3</td>
<td>Survey Course in Planning, Evaluation, and Accountability</td>
</tr>
<tr>
<td>PHC 6708</td>
<td>3</td>
<td>Evaluation Methods in Community Health</td>
</tr>
</tbody>
</table>

**Qualitative Methods**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>PHC 6193</td>
<td>3</td>
<td>Qualitative Methods in Community Health Research</td>
</tr>
<tr>
<td>PHC 6725</td>
<td>3</td>
<td>Focus Group Research Strategies</td>
</tr>
</tbody>
</table>

**Measurement**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS 7747</td>
<td>3</td>
<td>Measurement Issues in Behavioral Health Services Research</td>
</tr>
<tr>
<td>EDF 6432</td>
<td>3</td>
<td>Foundations of Measurement</td>
</tr>
<tr>
<td>EDF 7436</td>
<td>3</td>
<td>Rasch Measurement Models*</td>
</tr>
<tr>
<td>EDF 7439</td>
<td>3</td>
<td>Foundations of Item Response Theory*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Pre requisite course EDF 6432 or equivalent</td>
</tr>
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</table>

**Didactic courses in behavioral & community sciences – 18 credit hours**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MHS 7749</td>
<td>3</td>
<td>Applications in Dissemination and Implementation Science</td>
</tr>
<tr>
<td>MHS 6065</td>
<td>3</td>
<td>Issues and Trends in Developmental Disabilities</td>
</tr>
<tr>
<td>MHS 6066</td>
<td>3</td>
<td>Systems, Services, and Supports for Children and Adolescents in Development Disabilities</td>
</tr>
<tr>
<td>MHS 6067</td>
<td>3</td>
<td>Evidence-Based Practices in Developmental Disabilities</td>
</tr>
<tr>
<td>MHS 6068</td>
<td>3</td>
<td>Community-Based Behavior Health Interventions for Culturally Diverse Youth</td>
</tr>
<tr>
<td>MHS 6069</td>
<td>3</td>
<td>Child &amp; Adolescent Behavioral Health</td>
</tr>
<tr>
<td>MHS 6072</td>
<td>3</td>
<td>Epidemiology and Prevention in Children’s Mental Health</td>
</tr>
<tr>
<td>MHS 6075</td>
<td>3</td>
<td>Cultural Competency in Behavioral Health</td>
</tr>
<tr>
<td>MHS 6095</td>
<td>3</td>
<td>Family-Centered Interdisciplinary Systems of Care</td>
</tr>
<tr>
<td>MHS 6410</td>
<td>3</td>
<td>Intensive Individualized Positive Behavior Support</td>
</tr>
<tr>
<td>MHS 6437</td>
<td>3</td>
<td>Family Perspectives on Behavioral Health Disparities</td>
</tr>
<tr>
<td>MHS 6494</td>
<td>3</td>
<td>Women’s Mental Health</td>
</tr>
<tr>
<td>MHS 6508</td>
<td>3</td>
<td>Wraparound Interventions and the System of Care</td>
</tr>
<tr>
<td>MHS 6605</td>
<td>3</td>
<td>Addressing Behavior Challenges in Young Children</td>
</tr>
<tr>
<td>MHS 6607</td>
<td>3</td>
<td>Behavioral Consultation and Collaborative Systems Change</td>
</tr>
<tr>
<td>MHS 6608</td>
<td>3</td>
<td>School-wide Positive Behavior Support</td>
</tr>
<tr>
<td>MHS 6654</td>
<td>3</td>
<td>Mental Health Informatics</td>
</tr>
<tr>
<td>MHS 6706</td>
<td>3</td>
<td>Child &amp; Adolescent Behavioral Health Policy</td>
</tr>
<tr>
<td>PHC 6542</td>
<td>3</td>
<td>Epidemiology of Mental Disorders</td>
</tr>
<tr>
<td>MHS 6900</td>
<td>3</td>
<td>Selected Topics: Substance Abuse, Crime and the Justice System</td>
</tr>
<tr>
<td>PHC 6035</td>
<td>3</td>
<td>Co-Morbidity and Physical Disorders</td>
</tr>
<tr>
<td>MHS 6938</td>
<td>3</td>
<td>Selected Topics: Grant Writing Seminar</td>
</tr>
<tr>
<td>RCS 5080</td>
<td>3</td>
<td>Medical Aspects of Disability</td>
</tr>
<tr>
<td>RCS 5480</td>
<td>3</td>
<td>Selected Topics: Human Growth &amp; Development</td>
</tr>
<tr>
<td>RCS 5780</td>
<td>3</td>
<td>Legal, Ethical, Professional Standards</td>
</tr>
<tr>
<td>RCS 5450</td>
<td>3</td>
<td>Fundamentals of Substance Abuse</td>
</tr>
<tr>
<td>RCS 6440</td>
<td>3</td>
<td>Social and Cultural Foundations of Counseling</td>
</tr>
<tr>
<td>RCS 6930</td>
<td>3</td>
<td>Obesity and Eating Disorders</td>
</tr>
<tr>
<td>PHC 6401</td>
<td>3</td>
<td>Homelessness: Implications for Behavioral Healthcare</td>
</tr>
<tr>
<td>PHC 6539</td>
<td>3</td>
<td>Foundations in Adolescent Behavioral Health</td>
</tr>
<tr>
<td>PUP 5607</td>
<td>3</td>
<td>Public Policy and Health Care</td>
</tr>
</tbody>
</table>
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 https://www.systemacademics.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

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)

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 Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- GRE required with a preferred Verbal score in 58th percentile and Quantitative score in 18th percentile for applicants interested in the thesis option. GRE not required if non-thesis track is selected.
- 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
- Core – 12 hours
- Concentration – 12 hours
- Electives – 9 hours
- Thesis/non-thesis – 6 hours

Core Requirements
12 credit hours
- MHS 6074- Child & Adolescent Behavioral Health 3 hours
- MHS 6027- Creating Cultural Competence in Behavioral Health Organizations 3 hours
- MHS 6099 -Child and Adolescent Behavioral Health Policy 3 hours
- MHS 6730- Research and Evaluation in Child and Adolescent Behavioral Health 3 hours

Concentrations
12 credit hours
Students select from the following concentration options:

- Developmental Disabilities (ABDD)
  - MHS 6140 -Intensive Individualized Positive Behavior Support 3 hours
  - MHS 6066- Systems, Services and Supports for Children & Adolescents with DD 3 hours
  - MHS 6065 - Issues and Trends in Developmental Disabilities 3 hours
  - MHS 6067- Evidence Based Practices for Children & Adolescents with DD 3 hours

- Leadership in Child and Adolescent Behavioral Health (ABLC)
  - MHS 6100- Applied Leadership in Children’s Behavioral Health 3 hours
  - MHS 6097- Financing in Child and Adolescent Behavioral Health 3 hours
  - MHS 6096- Program Development and Implementation in Children’s Mental Health 3 hours
  - MHS 7740- Survey Course in Planning, Evaluation, and Accountability 3 hours

- Translational Research and Evaluation (ABTR)
  - PHC 6728- Translational Research Methods in Adolescent Behavioral Health 3 hours
  - PHC 6729- Advanced Research Education in Adolescent Behavioral Health 3 hours
  - MHS 7746- Statistical Applications in Adolescent Behavioral Health 3 hours
  - PHC 6539- Foundations in Adolescent Behavioral Health 3 hours

- Youth & Behavioral Health (ABYB)
  - MHS 6095- Family-Centered Interdisciplinary Care 3 hours
  - RCS 5450- Fundamentals of Substance Abuse 3 hours
  - MHS 6532- Epidemiology of Mental Disorders 3 hours
  - MHS 6096- Program Development & Implementation in CABH 3 hours

Electives
9 credit hours
Elective courses vary by concentration

Comprehensive Examination
Students will sit for the comprehensive exam in the semester in which they complete all core courses and required concentration course.

Thesis/Non Thesis
6 credit hours minimum
- MHS 6972  6 Thesis in Child and Adolescent Behavioral Health
- MHS 6941  6 Applied Field Experience Seminar

COURSES
See https://www.systemacademics.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)

Also offered as a concurrent degree

CONTACT INFORMATION

College: Behavioral & Community Sciences
Department: Communication Sciences and Disorders (CSD)
Contact Information: www.grad.usf.edu

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 Admission and English Proficiency requirements 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 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></th>
<th>90 (post-bacc)</th>
<th>53 (post-master’s)</th>
</tr>
</thead>
</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</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDF 6407 Statistical Analysis for Ed. Research I</td>
<td>4</td>
</tr>
<tr>
<td>EDF 7408 Statistical Analysis for Ed. Research II</td>
<td>4</td>
</tr>
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</table>

OR

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEY 6934 Research Methods I</td>
<td>3</td>
</tr>
<tr>
<td>GEY 6934 Research Methods II</td>
<td>3</td>
</tr>
</tbody>
</table>

Research Design

SPA 7806 Advanced Research Design in CSD

3 credit hours minimum

Research rotation

Two research rotations, as described below.

11 credit hours minimum

Core Content

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPA 7811 Research Foundations in Speech Science</td>
<td>3</td>
</tr>
<tr>
<td>SPA 7812 Research Foundations in Hearing Science</td>
<td>3</td>
</tr>
<tr>
<td>SPA 7826 Research Foundations in Neurocommunicative Sciences</td>
<td>3</td>
</tr>
<tr>
<td>SPA 7841 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:

SPA 5403 Language Learning in the School-Age Years 3
SPA 5204 Advanced Clinical Phonology 3
SPA 5552 Diag Prin & Pratice 3
SPA 6401 Pediatric Lang Dis 3
SPA 6404 Language Learning Dis 3
SPA 6473 Multicultural Differences in Lang Use 3
SPA 6413 Augmentative and Alternative Comm 3
SPA 6571 Ethical Practice Issues in Comm. Dis 1-2
SPA 7150 Advanced Speech Science 3
SPA 6211 Adv Vocal Dis 3
SPA 6225 Adv Fluency 3
SPA 6232 Neuromotor 3
SPA 6417 Communication and Cognition in TB 3
SPA 6564 Seminar in Aging, Cognition, and Comm. 3
SPA 6410 Aphasia 3
SPA 6565 Dysphagia 3
SPA 6805 Research Procedures in CSD 3

Audiology Courses

SPA 6571 Profession of Audiology 1-2
SPA 5153 Quant Prov Solving 3
SPA 5120 Psychoacoustics 3
SPA 5132 Audiology Instrumentation 3
SPA 5303 Auditory A&P 3
SPA 5328 Rehabilitative Audiology for Adults 3
SPA 6305 Pediatric Audiology 3
SPA 6307 Speech Perception & Hearing Loss 3
SPA 6311 Medical Audiology 3
SPA 6314 Electrophys 3
SPA 6316 Vestibular Eval & Treatment 3
SPA 6324 Aural Rehab: Children 3
SPA 6340 Principles of Amplification I 3
SPA 6341 Principles of Amplification II 3
SPA 6354 Hearing Conservation 3
SPA 7346 Cochlear Implants 3
SPA 7330 Adv Vestibular Eval & Treatment 3
SPA 7331 Adv Medical Audiology 3
SPA 7332 Adv Electrophysiology 3
SPA 6393 Audiology Practice Management 3
SPA 6805 Research Procedures in CSD 3
Advanced Study 9 credit hours

Advanced topics in Communication Sciences and Disorders 3
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.

Concurrent Degree Option

Doctor of Audiology (Au.D.) in Audiology (AYD) – total minimum hours – 120+ credit hours
Doctor of Philosophy (Ph.D.) in Communication Sciences and Disorders (CSD) – total minimum hours – 152 credit hours

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.

Refer to individual Majors for deadlines and details of degree requirements.

Additional Admission Requirements for the Concurrent degree option:

- Admission to the Au.D. Major
- One (1) letter of recommendation from a member of the USF Audiology research faculty.
• A 1-2 page letter of intent.
• Demonstration of competency in communication skills as determined by the chairperson or delegate.

Shared Courses –9 hours
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.  
SPA 7332 Advanced Electrophys.

Degree 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:
     o SPA 7811 (3) Research Foundations in Speech Science  
     o SPA 7826 (3) Research Foundations in Neurocommunicative Science  
     o SPA 7841 (3) Research Foundations in Language Science

4. 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.

All other requirements of each major must be completed. Refer to the Concurrent Policy for more information.

COURSES
See https://www.systemacademics.usf.edu/course-inventory/
CRIMINAL JUSTICE ADMINISTRATION

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

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 Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- 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)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCJ 6936</td>
<td>Current Issues in Law Enforcement</td>
<td>3</td>
</tr>
<tr>
<td>CCJ 6605</td>
<td>Theoretical Approaches to Criminal Behavior</td>
<td>4</td>
</tr>
<tr>
<td>CCJ 6705</td>
<td>Research Methods in Criminology</td>
<td>4</td>
</tr>
<tr>
<td>CJE 6025</td>
<td>Policy Organization, Behavior, and Administration</td>
<td>3</td>
</tr>
<tr>
<td>CJE 6029</td>
<td>Adv Seminar in Law Enforcement</td>
<td>3</td>
</tr>
<tr>
<td>CJE 6712</td>
<td>Criminal Justice Graduate Capstone Seminar</td>
<td>3</td>
</tr>
<tr>
<td>CCJ 6706</td>
<td>Quantitative Analysis I</td>
<td>4</td>
</tr>
<tr>
<td>CCJ 6406</td>
<td>Theory, Practice, and Research in Law Enforcement</td>
<td>3</td>
</tr>
</tbody>
</table>

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 https://www.systemacademics.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: CIP
Major/College Codes: CCJ BC
Approved: 1974

CONTACT INFORMATION

College: Behavioral & Community Sciences
Department: Criminology (CJP)

Contact Information: www.grad.usf.edu

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 Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

• Preferred minimum scores of 153V (61st percentile), 144Q (17th 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: (a) reasons for seeking a MA degree in criminology, (b) research interests, and (c) future career plans.
• 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
CCJ 6485 (3) Criminal Justice and Public Policy
CCJ 6705 (3) Research Methods in Criminology
CCJ 6706 (4) Quantitative Analysis I
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 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 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.

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
For students pursuing the thesis option, an oral defense of a written thesis is required after the final draft of the thesis has been accepted by the candidate’s supervisory committee.

For students pursuing the non-thesis option students must pass a comprehensive exam or complete a project. The comprehensive exam is designed to test the students’ knowledge of the three core areas of the Master’s program; criminological theory, current issues in criminal justice and research methodology. A project is typically a research proposal, but can be other types of research activities including an internship focused on understanding a criminal justice problem along with a literature review on that problem. Approval for the proposed project must be received from the Major Professor and one other Criminology faculty member.

COURSES
See https://www.systemacademics.usf.edu/course-inventory/
See http://criminology.cbc.usf.edu/masterCriminology/
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 Admission and English Proficiency requirements 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 153 Verbal (61st percentile), 144 Quantitative (17th percentile) or higher on the Graduate Record Exam (GRE). All applicants must submit GRE scores taken within five (5) years of the desired term of entry.
- Three 3 letters of recommendation speaking to the applicant’s academic capabilities
- A statement of purpose detailing reasons for seeking a Ph.D. degree in Criminology, future career plans and research interests.
- A sample of written work providing evidence of the applicant’s academic capabilities. If an applicant has completed a master’s thesis, it should be submitted.
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>Credits</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 7726</td>
<td>3</td>
<td>Research Methods in Criminology II**</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>
</tr>
</tbody>
</table>

Electives – 9 hours
Options include:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</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>
</tr>
</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>Credits</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCJ 7910</td>
<td>6</td>
<td>Advanced Research</td>
</tr>
</tbody>
</table>

*Dissertation - 18 hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</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, (b) research methods and data analysis and the student’s (a) innovative, critical and analytical thinking and (b) writing skills.

COURSES
See [https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.usf.edu/course-inventory/)
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.

ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- 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

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 https://www.systemacademics.usf.edu/course-inventory/
See http://criminology.cbcs.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

Minimum Total Hours: 30
Level: Masters
CIP Code: 30.1101
Dept Code: GEY
Major/College Codes: GEY BC
Approved 1967

CONTACT INFORMATION

College: Behavioral & Community Sciences
Department: School of Aging Studies (GEY)
Contact Information: www.grad.usf.edu

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., please see the separate listing for Aging Studies Ph.D.

The School offers the M.A. in Gerontology. Students are advised to meet with the Graduate Director to select courses 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, students complete a capstone applied research project designed to integrate key knowledge, concepts, and information in the field of gerontology. This course must be taken and passed by all students in the M.A. program. There are no language requirements.

ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- The GRE examination is optional for applicants who either have a 3.25 or higher GPA for all work completed as an undergraduate student, a 3.50 or higher in a completed master’s degree program, or a completed doctoral degree (including professional degrees such as the JD and MD), all from a regionally accredited institution.
- For students submitting a GRE score, a preferred GRE score of at least 149V (41st percentile), 142Q (16th percentile), 3.5 A.W.
- Statement of Purpose in pursuing a MA in Gerontology
- Current Resume
- 2 letters of references
CURRICULUM REQUIREMENTS

Total Minimum Hours – 30

Required courses – 12 credit hours
Electives – 15 credit hours
Capstone – 3 credit hours

Core Courses -12 credit hours
GEY 5476  3  Program Evaluation in Aging Services
GEY 6600  3  Human Development
GEY 6613  3  Physical Change and Aging
GEY 6626  3  Health, Ethnicity, and Aging

Electives - 15 credit hours minimum
The remaining 15 hours of coursework must be selected from other graduate courses in gerontology. Under certain circumstances, students may be able to substitute other graduate classes as part of the elective courses required for the degree with permission from the Graduate Director.

GEY 5503  3  Assisted Living Facility Management
GEY 5630  3  Economics of Aging
GEY 6206  3  Family Caregiving in Aging and Chronic Illness
GEY 6614  3  Aging and Mental Disorders
GEY 6616  3  Mental Health Assessment of Older Adults
GEY 6617  3  Gerontological Counseling Theories and Practice
GEY 6222  3  Elder Abuse Assessment and Intervention
GEY 6901  1-3  Directed Readings in Gerontology

Capstone Requirement – 3 credit hours
GEY 6910  3  Directed Research in Gerontology

Following completion of the necessary coursework, students enroll in GEY 6910 Directed Research in Gerontology, and complete a capstone applied research project designed to integrate key knowledge, concepts, and information in the field of gerontology. This course is pass/fail and must be taken and passed by all students in the M.A. major to meet requirements for the degree.

Comprehensive Exam
Students complete the Capstone requirement in lieu of a comprehensive exam.

Internship
Internships are available for students local to USF who need practical experience in the field of aging.

COURSES
See https://www.systemacademics.usf.edu/course-inventory/
REHABILITATION AND MENTAL HEALTH COUNSELING (POST-BACC)

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: 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 Accelerated (5-year) Major
Rehabilitation and Mental Health Counseling (REF)
Concentrations in:
Addictions and Substance Abuse Counseling (ASA)
Marriage and Family Therapy (MFL)

The Accelerated (5-year) major is currently inactive.

CONTACT INFORMATION

College: Behavioral & Community Sciences
Department: Child and Family Studies (CFS)

Contact Information: www.grad.usf.edu

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 Admission and English Proficiency requirements 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 https://www.systemacademics.usf.edu/course-inventory/
# SOCIAL WORK

## Master of Social Work (M.S.W.) Degree

### DEGREE INFORMATION

<table>
<thead>
<tr>
<th>Priority Admission Application Deadlines:</th>
<th>CONTACT INFORMATION</th>
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</thead>
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<tr>
<td><strong>Full-time two-year program:</strong> February 15</td>
<td><strong>College:</strong> Behavioral &amp; Community Sciences</td>
</tr>
<tr>
<td><strong>Full-time Adv Standing:</strong></td>
<td><strong>Department:</strong> School of Social Work (SOK)</td>
</tr>
<tr>
<td><em>Summer:</em> February 15</td>
<td><strong>Contact Information:</strong> <a href="http://www.grad.usf.edu">www.grad.usf.edu</a></td>
</tr>
<tr>
<td><em>Spring:</em> October 15</td>
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</table>

### Part-time program:
Contact School for further information. Please call 813974-2063 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
- **Approved:** 1981

### Also offered as:
Concurrent Degree – M.S.W./M.P.H.

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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 and online. Students qualify by receiving “B-” or better grades in all the undergraduate social work courses. (Students do not qualify with any grade below “B-” 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 Admission and English Proficiency requirements 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
- Captstone Project - In lieu of the Comprehensive exam, students will complete a Captstone 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 Captstone 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 all the undergraduate social work courses. (Students do not qualify with any grade below “B-” in these courses).

Curriculum Requirements (B.S.W. students) 35 hours minimum

<table>
<thead>
<tr>
<th>Summary</th>
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<tbody>
<tr>
<td>Core requirements</td>
<td>20 hours</td>
</tr>
<tr>
<td>Field Experience</td>
<td>8 hours</td>
</tr>
<tr>
<td>Electives</td>
<td>6 hours</td>
</tr>
<tr>
<td>Capstone Project</td>
<td>1 hour</td>
</tr>
<tr>
<td>Total</td>
<td>35 hours for BSW students</td>
</tr>
</tbody>
</table>

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
Concurrent Degree Option

M.S.W. in Social Work (SOK) – 35 credit hours (for Advanced Standing);
M.P.H. in Public Health (MPH) – 42 credit hours

Total hours after sharing 9 hours of coursework: 68 credit hours

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
Must meet University Admission and English Proficiency requirements as well as requirements for admission to the major. Refer to the individual listings for the MPH and MSW for admission requirements specific to each major.

Shared Courses:
9 credit hours of graduate electives

For all other requirements, including Thesis/non-thesis, Internship, Comprehensive Exam, etc., refer to the Catalog listing for that major.

COURSES
See https://www.systemacademics.usf.edu/course-inventory/
The School of Social Work offers a full-time interdisciplinary program leading to a Ph.D. in Social Work. The Ph.D. degree program 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 practice and to provide leadership in the development of program and services for diverse, vulnerable and underserved populations. Unique to this program is the strategic emphasis on topic areas that align with the strengths of the College, USF, and forecasted direction of the profession. These are: (1) Behavioral Health, (2) Global Issues, (3) Health, (4) Leadership and Business, and (5) Societal Change and Innovation. The degree program leads to the preparation of future scholars and educators to advance social justice and vulnerability issues.

ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

Admission is typically limited to individuals who hold a Master in Social Work from programs accredited by the Council on Social Work Education or international equivalents. However, applicants without a Master’s degree in social work, but with a Master’s degree in a related discipline are welcome to apply and will be considered on a case by case basis. The admissions committee may review the degree and request additional material for consideration to the program.

- A master’s degree GPA of at least 3.50 on a 4.00 scale
- Graduate Record Examination (GRE) with preferred scores of at least 30th percentile in the quantitative section and at least 50th percentile in the verbal section.
- Two letters of recommendation addressing applicant’s academic and professional capabilities.
- Applicant’s statement that describes reasons for seeking admission to the Ph.D. in Social Work program, career goals, and research interests.
- Professional writing sample providing evidence of scholarly abilities, such as journal article, book chapter, technical report, thesis, grant application or other comparable work.
- The admissions committee may request a personal or telephone interview with an applicant to clarify materials submitted.
CURRICULUM REQUIREMENTS

Total Minimum Hours: 42 post master's
The Ph.D. degree program requires a minimum of 42 credit hours post MSW/master’s degree. In accordance with university policy requiring a minimum of 72 hours post baccalaureate for a Ph.D., a minimum of 30 credit hours from the MSW/master’s degree can be applied to this degree’s post-baccalaureate’s 72 hour minimum. No credit hours for field work/internship will be counted towards the required credit hours for the Ph.D.

Core – 15 credit hours
Courses in Area of Strategic Emphasis – 9 credit hours
Graduate Research Methods – 12 credit hours minimum
Dissertation – 2 credit hours minimum
Additional hours in research or area of emphasis/directed studies or dissertation – 4 credit hours minimum

Core Requirements – 15 credit hours
SOW 7491 3 Theoretical Perspectives in Social Work Research
SOW 7981 3 Scientific Communication and Dissemination Practices
SOW 7616 3 Advanced Clinical Practice With Complex Problems
SOW 7775 3 Critical Issues in Social Work
SOW 7776 3 Social Work Educator in the University

Courses in Area of Strategic Emphasis – 9 credit hours minimum
Students will also take a minimum of three (3) (9 credit hours) graduate courses in their area of strategic emphasis offered in the College or University.

Graduate Research Methods – 12 credit hours minimum
Students will complete three (3) credit hours minimum in Directed Studies
SOW 7917 3 Directed Studies in Social Work Research
9 Research Courses*

*Students will also take a minimum of three (3) (9 credit hours) of graduate research methods course offered in the College or the University.

Additional Hours – 4 credit hours minimum
Students should expect to take at least four (4) additional credit hours either in research or area of strategic emphasis, or in directed studies or dissertation hours.

Qualifying Exam
Successful completion of qualifying examinations at the end of coursework prepares the student for Candidacy. Students must successfully pass the School of Social Work qualifying exam in order to be admitted into Doctoral Candidacy.

Dissertation -2 credit hours minimum
Successful defense of a dissertation consisting of original Social Work research. Students will take a minimum of 2 dissertation credits hours at the time of their defense.

SOW 7980 2 Dissertation Hours

COURSES
See https://www.systemacademics.usf.edu/course-inventory/
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 Admission and English Proficiency requirements 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. 148) on the quantitative section, taken within five years preceding application
- three letters of recommendation
- a letter of intent and resume, and
- in accordance with our accreditation board (Council of Academic Programs in CSD) the applicant must possess and demonstrate the following Essential Functions: physical health-motor skills, intellectual skills,
communication, sensory abilities, and behavior-social qualities which are necessary to achieve the knowledge and skills standards required for graduation and certification by the American Speech Language and Hearing Association (ASHA) and also enable the student to meet graduate and professional requirements as required by state and national credentialing agencies. Graduate student clinicians with disabilities are expected to meet the same standards and demonstrate the same essential functions as their non-disabled peers with or without reasonable accommodations. For more information, students with disabilities are encouraged to contact Students with Disabilities Service (SDS) at: http://www.sds.usf.edu/Students.htm

CURRICULUM REQUIREMENTS

Total Minimum hours - 62 hours
Core – 29 credit hours
Practicum – 24 credit hours
Thesis/non-thesis – 9 credit 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>Credits</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>Credits</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>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPA 6232</td>
<td>Neuromotor Disorders of Speech</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, or clinician, 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 or at a local externship site during the second summer, and the third summer is devoted to accruing clinical hours at a local externship site.

COURSES
See https://www.systemacademics.usf.edu/course-inventory/
Section 14

MUMA

COLLEGE OF BUSINESS

http://www.coba.usf.edu
## Changes to Note

The USF Graduate Council approved the following on the date noted.

<table>
<thead>
<tr>
<th>Majors</th>
<th>Degree</th>
<th>Change Details</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accountancy</td>
<td>M.Acc.</td>
<td>Add new Concentration: Corporate; change Name from Audit/Systems to Assurance</td>
<td>4/2/18</td>
</tr>
<tr>
<td>Accountancy</td>
<td>M.Acc.</td>
<td>Updated copy</td>
<td>4/16/18</td>
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<tr>
<td>Business Administration</td>
<td>M.B.A.</td>
<td>Change curriculum</td>
<td>10/2/17</td>
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<tr>
<td>Business Administration</td>
<td>M.B.A.</td>
<td>Additional changes to curriculum</td>
<td>1/8/18</td>
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<td>Business Administration</td>
<td>D.B.A.</td>
<td>Change admissions, core</td>
<td>12/4/17</td>
</tr>
<tr>
<td>Business Administration</td>
<td>Ph.D.</td>
<td>Move major requirements out of concentrations</td>
<td>3/5/18</td>
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<tr>
<td>Business Analytics and Info Systems</td>
<td>M.S.</td>
<td>Change curriculum</td>
<td>2/5/18</td>
</tr>
<tr>
<td>Finance</td>
<td>M.S.</td>
<td>Change admissions, update scores</td>
<td>1/8/18</td>
</tr>
<tr>
<td>Management</td>
<td>M.S.</td>
<td>Admission updates and new concentration in MIS</td>
<td>3/5/18</td>
</tr>
<tr>
<td>Marketing</td>
<td>M.M.</td>
<td>Change curriculum</td>
<td>2/5/18</td>
</tr>
</tbody>
</table>
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)
- Assurance (AUS)
- Corporate (COR)
- 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)
  - Management Information Systems (MST)
  - 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: 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: 52.0301
Dept. Code: ACC
Major/College Codes: MAC BA
Effective: 1970

Concentrations:
Assurance (AUS)
Corporate (COR)
Tax (TAX)

Also offered as:
Concentration under Business Administration (Ph.D.)

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 a regionally-accredited school. The major may also be structured to satisfy the requirements to sit for the CPA Examination in Florida.

Accreditation:
Accredited by The Association to Advance Collegiate Schools of Business (AACSB International).

Major Research Areas: Visit the Faculty Research page under Faculty in the Lynn Pippenger School of Accountancy website.

ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- 3.00 overall upper-level GPA and a 3.00 GPA in all upper-level accounting courses (minimum of 21 hours at a U.S. regionally accredited program generally within the past 5 years; OR completion of the following “foundation” courses with a minimum grade of B in each course:
  a. Intermediate Financial Accounting I (ACG 3103),
  b. Intermediate Financial Accounting II (ACG 3113),
  c. Cost Accounting and Control I (ACG 3341),
  d. Accounting Information Systems (ACG 3401),
  e. Auditing I (ACG 4632), and

http://www.coba.usf.edu
Students with undergraduate degrees with majors other than accounting are encouraged to contact Undergraduate advising at the Muma College of Business.

- Minimum GMAT score of 500 or higher, or equivalent GRE score of 305. Students may apply for a GMAT waiver if the student has obtained an undergraduate degree from USF Tampa and earned a GPA of at least 3.30 in the 6 core accounting major courses.

Admission to the M.Acc. Degree Program is competitive. Meeting minimum requirements does not guarantee admission. 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, business analytics and information systems, management and marketing. 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 two required common core accounting courses. Students may elect a concentration (12 hours) in Assurance, Corporate, or Tax. The sequencing of courses will be determined in consultation with the M.Acc. Advisor.

Total Minimum hours - 30 hours
At least 21 hours must be in 6000-level courses.

Core – 6 hours
Concentration – 12 hours
Electives – 6 hours
Non-Accounting Electives – 6 hours

Core Requirements – 6 hours
ACG 6875  3  Financial Reporting and Professional Issues
ACG 6841C  3  Innovation and Analytics in Accounting

CONCENTRATIONS – 12 hours minimum:
Students select from the following Concentrations:

ASSURANCE – 12 credit hours
ACG 6457  3  Accounting Systems, Audit, Control & Security
Select three (3) course from:
ACG 5675  3  Internal and Operational Audit
ACG 6636  3  Contemporary Issues in Audit
ACG 5675  3  Internal and Operational Audit
ACG 6688  3  Forensic Accounting and Legal Environment
ISM 6328  3  Information Security & Risk Management

CORPORATE – 12 credit hours
ACG 6346  3  Contemporary Issues in Managerial Accounting
ACG 5675  3  Internal and Operational Auditing
TAX 5015  3  Federal Taxation for Business Entities
Select one (1) course from:
FIN 6416  3  Advanced Financial Management
FIN 6465  3  Financial Statement Analysis
TAX – 12 credit hours
TAX 5015  3  Taxation of Business Entities
TAX 6134  3  Advanced Corporate Taxation
TAX 6005  3  Advanced Partnership Taxation
TAX 6065  3  Contemporary Issues in Taxation

Accounting Electives – 6 hours
Students select electives in the area of the Concentration in consultation with the Graduate Advisor.

Non-accounting Electives - 6 hours
Graduate level electives must be approved in advance by M.Acc. Advisor
Note: 5000 level courses may count in the M.Acc. Program only if not counted towards the Bachelor’s Degree.

Comprehensive Exam
Students will prepare an oral presentation on a case that integrates program concepts in their last semester. The presentation will be graded by the Graduate Committee of the Lynn Pippenger School of Accountancy. Students must earn a passing grade to graduate.

COURSES
See https://www.systemacademics.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

Also offered as a Concurrent Degree

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

CONTACT INFORMATION

College: Muma College of Business
Contact Information: www.grad.usf.edu
Other Resources: www.mba.usf.edu
ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements, 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 may request a waiver of GMAT if they meet one of the following requirements:
  - Have a Bachelor’s degree with a cumulative GPA of 3.50 or greater from the University of South Florida-Tampa;
  - Have a Bachelor’s degree with a cumulative GPA of 3.50 or greater from any State of Florida University that is a Preeminent institution (i.e., University of Florida-Gainesville, or Florida State University-Tallahassee)
  - Have a Bachelor’s degree with a cumulative GPA of 3.50 or greater from Association of American Universities (AAU); or
  - Have five (5) or more years of managerial or professional experience
  - For applicants with a 3-year Bachelor’s Degree from a regionally-accredited institution, the following requirements need to be met in addition to those listed above: Minimum GMAT score of 650 or a minimum GRE score of at least 321 (combined verbal and quantitative), and a minimum of 25th percentile in the verbal portion of the test. When the 3-year Bachelor’s Degree is less than 120 hours from Non-Bologna Accord Institutions, a transcript evaluation from NACES member is required to confirm equivalency.
  - A statement of purpose;
  - Optional Interview
  - A resume detailing 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.);

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 semesters and 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

Students entering with a bachelor’s in business from a regionally-accredited institution complete a minimum of 32 hours:
  - Core – 14 hours
  - Concentration or Electives/Individualized Area of Emphasis– 18 hours
  - Total 32 hours minimum
Students entering without a bachelor’s in business from a regionally-accredited institution complete a minimum of 48 hours:
  Business Foundation Courses – 16 hours
  Core – 14 hours
  Concentration or Electives/Individualized Area of Emphasis – 18 hours
  Total 48 hours minimum

BUSINESS FOUNDATION – 16 hours
Students are expected to have a common body of business knowledge as demonstrated with a four-year undergraduate degree in business from a regionally accredited program or completion of business foundation courses, either of them taken within the last 7 years. Students needing to fulfill this requirement may either complete foundation coursework before applying to the MBA degree program or complete them as part of the curriculum requirements. NOTE: Foundation courses may not be counted as electives.

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 either a Concentration or develop an individualized “Area of Emphasis” with Graduate Academic Advisor Approval – 18 credit hours min

Compliance, Risk Management & Anti-Money Laundering Concentration – 18 credit hours
This is an online concentration that prepares graduates for a career in compliance, risk management and anti-money laundering, especially pertinent to the financial services sector.

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

http://www.coba.usf.edu
Cybersecurity Concentration- 18 credit hours

This 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.

ISM 6328  3  Basics of Information Security and Risk Management
ISM 6930  3  Special Topics: Decision Processes for Business Continuity and Disaster Recovery

One of the following two courses
ISM 6225  3  Distributed Information Systems
EEL 6808  3  Data Networks, Systems, and Security

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.

Data Analytics Concentration- 18 credit hours

This 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.

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.

Sport Business Concentration - 19 hours

This concentration 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.

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

This concentration focuses on supply chain management which involves 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.

- SCM 6006 3 Supply Chain Management
- MAR 6216 3 Logistics and Physical Distribution Management
- SCM 6206 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

Electives - 18 credit hours minimum

Students may complete electives in a General Pathway or may develop an individualized areas of emphasis with Graduate Director Approval. Examples of individualized areas of emphasis include, but are not limited to Finance, Creativity & Innovation in Business, Marketing Strategy, among others.

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.

Internship Option –

Internships are available with some of the concentrations and specializations. Check with the Graduate Director for options.

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:

Year 1 - M.D. Courses
  Summer 1 - Business Foundation Courses
Year 2 - M.D. Courses
  Summer 2 - Business Foundation Courses; Earn Business Foundations Certificate
Year 3 - M.D. Courses
Year 4 - M.B.A. Courses
  Summer 4 - M.B.A. Courses; Earn M.B.A. Degree
Year 5 - M.D. Courses; Earn M.D. Degree

Suggested Schedule for Pharm.D. 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:

Year 1  PharmD Courses
  Summer 1  Business Foundation Courses
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

Concurrent Degree Options
Students may apply to pursue one of the Concurrent Degree Options. Applicants must meet University Admission and English Proficiency Requirements, as well as the requirements for each major. Refer to the individual listings for each major for admission and curriculum requirements specific to the major. Admission into one major does not guarantee admission in the other major.

Concurrent Business Administration (M.B.A.) and Sports and Entertainment Management (M.S.)

M.B.A. in Business Administration – total minimum hours – 33
M.S. in Sport and Entertainment Management – total minimum hours - 36

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:

Shared Courses – 9 hours
  SPB 6719  Sport and Entertainment Marketing Strategy  3
  SPB 6406  Sport and Entertainment Law  3
  SPB 6706  Sport Business Analytics  3

Total Combined hours after sharing: 60 hours
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 https://www.systemacademics.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

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 Admission and English Proficiency requirements 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 professional work experience, at least 5 of which must be at a senior managerial, senior technical or executive level
- personal statement
- interview
CURRICULUM REQUIREMENTS

Minimum Hours: 72 hours post-bachelors

Core – 15 credit hours
Other Required Courses – 18 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 – 15 hours
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:

- GEB 7557 Research and Writing Skills for Doctoral Students 3 credits
- QMB 6375 Applied Linear Statistical Models 3 credits
- QMB 7565 Introduction to Research Methods 3 credits
- QMB 7566 Applied Multivariate Statistical Methods 3 credits
- GEB 7911 Qualitative Research Methods in Business 3 credits

Other Required Courses – 18 hours
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:

- ISM 7406 Business Analytics 3 credits
- GEB 7298 Creativity and Innovation 3 credits

The final category is proposed by faculty members based upon their areas of interest and expertise as well as student interests. Four of the following courses would be offered so as to provide exposure to a variety of research-related topics and activities.

- ACG 7936 Seminar on Special Topics in Accounting 3 credits
- FIN 7930 Selected Topics in Finance 3 credits
- GEB 6457 Ethics, Law and Sustainable Business Practices 3 credits
- ISM 7386 Informing Science 3 credits
- ISM 7930 Selected Topics in MIS 3 credits
- MAN 6930 Selected Topics 3 credits
- MAR 7931 Seminar on Selected Marketing Topics 3 credits

Publication Courses
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:

- ACG 6915 Directed Research 3 credits
- GEB 6930 Selected Topics 3 credits
- FIN 7915 Directed Research 3 credits
- ISM 7931 Directed Research 3 credits
- MAN 6911 Directed Research 3 credits
- MAR 6916 Directed Research 3 credits
Issues Courses 10 Credits
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, ISM7931, MAN 7905, MAR 7910) for selected issues courses during their final year of the major.

Dissertation Proposal Course 4 Credits
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 16 Credits
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 https://www.systemacademics.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 (ACC)
Finance (FIN)
Information Systems (IST)
Marketing (MKT)

CONTACT INFORMATION

College: Muma College of Business
Contact Information: www.grad.usf.edu

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 – The Association to Advance Collegiate Schools of Business.

ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements, as well as requirements for admission to the major, listed below.

• Competitive based on GPA, GMAT or GRE
• Personal statement
• Recommendations
• Interview
CURRICULUM REQUIREMENTS

Total Minimum Hours: 90

Foundation- 0-15*
Core – 21 hours
Concentration –minimum 15
Support Field Hours - 9
Dissertation- 21
Additional Hours- 9**

*Students who are eligible to waive foundation courses will need to replace those credit hours either with additional coursework determined in conjunction with the area coordinator or if the student has a completed master’s degree, relevant courses can be considered for transfer.

** These hours will be determined by consultation with the concentration area coordinator. For students who have a completed master’s degree, relevant coursework can be considered for transfer credit.

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 (0-15 hours)
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 (21 hours)
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 7557, 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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECO 6424</td>
<td>Econometrics I</td>
<td>3</td>
</tr>
<tr>
<td>ECO 6425</td>
<td>Econometrics II</td>
<td>3</td>
</tr>
<tr>
<td>ECO 7426</td>
<td>Econometrics III</td>
<td>3</td>
</tr>
<tr>
<td>ECO 7427</td>
<td>Econometrics IV</td>
<td>3</td>
</tr>
<tr>
<td>QMB 6375</td>
<td>Applied Linear Statistical Models</td>
<td>3</td>
</tr>
</tbody>
</table>
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 – (Minimum 15 hours)
Students select from the following concentrations: Accounting, Finance, Information Systems, or Marketing

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, 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.

Accounting Concentration - 15 hours
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

Course requirements – In order to obtain a concentration in Accounting, the student must complete the following coursework:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACG 7156</td>
<td>Seminar in Financial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACG 7646</td>
<td>Seminar in Auditing</td>
<td>3</td>
</tr>
<tr>
<td>ACG 7356</td>
<td>Seminar in Management Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACG 7415</td>
<td>Seminar in Accounting Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>ACG 7936</td>
<td>Seminar on Special Topics in Accounting</td>
<td>3</td>
</tr>
</tbody>
</table>

Finance Concentration – 18 hours

Course requirements –
In addition to the required core and foundation courses, the curriculum will normally include the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</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>
Information Systems Concentration 18 hours

Course requirements –
ISM 6124  3  Advanced Systems Analysis and Design*
ISM 6218  3  Advanced Databases Management*
ISM 6225  3  Distributed Information Systems*
ISM 6930  3  Computational Methods in Business
ISM 7911  3  Seminar in Technical IS Research
ISM 7912  3  Seminar in MIS Organizational Research

Marketing Concentration Requirements 18 hours

Course Requirements –
Students will be required to successfully complete a minimum of 6 doctoral-level Marketing seminars. The six required courses may be selected from the following list:

MAR 7555   3  Consumer Behavior Theory
MAR 7635   3  Advanced Marketing Research: Design and Technique
MAR 7667   3  Marketing Models and Strategy Applications
MAR 7787   3  Marketing Theory and History
MAR 7910   1-12 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

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.

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.

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 (minimum 21 hours)**

- ACG 7980  Dissertation in Accounting
- FIN 7980  Dissertation in Finance
- ISM 7980  Dissertation in Information Systems
- MAR 7980  Dissertation in Marketing

**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 [https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.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: Muma College of 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.)

Also offered as an Accelerated Major

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 – The Association to Advance Collegiate Schools of Business.

CONTACT INFORMATION

College: Muma College of Business
Department: Information Systems/Decision Sciences (QMB)
Contact Information: www.grad.usf.edu
ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements, 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:

- 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.
- letters of recommendations.
- statement of purpose, and
- relevant work experience.
  - For applicants with a 3-year Bachelor’s Degree from a regionally-accredited institution, the following requirements need to be met in addition to those listed above: Minimum GMAT score of 650 or a minimum GRE score of at least 321 (combined verbal and quantitative), and a minimum of 25th percentile in the verbal portion of the test. When the 3-year Bachelor’s Degree is less than 120 hours from Non-Bologna Accord Institutions, a transcript evaluation from ANACES member is required to confirm equivalency.

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) A course in high-level, object oriented programming language (e.g., C#, C++, Java and Python) or substantial programming experience;
2) A course in Information Systems Analysis and Design or equivalent experience;
3) A course in 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
- QMB 6302 3 Analytical Methods for Business

**Capstone Course – 3 credits**
ISM 6155 3 Enterprise Information Systems Management
This course is considered 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 a 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.

**Accelerated Major**

**Accelerated B.S./M.S. - Business Analytics and Information Systems**

*Note – Due to accreditation guidelines, Accelerated Majors must have a total of 150 combined credit hours after sharing credit hours. Contact the department for information.*

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)**
ISM 3232 3
ISM 3113 3
Additional UG Courses 9

ISM 4212 3
ISM 4220 3
Additional UG Courses 9

**Fourth Year (Student accepted in M.S./BAIS Program)**
ISM 6436 3
UG Courses 12

ISM 4300 (B.S. Capstone) 3
ISM 6124 3
UG Courses or Graduate Electives 6 hours

**Fifth Year**
ISM 6225 3
ISM 6218 3
Graduate Electives 6

ISM 6155 (M.S. Capstone) 3
Graduate Electives 12

The following courses are suggested specialization elective courses, cross-listed between the graduate and undergraduate catalog:
ISM 6145/4930 Software Testing
ISM 6156/4153 Enterprise Resource Planning
ISM 6328/4323  Information Security and Risk Management
ISM 6930/4930  Mainframe Technologies

COURSES
See https://www.systemacademics.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

Also offered as a Concurrent Degree

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.

- 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
*Crosslisted course, choose 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</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>
<tr>
<td>EIN 6935</td>
<td>Technology Venture Strategies</td>
<td>3</td>
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<td>EIN 6324</td>
<td>Technical Entrepreneurship</td>
<td>3</td>
</tr>
<tr>
<td>EIN 6936</td>
<td>Strategies in Entrepreneurship Tech</td>
<td>3</td>
</tr>
<tr>
<td>EIN 6935</td>
<td>Strategic Market Assessments</td>
<td>3</td>
</tr>
<tr>
<td>EIN 6934</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>
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<tbody>
<tr>
<td>ENT 6606</td>
<td>Product Development</td>
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<tr>
<td>ENT 6930</td>
<td>Special Topics Entrepreneurship</td>
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<tr>
<td>ENT 6947</td>
<td>Advanced Topics in Entrepreneurship</td>
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<td>MAN 6930</td>
<td>Global Entrepreneurship</td>
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<td>EIN 6934</td>
<td>New Product Development</td>
</tr>
<tr>
<td>EIN 6930</td>
<td>Special Topics in Management</td>
</tr>
<tr>
<td>EIN 6457</td>
<td>Overview of Regulated Industries</td>
</tr>
<tr>
<td>EIN 5201</td>
<td>Creativity in Technology</td>
</tr>
<tr>
<td>GEB 6457</td>
<td>Ethics, Law &amp; Sustainable Business Practices</td>
</tr>
<tr>
<td>GMS 6095</td>
<td>Principles of Intellectual Property</td>
</tr>
<tr>
<td>GMS 6436</td>
<td>Introduction to Biotechnology</td>
</tr>
<tr>
<td>GMS 6873</td>
<td>Biomedical Ethics</td>
</tr>
<tr>
<td>GMS 7930</td>
<td>Principles of Biochemistry and Genetics</td>
</tr>
<tr>
<td>MAN 6456</td>
<td>Improvisation in Organizations</td>
</tr>
<tr>
<td>ENT 6155</td>
<td>Mergers and Acquisitions: An Entrepreneurial Perspective</td>
</tr>
</tbody>
</table>

Or other graduate courses which may be approved by the Graduate Director

Concurrent Degree Options

Students may apply to pursue one of the Concurrent Degree Options. Applicants must meet University Admission and English Proficiency Requirements, as well as the requirements for each major. Refer to the individual listings for each major for admission and curriculum requirements specific to the major. Admission into one major does not guarantee admission in the other major. **Note: Due to accreditation requirements, all Concurrent degrees must total 60 hours after sharing credits.**

Concurrent M.S./M.S.B.E.

M.S. in Entrepreneurship in Applied Technologies – 33 hours
M.S.B.E. in Biomedical Engineering – 30 hours

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.
Shared Courses – 9 hours*
BME 6000  Biomedical Engineering  (3)
GMS 7930  Principles of Intellectual Property  (3)
EIN 6934  New Product Development  (3)

Total Combined hours after sharing: 60 hours*
All 60 hours of coursework in both programs are required to earn both degrees; there are no electives.
*See note regarding the 60 hours minimum after sharing credits.

Concurrent M.S./M.S.B.E.
M.S. in Entrepreneurship in Applied Technologies – 33 hours
M.S.B. in Biotechnology – 30 hours

Shared courses
Up to 3 hours may be shared between the two majors

Concurrent M.S./M.A.
M.S. in Entrepreneurship in Applied Technologies – 33 hours
M.A. in Global Sustainability – 30 hours

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.

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)*
ENT 6016  New Venture Formation  3
ENT 6116  Business Plan Development  3
GMS 6095  Principles of Intellectual Property  3
ENT 6186  Strategic Market Assessment  3
ENT 6947  Applied Topics in Entrepreneurship  3
ENT 6606  Product Development  3
ENT 6415  Venture Capital and Private Equity  3

All Concurrent Degree 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.

Total Combined hours after sharing: 60 hours*
*See note regarding the 60 hours minimum after sharing credits.

COURSES
See http://ugs.usf.edu/course-inventory or http://ce.usf.edu or http://www.entrepreneurship.usf.edu
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: Muma College of 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.)

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 Admission and English Proficiency requirements, 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.

- GMAT (may be waived)
- 5 years of management/professional experience
- Interview
- Statement of corporate approval
CURRICULUM REQUIREMENTS

Total Minimum Hours: 48

Executive MBA Curriculum *

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</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>GEB 6865</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 https://www.systemacademics.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: Muma College of Business
Department: Finance (FIN)
Contact Information: www.grad.usf.edu

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 Admission and English Proficiency requirements, as well as requirements for admission to the major, listed below.

- GMAT score of 550 or higher (or equivalent GRE score)
- 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.
- For applicants with a three-year Bachelor’s Degree from a regionally accredited institution, the following requirements need to be met in addition to those listed above:
  - Minimum GMAT score of 650 with a minimum score of 25 on the verbal portion, or a minimum GRE score of 321 with minimum score of 150 on verbal reasoning.
  - When the three-year Bachelor’s Degree is less than 120 hours from Non-Bologna Accord Institutions, a transcript evaluation from a NACES member is required to confirm equivalency.

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

http://www.coba.usf.edu
FIN 6406 2 Financial Management
QMB 6305 2 Managerial Decision Analysis

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:
Human Resource (HRM)
Project Management (PMT) (201608)
Management Information Systems (MST) (201808)

CONTACT INFORMATION

College: Muma College of Business
Department: Information Systems and Decision Sciences
Contact Information: www.grad.usf.edu

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.

ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements, 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); For applicants with a 3-year Bachelor’s Degree from a regionally accredited institution, the following requirements need to be met:
  o Minimum GMAT score of 600 or a minimum GRE score of at least 321, and a minimum of 25th percentile in the verbal portion of the test.
  o When the 3-year Bachelor’s Degree is less than 120 hours from Non-Bologna Accord Institutions, a transcript evaluation from a NACES member is required to confirm equivalency.

• GMAT, (preferred), GRE, MCAT, LSAT, and PCAT (submitted scores must be within five (5) years of the term of entry);
  o Applicants from Preeminent and Emerging Universities within the State of Florida (University of Florida, Florida State University, and University of South Florida-Tampa) and a cumulative GPA of 3.50 or greater may request waiver of GMAT;
  o 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 program

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 (counts within electives) – 1-3 hours
Optional Research Paper (counts within electives) – 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.
MAN 6055  2  Organizational Behavior
MAN 6289  3  Organizational Change and Development
MAN 6347  3  People Analytics
ISM  6316  3  Project Management

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.
MAN 6950  3  Capstone Experience in Leading Organizations

Concentrations
Students may select from one of the following Concentrations:
Project Management Concentration (12 credit hours)

Select 12 credit hours from the following:
MAN 6448 3 Negotiating Agreement and Resolving Conflict
MAN 6601 3 International Management
MAN 6145 3 Managing Creative Projects
MAN 6165 3 Principles of Collaboration
MAN 6435 3 Contract Management
ACG 6026 3 Accounting Concepts for Managers

Human Resources Concentration (12 credit hours)

MAN 6305 3 Human Resource Management
MAN 6930 3 Employment Law

Choose 6 credits from the following courses:
MAN 6448 3 Negotiating Agreement and Resolving Conflict
MAN 6601 3 International Management
MAN 6204 3 Organization Design and Structure
MAN 6165 3 Principles of Collaboration

Management Information Systems Concentration (12 credit hours)

ISM 6124 3 Advanced Systems Analysis and Design
ISM 6218 3 Advanced Database Management Systems

Choose 6 credits from the following courses:
ISM 6156 3 Enterprise Resource Planning (Pre-req: ISM 6021)
ISM 6436 3 Operations and Supply Chain Processes
ISM 6136 3 Data Mining (Pre Req QMB 6305)
Or any elective pre-approved by the Director of the Muma College of Business Masters in Management.

Electives– 4 credit hours minimum
MAN 6930 3 Management Internship
GEB 6445 2 Social, Ethical, Legal Systems
MAN 6147 2 Leadership/Management Concepts
MAN 6726 2 Strategic Business Analysis
GEB 6457 3 Ethics, Law, and Sustainable Business Practices
ISM 6328 3 Information Security and Risk Management
ISM 6436 3 Operations and Supply Chain Processes
MAN 6256 3 Politics and Control in Organization
MAN 6905 1-3 Independent Study
MAR 6216 3 Logistics and Physical Distribution Management
MAN 6599 3 Logistics Systems & Analytics

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. Any course offered in the concentrations not selected by the student may also be taken as an elective.

Comprehensive Exam

Practicum Option (1 to 3 Credits.)
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.
Research Paper Option (3 Credits.)
MAN 6905 3 Independent Study

The research paper option requires students to work on an scholarly publication related to management. Typically this means that the student picks an academic supervisor, picks a scholarly research topic, conducts literature survey, designs a research method, collects data, analyzes the data, and writes a research paper. The student then presents it to a committee and uses their feedback to revise the paper and submit to one of the peer reviewed conferences in the management or related disciplines. The research paper option (MAN 6905) will count for 3 credit hours of electives.

COURSES
See https://www.systemacademics.usf.edu/course-inventory/
# MARKETING

## Master of Science in Marketing (M.S.M.) Degree

<table>
<thead>
<tr>
<th>DEGREE INFORMATION</th>
<th>CONTACT INFORMATION</th>
</tr>
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<tbody>
<tr>
<td><strong>Priority Admission Application Deadlines:</strong></td>
<td>College: Muma College of Business</td>
</tr>
<tr>
<td>Fall: June 1</td>
<td>Department: Marketing (MKT)</td>
</tr>
<tr>
<td>Spring: October 15</td>
<td>Contact Information: <a href="http://www.grad.usf.edu">www.grad.usf.edu</a></td>
</tr>
</tbody>
</table>

International applicant deadlines: [http://www.grad.usf.edu/majors](http://www.grad.usf.edu/majors)

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.)

## Accreditation
Accredited by AACSB International - The Association to Advance Collegiate Schools of Business.

## ADMISSION INFORMATION

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

The M.S. 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:

- GMAT (preferred), GRE, MCAT, LSAT, and PCAT (submitted scores must be within five (5) years of the term of entry);
- Applicants may request a waiver of GMAT if they meet one of the following requirements:
  - Have a Bachelor’s degree with a cumulative GPA of 3.50 or greater from the University of South Florida-Tampa
  - Have a Bachelor’s degree with a cumulative GPA of 3.50 or greater from any State of Florida University that is a preeminent institution (i.e., University of Florida-Gainesville, Florida State University-Tallahassee)
  - Have a Bachelor’s degree with a cumulative GPA of 3.50 or greater from an AAU school (American Association of Universities).
  - Have three (3) or more years of managerial or professional experience
- A statement of purpose;
- Resume
- Relevant professional work experience;
- Any additional information that helps to ensure the potential success of the applicant in the degree program
  - For applicants with a 3-year Bachelor’s Degree from a regionally-accredited institution, the following requirements need to be met in addition to those listed above: Minimum GMAT score of 650 or a minimum GRE score of at least 321 (combined verbal and quantitative), and a minimum of 25th percentile in the verbal portion of the test. When the 3-year Bachelor’s Degree is less than 120 hours
from Non-Bologna Accord Institutions, a transcript evaluation from a NACES member is required to confirm equivalency.

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
- **SCM 6006**  3  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

http://www.coba.usf.edu
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 https://www.systemacademics.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: Muma College of Business
Department: Finance (FIN)
Contact Information: www.grad.usf.edu

Accreditation
Accredited by AACSB International - The Association to Advance Collegiate Schools of Business.

ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements, 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):

- ACG 6025 Financial Accounting 2
- ACG 6075 Managerial Accounting and Control 2
- ECP 6702 Managerial Economics 2
- ECO 6708 Global Economic Environment of Business 2
- FIN 6406 Financial Management 2
- QMB 6305 Managerial Decision Analysis 2

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.

http://www.coba.usf.edu
Required Core/Courses  
25 hours

FIN 6416 Advanced Financial Management  3  
REE 6045* Real Estate Decisions  2  
REE 6207* Real Estate Finance  2  
REE 6737* Real Estate Development  3  
REE 6305 Real Estate Investment  2  
GIS 5049 GIS for Non-Majors  3  
CGN 6933 Green Infrastructure and Sustainable Community  3  
URP 6232 Research Methods for Urban & Regional Planning  3  
ARC 5931 The City  3

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  
9 hours

Students can select any three (a minimum of nine hours) of the following courses:

FIN 6515 Investments  3
FIN 6246 Advanced Money and Capital Markets  3
FIN 6418 Working Capital Management  3
FIN 6605 International Finance  3
REE 6938 Selected Topics in Real Estate  2-4
ECP 6614 Urban Economics  3
CGN 6933 Global Warming  1-4
TTE 5501 Transportation Planning and Economics  3
PAD 6336 Community Development Programs  3
GEO 6627 Site Feasibility Analysis  3
GEO 6605 Contemporary Urban Issues  3
EVR 6934 Management of Florida Landforms  3
GEO 6116 Perspectives of Environmental Thought  3
GEO 6209C Global Sustainability Development  3
ARC 6397 Introduction to Urban Design Theory, Methods & Processes  3
ARC 5931 Special Studies in Architecture  1-5

Total program  
34 hours

COURSES

See https://www.systemacademics.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: Muma College of Business
Department: Marketing
Contact Information: www.grad.usf.edu

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 Admission and English Proficiency requirements, 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>Credits</th>
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</thead>
<tbody>
<tr>
<td>SPB 6719</td>
<td>Sport and Entertainment Marketing Strategy*</td>
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<tr>
<td>SPB 6406</td>
<td>Sport and Entertainment Law*</td>
<td>3</td>
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<tr>
<td>SPB 6706</td>
<td>Sport Business Analytics*</td>
<td>3</td>
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<tr>
<td>SPB 6605</td>
<td>Sport and Social Issues</td>
<td>3</td>
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<tr>
<td>SPB 6116</td>
<td>Sport and Entertainment Finance</td>
<td>3</td>
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<tr>
<td>SPB 6735</td>
<td>Global Environment of Sport</td>
<td>3</td>
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<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 [https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.usf.edu/course-inventory/)
Changes to Note

The USF Graduate Council approved the following on the date noted.

New Degree Program
Learning Design and Technology M.S.  New Degree Program CIP 13.0501 (LDT)  11/6/17

Majors
All Majors  All  Updated college procedures for Comprehensive Exam  4/16/18
Curriculum and Instruction  Ed.S.  Non-substantive edits  2/5/18
Curriculum and Instruction  Ph.D.  Non-substantive edits  2/5/18
Educational Leadership  Ed.S.  Change to Spring only admission; update curriculum  3/5/18
Educational Leadership  Ph.D.  Change to fall only admission; update curriculum  3/5/18
Mathematics Ed (6-12)  M.A.T.  Change curriculum; add GKT test clarification  3/5/18
Middle Grades Math (5-9)  M.A.T.  Change curriculum; add GKT test clarification  3/5/18
Reading Education  M.A.  Change curriculum  2/5/18

Certificates
Diversity in Education  Change curriculum  4/16/18

*Curriculum And Instruction  M.Ed.  Noted Instructional Technology Concentration (SIT) as discontinued, pending final termination
University of South Florida  
College of Education  
4202 E. Fowler Ave, EDU162  
Tampa, FL  33620  

Web address:  
http://www.usf.edu/education  
Phone:  
813-974-3406  
Fax:  
813-974-3391  

College Dean:  
Robert C. Knoeppel, Ph.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. 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) *with no ESOL Endorsement*
  - 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) — Discontinued refer to MS in Learning Design and Technology
- 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)
- Learning Design and Technology (LDT)
- E-Learning Design and Development (LDTE)
- Cybersecurity Education (LDTC)
- Big Data and Learning Analytics (LDTD)
- Game-Based Learning and Analytics (LDTG)

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 (EEE)
Vocational Education (EVO)

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 the most current list of certificates access http://www.usf.edu/innovative-education/graduate-certificates/programs/index.aspx

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
Unofficial transcripts (either scan or copy) from both the graduate and undergraduate institutions are acceptable at the time of application; however, official transcripts are 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 Education 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:**

<table>
<thead>
<tr>
<th>Program of Study</th>
<th>9 hours minimum</th>
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<tbody>
<tr>
<td>Foundations and Curriculum Core</td>
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<tr>
<td>EDF 6432 Foundations of Measurement</td>
<td>3</td>
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<tr>
<td>or</td>
<td></td>
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<tr>
<td>EDF 6481 Foundations of Educational Research</td>
<td>3</td>
</tr>
<tr>
<td>EDG 6627 Foundations of Curriculum &amp; Instruction</td>
<td>3</td>
</tr>
<tr>
<td>Psychological/Social Foundations (Choice from list below)</td>
<td>3</td>
</tr>
<tr>
<td>EDF 6211 Psychological Foundations of Education</td>
<td>3</td>
</tr>
<tr>
<td>EDF 6215 Learning Principles Applied to Instruction</td>
<td>4</td>
</tr>
<tr>
<td>EDF 6217 Behavior Theory and Classroom Learning</td>
<td>4</td>
</tr>
<tr>
<td>EDF 6354 Human Development and Personality Theories</td>
<td>4</td>
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<tr>
<td>EDF 6165 Group Processes</td>
<td>1-3</td>
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<tr>
<td>(available only to students in the College Student Affairs Concentration)</td>
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<tr>
<td>EDF 6517 Historical Foundations of American Education</td>
<td></td>
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<tr>
<td>EDF 6606 Socio-Economic Foundations of American Education</td>
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</table>

**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.)

http://www.usf.edu/education/
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

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 Admission and English Proficiency requirements 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.

Total Minimum Hours (non-thesis option) 36 hours

Core Requirements 6 hours
EDF6481 Foundations of Educational Research 3
or EDF6432 Foundations of Measurement 3
and one approved Psychological or Social Foundations course 3

General Adult Education Requirements 11 hours
ADE 6080: Foundations of Adult Education 4
ADE 6385: The Adult Learner 3
ADE 6966: Final Master’s Seminar (prior approval needed) 4

Concentration Requirements 18 hours
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:

Remaining hours to be selected from among:
- ADE6160 Program Management in Adult Education 3
- ADE6197 Adult Basic Education 4
- ADE6280 Administration in Local Adult Education Programs 4
- ADE6287 Supervision of Local Adult Education Programs 4
- ADE6370 Human Resource Development 3
- ADE6946 Practicum in Adult Education 2-6
- ADE6161 Curriculum Construction in Adult Education 4
- ADE6360 Methods of Teaching Adult Education 3
- ADE6906 Independent Study 2-19
- ADE6198 Effective Continuing Education for Professional Groups 3

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
# AUTISM SPECTRUM DISORDER AND INTELLECTUAL DISABILITIES

**Master of Arts (M.A.) Degree**

## DEGREE INFORMATION

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- **Minimum Total Hours:** 33
- **Level:** Masters
- **CIP Code:** 13.1013
- **Dept. Code:** EDS
- **Major/College Codes:** ASD/ED
- **Approved:** 2011

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 Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- A 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,
  - 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
A preferred GRE Verbal score of 154 (65th percentile) or higher and Quantitative score of 143 (14th percentile) 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 Pleuralistic 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

ADMISSION INFORMATION

Must meet University Admission and English Proficiency 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:

- 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;
- 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
ECT 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

This is a limited access major with internal deadlines. Please check with the 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 Admission and English Proficiency requirements 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 3.20 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
- Process Core – 7 hours
  - EDF6354 Human Development and Personality Theories
  - EDF6481 Foundations of Educational Research

  7 hours minimum
Other Core Courses:

- MHS6006 Trends and Principles of the Counseling Profession 4
- MHS6420 Multicultural Counseling with Diverse Populations 3
- MHS6200 Assessment and Appraisal Procedures 4
- MHS6340 Career Development 4
- MHS6400 Counseling Theories and Practices 4
- MHS6311 Online Services in Counseling and Helping Professions 3
- MHS6509 Group Counseling Theories and Practices 4
- MHS6700 Legal and Ethical Issues in the Counseling Profession 3

CONCENTRATION REQUIREMENTS

CAREER COUNSELING CONCENTRATION

- MHS6800 Practicum in Counseling Adolescents and Adults 4
- MHS6601 Consultation for the Counseling Profession 3
- MHS6341 Career Program Design and Evaluation 3
- MHS6887 Internship in Career and College Counseling 6

Comprehensive Examination
Students must successfully pass a comprehensive examination prior to graduation.

SCHOOL COUNSELING CONCENTRATION (PLAN II)

- EDF6217 Behavior Theory and Classroom Learning 4
- MHS6450 Counseling Substance Abuse in School and Community 4
- MHC6470 Human Sexuality Issues for Counselors 4
- MHS6800 Practicum in Counseling Adolescents and Adults 4
  OR
- SDS6801 Practicum in Counseling Children 4
- MHS6413 School Counseling Accountability 3
- MHS6601 Consultation for the Counseling Profession 3
- MHS6417 Human Sexuality Issues 4
- EDG6931 Reading and Research Methods 3
- EDF6217 Behavior Theory and Classroom Learning 3
- SDS6820 Internship in School Counseling 6
- RED6786 Research & Methods in Reading 3
- TSL6700 ESOL for School Counselors and Psychologists 3

Comprehensive Examination
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

- MHS6800 Practicum in Counseling Adolescents and Adults 4
- MHS6620 Counseling in Community Setting 3
- MHS6070 Study of Mental Disorders for Counselors 3
- MHS6450 Counseling Substance Abuse in School and Community 3
- MHS6470 Human Sexuality Issues for Counselors 3
- MHS6885 Internship in Community Agency Counseling 9

Comprehensive Examination
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 (SIT) – Discontinued refer to MS in Learning Design and Technology
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

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 Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

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 Education
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  3  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  1-6  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.
INSTRUCTIONAL TECHNOLOGY (SIT) - Discontinued
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:
- EME 6055 Current Trends in Instructional Technology 3
- EME 6208 Interactive Media 3
- EDF 6284 Problems in Instructional Design for Computers 3
- EME 6930 Programming languages for Education 3
OR
- EME 6207 Web Design 3
- EME 6458 Distance Learning 3
- EME 6631 Development of Technology-Based Instruction 3

Electives - 6 hours minimum
Selected with advisor from the following list or other graduate course approved by the Graduate Director:
- EME 5403 Computers in Education 3
- EME 6053 Internet in Education 3
- EME 6207 Web Design 3
- EME 6215 Instructional Graphics 3
- EME 6209 Digital Video 3
- EME 6235 Technology Project Management 3
- EME 6480 Digital Citizenship and Internet Safety 3
- EME 6680 Game Design and Developmtn for Learning 3
- EME 6681 Game Analytics for Learning 3
- EME 6271 Technology Leadership in Education 3
- EME 6936 Internship in E-Learning Development 3
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 9 hours minimum
Students are required to take both EDF 6481 and EDF 6432 from the Major Core

Concentration Requirements 22 hours minimum
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

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**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.

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 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 Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

CURRICULUM REQUIREMENTS

Total Minimum hours 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 18 hours minimum

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 4
(If not used for the Curriculum Course Requirement)
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 Teaching & Learning

ELEMENTARY EDUCATION (SEE) – 36 HOURS
Offered from the Department of Teaching & Learning
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.

http://www.usf.edu/education/
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 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 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 & Learning
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 bachelors 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

http://www.usf.edu/education/
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/
CURRICULUM AND INSTRUCTION

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines

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<td>Spring</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.

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.

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 Research Area
Information available by accessing the concentration areas, listed alphabetically in the catalog.

ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements 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
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
Dissertation Requirement:  
ADE 7980 Dissertation  
18 hours minimum  
2-18

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 bachelors 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 a 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

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<td>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.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measurement/Statistics/Research Design:      11 hours minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDF 6407  Statistical Analysis I</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>EDF 7408  Statistical Analysis II</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>Plus (select one from the listing below)</td>
</tr>
<tr>
<td>EDF 7484  Statistical Analysis III</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>EDF 7437  Advanced Educ. Measurement</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>EDG 7931  Qualitative Res., Des., &amp; Data Coll.</td>
</tr>
<tr>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Foundations: 7 hours minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philosophical/Social Foundations (select one)</td>
</tr>
<tr>
<td>EDF 6705  Gender and the Ed. Process</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>ESF 7586  Classics in Ed. Research</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>ESF 7682  Ed. In Metropolitan. Areas</td>
</tr>
<tr>
<td>4</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Psychological Foundations (select one)</th>
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</thead>
<tbody>
<tr>
<td>EDF 7145  Cognitive Issues in Instruction OR</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>EDG 7931  (Seminar of choice)</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>Requires the approval of the major professor and the college.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Concentration Requirements: 38 hours minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDF 7946  Supervised Exp. In College Teaching</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>MHS 6311  On-line Services in Counseling</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>MHS 7740  Planning, Eval., &amp; Accountability OR</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>EDF 7493  Sys. Approaches for Program Plan &amp; Eval.</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>MHS 7401  Adv. Counseling Theories</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>MHS 7610  Consultation and Supervision Theory</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>MHS 7930  Advanced Seminar in Counseling</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>EDG 7931  Adv. Practicum in Counseling</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>SDS 7830  Adv. Internship in Counseling</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>EDG 7931  Cognitive Behavioral Research. Seminar</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>EDG 7931  Practicum in Supervision of Counseling</td>
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<tr>
<td>3</td>
</tr>
<tr>
<td>EDG 7931  Proposal Preparation</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>EDG 7910  Directed Research</td>
</tr>
<tr>
<td>3</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Dissertation:</th>
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</thead>
<tbody>
<tr>
<td>MHS 7980  Dissertation</td>
</tr>
<tr>
<td>24</td>
</tr>
</tbody>
</table>
**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:**
- 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
- EDF 7478  Qualitative Research in Education II or equivalent qualitative course selected in conjunction with major committee 3-4
- Specialized Research Methods Course determined in conjunction with major committee based on the student’s research agenda 3-4

**Concentration Requirements** 39 hours minimum

**Required Concentration Courses (18 hours minimum)**
- EEC 7056  Leadership and Advocacy Concerning Issues Affecting Young Children 3
- EEC 7057  Critical Perspectives in Early Childhood Education 3
- EEC 7306  Teaching and Learning in Early Childhood 3
- EEC 7416  Sociocultural Approaches to Working with Children and Families 3
- EEC 7317  ICT in the Early Years 3
- EEC 7627  Arts & Aesthetics in Early Childhood Ed: Curriculum in Context 3

**CELS Professional Development Courses (12 hours minimum)**
- EDG 7938  Adv Grad Seminar; Intro to Research in Childhood Ed & Lit Studies 3
- EDG 7939  Advanced 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 developed in support of the student’s research objectives.

**Qualifying Examination**


**Dissertation:** 4 hours minimum
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

- Preferred GRE scores: verbal minimum of 400 (prior scale)/146 (new scale) (31st percentile), quantitative minimum of 400 (Prior scale)/140 (New scale) (8th percentile)
- 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
- 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 30 hours minimum

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
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 &
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 3-4
   presentation

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**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDG 7938 Adv Grad Seminar; Intro to Research in Childhood Ed &amp; Lit Studies</td>
<td>3</td>
</tr>
<tr>
<td>EDG 7939 Adv Grad Seminar: Research in Progress</td>
<td>3</td>
</tr>
<tr>
<td>EDH 7325 Supervised Teaching in Childhood Ed &amp; Lit Studies I</td>
<td>3</td>
</tr>
<tr>
<td>EDH 7326 Supervised Teaching in Childhood Ed &amp; Lit Studies II</td>
<td>3</td>
</tr>
</tbody>
</table>

**Cognate**

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**

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDG 7067</td>
<td>Philosophies of Inquiry</td>
<td>3</td>
</tr>
</tbody>
</table>

### Secondary Education Core

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESE 7343</td>
<td>Teaching and Learning in the Content Areas</td>
<td>3</td>
</tr>
<tr>
<td>ESE 7944</td>
<td>Collegiate Teaching in Secondary Education</td>
<td>3</td>
</tr>
<tr>
<td>ESE 7937</td>
<td>Advanced Seminar in Secondary Education</td>
<td>3-6</td>
</tr>
<tr>
<td>LAE 6906</td>
<td>Independent Study (optional and may be substituted for one of above with approval of Doctoral Committee)</td>
<td>3</td>
</tr>
</tbody>
</table>

### Statistics/Measurement/Research Design

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDF 7408</td>
<td>Statistical Analysis II</td>
<td>4</td>
</tr>
<tr>
<td>Note: EDF 6407 pre-req for this course</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDF 7410</td>
<td>Design of Systematic Studies in Education</td>
<td>4</td>
</tr>
<tr>
<td>EDF 7477</td>
<td>Qualitative Research in Education I</td>
<td>4</td>
</tr>
<tr>
<td>EDF 7478</td>
<td>Qualitative Research in Education II</td>
<td>4</td>
</tr>
</tbody>
</table>

Additional courses to be determined by the graduate faculty based on the orientation of the student’s research agenda and prior preparation.

### Cognate

<table>
<thead>
<tr>
<th>Hours</th>
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<tbody>
<tr>
<td>3-9</td>
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</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAE 7735</td>
<td>Advanced Seminar in English Education: Language and Literacy</td>
<td>3</td>
</tr>
<tr>
<td>LAE 7735</td>
<td>Advanced Seminar in English Education: Teacher Education</td>
<td>3</td>
</tr>
<tr>
<td>LAE 7735</td>
<td>Advanced Seminar in English Education: Writing</td>
<td>3</td>
</tr>
<tr>
<td>LAE 7735</td>
<td>Advanced Seminar in English Education: Research</td>
<td>3</td>
</tr>
<tr>
<td>LAE 7910</td>
<td>Directed Research in LAE</td>
<td>12*</td>
</tr>
</tbody>
</table>

*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

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
The Doctor of Philosophy degree (Ph.D.) in Curriculum and Instruction with a concentration in Instructional Technology program is designed to prepare students to become skilled researchers who can design and conduct original research in the field of instructional technology. Our graduates assume academic and leadership positions in higher education, corporations, the military, and other venues, where research and best practices are integrated to advance new knowledge and to improve learning and performance.

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 3 hours minimum
EDG 7067 Philosophies of Inquiry 3

Interdisciplinary Professional Core 7 hours minimum
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 7586 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
- **EDF 6407** Statistical Analysis I  
  4 hours minimum
- **EDF 7408** Statistical Analysis II  
  4 hours minimum
- **EDF 7410** Design of Systematic Studies in Education  
  4 hours minimum
- **EDF 7477** Qualitative Res in Education I  
  4 hours minimum
- OR **EDF 7478** Qualitative Research in Ed. II (Required)  
  4 hours minimum

### Major Specialization
- **EME 6613** Development of Technology-Based Instruction  
  3 hours minimum
- **EME 7938** Computer-Augmented Instructional Paradigms in Education  
  3 hours minimum
- **EME 7939** Research in Technology-Based Education  
  3 hours minimum

### Electives
- Choice of FOUR electives from among appropriate IT course offerings below (Required):
  - **EME 7910** Directed Research  
    3 hours minimum
  - **EME 7458** Research in Distance Learning  
    3 hours minimum
  - **EME 7631** Research in Technology Project Management  
    3 hours minimum
  - **EME 7615** Game Design for Ebooks EME 6209 Digital Video  
    3 hours minimum
  - **EME 6930** Web programming  
    3 hours minimum
  - **EME 6930** Flash  
    3 hours minimum
  - **EME 6215** Instructional Graphics  
    3 hours minimum
  - **EME 6207** Web Design  
    3 hours minimum
  - 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

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### 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 hours minimum
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
Courses must be distributed across two/three disciplines, with the approval of the doctoral committee.

Doctoral Dissertation
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:

- 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 (148 new scale; 30th percentile) on the quantitative portion and at least 475 (151 new scale; 52nd percentile) 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 9 hours minimum
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 16 hours minimum
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 24 hours minimum
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 9 hours minimum
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
EDF7940  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., LCACHE, EPS, or T&L).

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
- Submit official GRE scores. Scores of 600 (148 new scale; 30th percentile) on the quantitative portion and 475 (151 new scale; 52nd percentile) 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  14 hours minimum
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  24 hours minimum
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.
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 from a foreign institution
- 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:**
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:**
SSE 7980 Dissertation Research 4 hours minimum

**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.

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**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:
1) A social security number in degree programs requiring practica or internships;
2) 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 - 12 hours
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 4
  - Two qualitative research methods courses (6 hrs. minimum)
  - EDF 7477 Qualitative Research in Education Part I I 4
  - EDF 7478 Qualitative Research in Education Part II 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
• 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

http://www.usf.edu/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/
EDUCATIONAL LEADERSHIP PROGRAM

Master of Education (M.Ed.) Degree

DEGREE INFORMATION

<table>
<thead>
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<th>Priority Admission Application Deadlines</th>
<th>CONTACT INFORMATION</th>
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<tr>
<td>Fall: June 1</td>
<td>College: Education</td>
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<tr>
<td>Spring: October 15</td>
<td>Department: Leadership, Counseling, Adult,</td>
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<td></td>
<td>Career, and Higher Education (L-CACHE)</td>
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<td></td>
<td>Contact Information: <a href="http://www.grad.usf.edu">www.grad.usf.edu</a></td>
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</tbody>
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Minimum Total Hours: 30
Level: Masters
CIP Code: 13.0401
Dept. Code: LEA
Major/College Codes: CAS ED
Approved: 1974

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 Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- 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
department 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>
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<tr>
<td>Educational Leadership Core Knowledge Requirements</td>
<td>15 hours</td>
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<tr>
<td>EDA 6192 Educational Leadership</td>
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<td>EDA 6061 Principles of Educational Administration</td>
<td>3</td>
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<tr>
<td>EDA 6213 Culturally Relevant Leadership</td>
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<td>EDG 6627 Foundations of Curriculum and Instruction</td>
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<td>EDA 6232 School Law</td>
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<tr>
<td>Educational Leadership Praxis and Field Experience Requirements</td>
<td>15 hours</td>
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<tr>
<td>EDA 6106 Administrative Analysis and Change</td>
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<td>EDA 6945 Administration Practicum I</td>
<td>3</td>
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<td>EDA 6285 School Curriculum Improvement</td>
<td>3</td>
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<tr>
<td>EDA 6945 Administration Practicum II</td>
<td>3</td>
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<tr>
<td>EDA 6194 Educational Leadership II: Building Capacity</td>
<td>3</td>
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</tbody>
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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/](http://www.ugs.usf.edu/course-inventory/)
The Education Specialist (Ed.S.) in Educational Leadership degree program is designed for experienced administrators seeking to develop their capacity to lead "turnaround" or lower performing schools. Coursework in this program is specifically designed in consultation with leadership development personnel and District-level Administrators in partnering school districts.

Students in this degree program develop their ability to make student-centered decisions through integration of rigorous analysis of theory, research, and exemplary practices. An appreciative inquiry orientation and applied capstone project enables candidates to work in teams. These teams develop an improvement report and intervention plan based on analysis of literature related to: school improvement and turnaround strategies: informed and responsible use of school data, including climate and culture inventories; ethical, political, cultural and critical perspectives on school sustainable school leadership; asset-based approaches to school improvement; and knowledge of effective program models or cases.

For individuals interested in the Florida Educational Leadership Certification, please see the M.Ed. degree program. For those interested in a research-focused degree, please see the Ph.D. degree program. Courses taken in the Ed.S. degree program may be able to be transferred into the Ed.D. in Educational Program Development - Educational Innovation if students apply for and are accepted before ending their Ed.S. program of study. Please consult the program coordinator for further information.

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 Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

Admission to the Education Specialist program occurs one time per year for the spring semester. Admission is based on a comprehensive evaluation of each applicant’s demonstrated academic potential to successfully complete all of the degree requirements. The process for admission to the degree program is often coordinated with partnering school districts. Interested applicants should contact the Program Coordinator for further information.

Preferred applicants should have:

- An earned master’s degree from an accredited institution of higher education.
- An earned grade point average of 3.50 in the master’s degree and an earned undergraduate grade point average of 3.00 in the last half of the undergraduate degree program.
Applicants will also submit:

- A statement of purpose for pursuing the Ed.S. degree program.
- Three letters of recommendation from people knowledgeable about the applicant's academic and professional competence.
- Current vita/resume.
- As applicable to a particular cohort, other relevant information may be required as developed in coordination with partnering school districts. Contact the Program Coordinator for further information.

### 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 7197 3 Current Readings and Discourse in Educational Leadership

**Area B: Required 6000 Level Courses (9 hours)**
- EDA 6106 3 Administrative Analysis and Change
- EDA 6213 3 Culturally Relevant Leadership

Select one of the following:
- EDA 6931 3 Case Studies in School Administration
- EDA 6271 3 Data-based Decision Making Strategies for Educational Leaders

**Area C: Capstone Project (6 hours)**
- EDG 6975 3 Project: Master/Specialist
- EDG 6975 3 Project: Master/Specialist

**Comprehensive Exam**

Students will be required to develop and defend a capstone research project proposal.

**Capstone Project**

Students will complete a capstone project, in which they 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 [https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.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: 57 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

The Ph.D. in Educational Leadership degree program is designed for those individuals who intend to build an academic career focused on conducting research and analysis in the multidisciplinary field of educational leadership and policy studies, or who wish to build an administrative career focused on innovative and inquiry-based leadership. Accordingly, this program will prepare individuals for careers in K-12 education systems, research universities and teaching colleges, as well as private, non-profit, state, federal, or international educational agencies.

Individual students will work alongside distinguished faculty with expertise in multiple fields including: ethical leadership, curriculum and pedagogy, politics of education, education law, organizational theory, equitable education reform, school accountability and choice policies, and anti-oppressive education. The program is designed to provide students exposure to research and academic discourses in organizational leadership, curriculum leadership, and policy leadership in education. In addition, students will gain knowledge around research methodologies and a specialized cognate area of study.

Students in this degree program will design an individualized program of study that reflects their specific research interests. This will prepare students to conduct and apply high quality research to practice, write and present scholarly papers at professional conferences, and submit research articles for publication in education journals.

Initial advising, from inquiry about the program through the first year of coursework, is provided by the Doctoral Program Coordinator. By the completion of the second year of study, students will select a major professor who will assist them with planning their remaining course of study. By the end of the third year, students will assemble an advisory committee consisting of the major professor and at least three other members. This committee guides the student through the dissertation process, including the qualifying examination, dissertation proposal, and dissertation defense.

NOTE: The Ph.D. degree program is not an initial certification or licensure program. Students seeking Florida Level 1 Educational Leadership Certification need to refer to the M.Ed. degree program or consult with the Ph.D. Program Coordinator to complete a modified program with additional coursework from the Education Leadership Praxis and Field Experiences Requirements (15 credits) in the M.Ed. Program in Educational Leadership, in addition to the Ph.D. requirements.

For further information, please see http://www.usf.edu/education/areas-of-study/educational-leadership-policy/

Accreditation:
Accredited by the National Council for the Accreditation of Teacher Education (NCATE).

http://www.usf.edu/education/
ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

Admission to the Doctor of Philosophy (Ph.D.) program in Educational Leadership occurs one time each year in the fall semester. Admission is based on a comprehensive evaluation of each applicant’s demonstrated academic potential to successfully complete all of the degree requirements. Success in the Ph.D. degree program requires students to deeply engage in an area of inquiry, apply excellence in research methods, and develop exceptional writing skills. The program faculty will consider each applicant entirely within the context defined by her or his personal and professional qualifications. Applicants meeting the set of initial criteria will be asked to participate in an interview conducted by faculty and complete a timed writing sample that will be scheduled to occur before or after the interview.

Applicants should have:

- An earned master’s from an accredited institution of higher education
- An earned grade point average of 3.50 in the master’s degree and an earned undergraduate grade point average of 3.00 in the last half of the bachelor’s degree
- An official Graduate Record Exam (GRE) received within the last five years. A combined score greater than 300 with no Quantitative or Verbal sub-test score below 150 is preferred (48th percentile Verbal; 38th percentile Quantitative).

Applicants should submit:

- A letter of intent outlining experiences and goals (3 page maximum);
- A current resume;
- 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 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).

CURRICULUM REQUIREMENTS

Total Minimum Hours: 57 hours

Core Knowledge – 12 hours
Major Knowledge – 15 hours
Minor Knowledge – 9 hours
Research Methods – 15 hours
Dissertation - 6 hours minimum

Core Knowledge Requirements

- EDG 7067 Philosophies of Inquiry 3
- EDA 7191 Leadership in Education: Theory & Inquiry 3
- EDA 7280 Curriculum Theory 3
- EDA 7287 Educational Politics and Policy: Theory & Issues 3

http://www.usf.edu/education/
Major Knowledge Requirements 15 hours

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDA 6195</td>
<td>Policy Development</td>
<td>3</td>
</tr>
<tr>
<td>EDA 7215</td>
<td>Educational Politics &amp; Engagement of Communities</td>
<td>3</td>
</tr>
<tr>
<td>EDA 7281</td>
<td>Policy Analysis and Implementation Strategies for Education Leaders</td>
<td>3</td>
</tr>
<tr>
<td>EDG 7931</td>
<td>Special Topics in Policy Leadership</td>
<td>3</td>
</tr>
<tr>
<td>EDA 7207</td>
<td>Transforming the Curriculum</td>
<td>3</td>
</tr>
<tr>
<td>EDG 7667</td>
<td>Analysis of Curriculum and Instruction</td>
<td>3</td>
</tr>
<tr>
<td>EDA 7692</td>
<td>Issues in Curriculum and Instruction</td>
<td>3</td>
</tr>
<tr>
<td>EDG 7931</td>
<td>Special Topics Seminar in Curriculum Leadership</td>
<td>3</td>
</tr>
<tr>
<td>EDA 7069</td>
<td>Ethics and Educational Leadership</td>
<td>3</td>
</tr>
<tr>
<td>EDA 7193</td>
<td>Organizational Leadership &amp; Systems Theory</td>
<td>3</td>
</tr>
<tr>
<td>EDA 7206</td>
<td>Appreciative Inquiry and Organizing in Public Education</td>
<td>3</td>
</tr>
<tr>
<td>EDA 7233</td>
<td>Legal Dimensions of School Administration</td>
<td>3</td>
</tr>
<tr>
<td>EDG 7931</td>
<td>Special Topics Seminar in Educational Leadership</td>
<td>3</td>
</tr>
<tr>
<td>EDG 7936</td>
<td>Graduate Seminar: Leader-Scholar Community</td>
<td>3</td>
</tr>
</tbody>
</table>

Note: Students cannot use more than 2 Special Topics Seminars to fulfill Major Knowledge Requirements.

Minor Knowledge Requirements 9 hours

| Elective 1  | 3 |
| Elective 2  | 3 |
| Elective 3  | 3 |

Note: In consultation with the program coordinator or major professor, students will select a minimum of three (3) 7000-level or 6000-level courses to be taken outside of the Educational Leadership Program area. Students are expected to support the development of their research interest through the courses taken to fulfill the Minor Knowledge Requirements.

Research Methods Requirements 15 hours

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>EDF 6407</td>
<td>Statistical Analysis Education I (or equivalent)</td>
<td>3-4</td>
</tr>
<tr>
<td>EDF 7477</td>
<td>Qualitative Research in Education I (or equivalent)</td>
<td>3-4</td>
</tr>
<tr>
<td>Elective 1</td>
<td></td>
<td>3-4</td>
</tr>
<tr>
<td>Elective 2</td>
<td></td>
<td>3-4</td>
</tr>
<tr>
<td>Elective 3</td>
<td></td>
<td>3-4</td>
</tr>
</tbody>
</table>

Dissertation 6 hours

EDG 7980 Dissertation: Doctoral

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 [https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.usf.edu/course-inventory/)
EDUCATIONAL PROGRAM DEVELOPMENT

Doctor of Education (Ed.D.) Degree

### DEGREE INFORMATION

<table>
<thead>
<tr>
<th>Priority Admission Application Deadlines</th>
<th></th>
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</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](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.

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 Admission and English Proficiency requirements 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.

### CONTACT INFORMATION

College: Education
Departments:
- Leadership, Counseling, Adult, Career, and Higher Education (L-CACHE)
- Teaching and Learning

Contact Information: [www.grad.usf.edu](http://www.grad.usf.edu)
Refer to individual concentrations for Contact Information.
• 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.

CURRICULUM REQUIREMENTS

Total Minimum Hours: 54 credit hours post-master’s

Core – 3 hours
Statistics/Measurement/Research Design/Applied Research – 9 hours minimum
Psychological and Social Foundations – 3 hours minimum
Concentration – 15 hours minimum
Electives – 15 hours minimum
Dissertation – 9 hours minimum

Core Requirement – 3 hours
EDG 7069 3 Sustainable Innovation in Education

Statistics/Measurement/Research Design/Applied Research – 9 hours minimum
Selection of three quantitative, qualitative, applied, or action research courses chosen in consultation with advisor.
EDF7408 4 Statistical Analysis for Educational Research II
EDF7410 4 Design of Systematic Studies in Education
EDF7438 4 Advanced Educational Measurement I
EDF7484 4 Statistical Analysis for Educational Research III
EDF7493 4 Systems Approaches for Program Planning, Evaluation and Development
EDF7477 4 Qualitative Research in Education Part I
EDF7478 4 Qualitative Research in Education Part II

Psychological and Social Foundations Requirement – 3 hours
Course focused on equity, diversity and social justice chosen in consultation with advisor.
EDF7145 4 Cognitive Issues in Instruction
EDF7655 4 Organization Development in Educational Institutions
EDF6883 4 Issues in Multicultural Education
EDF7934 4 Seminar in Social Foundations of Education
EDF6938 3 History of Higher Education in the United States

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-CACHE)
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

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

http://www.coedu.usf.edu/
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.ups.usf.edu/course-inventory/
# ELEMENTARY EDUCATION

## 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><strong>Fall:</strong> February 15</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>

International applicant deadlines: [http://www.grad.usf.edu/majors](http://www.grad.usf.edu/majors)

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<thead>
<tr>
<th>Minimum Total Hours:</th>
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<tbody>
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<td>Level:</td>
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<td>CIP Code:</td>
<td>13.1202</td>
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<tr>
<td>Dept. Code:</td>
<td>EDR</td>
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<td>Major/College Codes:</td>
<td>AEE ED</td>
</tr>
<tr>
<td>Approved</td>
<td>1964</td>
</tr>
</tbody>
</table>

### 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.

### ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements 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.

• 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

Core Requirements

<table>
<thead>
<tr>
<th>Process Core:</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<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>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/](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>
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<td>Fall: June 1</td>
<td>College: Education</td>
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<tr>
<td>Spring: October 15</td>
<td>Department: Teaching and Learning</td>
</tr>
<tr>
<td>Summer: 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

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 Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- 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

* 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:
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.

Program of Study: 53 hours

Core Requirements: 9 hours
- LAE 6427 Children’s Literature: Teaching Literature Appreciation 3
- RED 6315 Emergent Literacy: Skills, Strategies, and Assessment 3
- EDE 6326 Instructional Planning for Diverse Learners 3

Process Core: 6 hours
- EDF 6211 Psychological Foundations or EDF 6938 Child Development 3
- EDF 6432 Measurement for Teachers 3

Concentration Requirements: 11 hours
- EDE 6946 Practicum Field Experience 3
- EDG 6947 MAT Final Internship 1-9
- EDE 6458 I and EDE 6458 II Selected Topics: Reflect. on Inst. Decision Making (I and II) 1-3

Content Specialization: 27 hours
- TSL 5085 ESOL I: Theory and Practice for Teaching English Language Learners 3
- TSL 5086 ESOL II: Second Language and Literacy Acquisition in Children and Adolescents 3
- TSL 5242 ESOL III: Language Principles, Acquisition, and Assessment for Teaching English Language Learners 3
- MAE 6117 Teaching Elementary Math 3
- SCE 6135 Teaching Elementary (K-5) School Science 3
- SSE 6617 Trends in K-6 Social Science Education 3
- RED 6317 Intermediate Literacy: Assessment Skills & Strategies Using Transdisciplinary Text 3
- LAE 6314 Teaching Composition in the Elementary Classroom: Research into Practice 3
- EDE 6506 Managing and Differentiating the Instructional Environment in Elementary Schools 3

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/
ENGLISH 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: 41
Level: Masters
CIP Code: 13.1305
Dept. Code: EDI
Major/College Codes: TEN ED
Approved: 2002

CONTACT INFORMATION

College: Education
Department: Teaching and Learning
Contact Information: www.grad.usf.edu

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 planed 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 Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- 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)
* 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 (27th percentile) acceptable for GK Mathematics GRE Verbal Reasoning scaled score of 151 (52nd percentile) 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 18 hours minimum
- EDF 6432 Measurement for Teachers 3
- ESE 5342 Teaching the Adolescent Learner 3
- 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 3
- TSL 5086 ESOL II Secondary Language and Literacy Acquisition 3
- TSL 5241 ESOL III Language Principles, Acquisition & Assessment for English Language Learners 3

Current Trends in Teaching Concentration 3 hours
- LAE 6637 Current Trends in English Education 3

Concentration Requirements 14 hours minimum
- LAE 6738 Teaching Reading in English Curriculum 3
- LAE 5862 Classroom Communication 3
- LAE 6325 Methods of Teaching Middle School Language Arts 4
- LAE 6339 Methods of Teaching Secondary Language Arts 4

Practicum, Internship, Field Work, etc. 6 hours
- 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
EXCEPTIONAL STUDENT EDUCATION (ESE)

Master of Arts (M.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines

<table>
<thead>
<tr>
<th>Term</th>
<th>Deadline</th>
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</thead>
<tbody>
<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: 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

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 Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- 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 3.00 on a 4.00 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.
- 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.
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.

Program of Study 36 hours minimum

Core Requirements 24 hours
EDF 6481  Foundations of Educational Research 3
EEX 6025*Trends and Issues in Special Education 3
EEX 6612  Management and Motivation of Exceptional and At-Risk Students 3
EEX 6222 Advanced Psychoeducational Assessment of Exceptional Students 3
EEX 6245 Transitional Programming for the Adolescent and Young Adult Exceptional Student 3
EEX 6732 Consultation and Collaboration in Special Education 3
EEX 5752 Working with Families: A Pluralistic Perspective 3
EEX 6248 Instructional Approaches for Exceptional Populations 3
EEX 6939 Advanced Seminar: paradigms, Practices, and Policies in Special Education 3

Specialization Requirements 9 hours
Varying Exceptionalities courses (Choose one)
EBD 6215 Adv Theories and Practices in Behavior Disorders 3
ELD 6015 Adv Theories and Practices in Specific Learning Disabilities 3
EMR 6052 Advanced Theories and Practices in Intellectual Disabilities 3
Elective 3
Elective 3

Comprehensive Examination 3 hours
A project is required to fulfill the comprehensive examination requirement.
EEX 6943

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/
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

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 Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- 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.
- 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.

**CURRICULUM REQUIREMENTS**

**Program of Study**

50 hours*

(Students entering with an ESOL endorsement and certification in Elementary Education have a minimum of 36 hours required to complete the program)

**College Requirements**

**Core Requirements:** 6 hours minimum

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>EDF 6211</td>
<td>Psychological Foundations of Education</td>
<td>3</td>
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<tr>
<td>EDF 6481</td>
<td>Foundations of Educational Research</td>
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**Concentration Requirements** 29 hours minimum

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tr>
<td>EEX 6051</td>
<td>Creating Positive Learning Environments for Students with Disabilities</td>
<td>6</td>
</tr>
<tr>
<td>EEX 6224</td>
<td>Developing Individualized Educational Programs for Students with Disabilities</td>
<td>6</td>
</tr>
<tr>
<td>EEX 6247</td>
<td>Implementing and Evaluating Individualized Programs for Students with Disabilities</td>
<td>6</td>
</tr>
<tr>
<td>EEX 6943</td>
<td>Practicum in Exceptional Student Education</td>
<td>2</td>
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<tr>
<td>RED 6514</td>
<td>The Reading Process in the Elementary School</td>
<td>3</td>
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<tr>
<td>RED 6544</td>
<td>Remediation of Comprehension Problems</td>
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<tr>
<td>MAE 6117</td>
<td>Math Methods</td>
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</table>

**ESOL Requirements** 9 hours

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>TSL 5085</td>
<td>Theory and Practice of Teaching English Language Learners</td>
<td>3</td>
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<tr>
<td>TSL 5086</td>
<td>Second Language Acquisition and Literacy in Children and Adolescents</td>
<td>3</td>
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<tr>
<td>TSL 5240</td>
<td>Language Principles, Acquisition, and Assessment for Teaching English Language Learners</td>
<td>3</td>
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</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**

6 hours

EDG 6947  Internship and Classroom Research

**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/
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

The M.S. in Exercise Science provides an 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 Admission and English Proficiency requirements 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
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*

<table>
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<th>Minimum Total Hours:</th>
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<td>Level:</td>
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<td>CIP Code:</td>
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<td>EDI</td>
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<td>Major/College Codes:</td>
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</table>

**Concentrations**

- Foreign Language Ed., French (AFF)
- Foreign Language Ed., German (AFG)
- Foreign Language Ed., Spanish (AFS)

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 Admission and English Proficiency requirements 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:

- 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.
- 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.).

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/
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 (GNE) – Fast-Track Concentration (with no ESOL Endorsement) Not Available
Chinese (CHN)
French (AFF)
German (AFG)
Italian (ITA)
Japanese (JPN)
Latin (LAT)
Russian (BFR)
Spanish (AFS)

Also offered as an Accelerated Major Option

CONTACT INFORMATION

College: Education
Department: Teaching and Learning
Contact Information: www.grad.usf.edu

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 Admission and English Proficiency requirements 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 bachelors 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.
• 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></th>
<th>33 (without ESOL)</th>
<th>42 (with ESOL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Requirements</td>
<td>9 hours minimum</td>
<td></td>
</tr>
<tr>
<td>EDF 6432 Foundations of Measurement OR TSL 5440, Language Testing</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ESE 5342 Teaching the Adolescent Learner</td>
<td>3</td>
<td></td>
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<tr>
<td>ESE 5344 Classroom Management for a Diverse School &amp; Society</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Current Trends in Teaching Specialization</td>
<td>3 hours</td>
<td></td>
</tr>
<tr>
<td>FLE 6665 Current Trends in Foreign Language Education</td>
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<tr>
<td>ESOL Endorsement Track</td>
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<tr>
<td>TSL 5085 ESOL I</td>
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<td>TSL 5086 ESOL II</td>
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<td>TSL 5242 ESOL III</td>
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<td>FLE 5291 Applications of Technology to FLE</td>
<td>3</td>
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<tr>
<td>FLE 5313 Methods of Teaching FL &amp; ESOL in the Elementary School</td>
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<tr>
<td>FLE 5331 Methods of Teaching FL &amp; ESOL in the Secondary School</td>
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<td></td>
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<tr>
<td>FLE 5895 Dual Language Education</td>
<td>3</td>
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</tr>
<tr>
<td>FLE 5946 Practicum in FL Teaching in the Secondary School</td>
<td>3</td>
<td></td>
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</tbody>
</table>

http://www.usf.edu/education/
CONCENTRATION REQUIREMENTS

Students select one of the following Concentrations:

**GENERAL EDUCATION (GNE)-- 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)     6

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.

Accelerated BA/BS to MAT in Foreign Language Education – Currently not available.

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.

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 bachelor's 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.

Requirements

Minimum program hours - 42

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

Minimum program hours - 18

EDF 6432 Foundations of Measurement **or**
TSL 5440 Language Testing
ESE 5344 Classroom Management for a Diverse School & Society
ESE 5342 Teaching the Adolescent Learner

Including ESOL Endorsement
TSL 5085 ESOL I
TSL 5086 ESOL II
TSL 5242 ESOL III

Current Trends in Teaching Specialization

FLE 6665 Current Trends in FLE

Course Requirements

Minimum program hours - 15

FLE 5313 Methods of Teaching FL & ESOL in the Elementary School
FLE 5331 Methods of Teaching FL & ESOL in the Secondary School
FLE 5895 Dual Language Education
FLE 5946 Practicum in FL Teaching in the Secondary School
FLE 5291 Applications of Technology to FLE

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.

Minimum program hours - 6

FLE 6947 Internship (PR: CI and passing scores of FTCE)

(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 for specific internship entrance and State of Florida testing requirements.

COURSES

See http://www.ugs.usf.edu/course-inventory/
LEARNING DESIGN AND TECHNOLOGY

Master of Science (M.S.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines
Fall: February 1
Spring: October 15
Summer: None

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

Minimum Total Hours: 33
Level: Masters
CIP Code: 13.0501
Dept. Code: EAP
Major/College Codes: LDT/ED
Effective: 201808

Concentrations
E-learning Design and Development (LDTE)
Cybersecurity Education (LDTC)
Big Data and Learning Analytics (LDTD)
Game-Based Learning and Analytics (LDTG)

CONTACT INFORMATION

College: Education
Department: Educational and Psychological Studies
Contact Information: www.grad.usf.edu

The field of learning technology is growing rapidly in higher education, industry, and K-12 settings. Nearly all major companies, government agencies, school districts, and universities and colleges, are actively recruiting their own learning technology experts. The M.S. in Learning Design and Technology has a foundation in E-learning with focus opportunities. The major is designed to provide a comprehensive curriculum and intensive training to prepare students for the job market of today and emerging fields of tomorrow in K-12 schools, higher education, industry, and military or other governmental agencies where the design, development, implementation, and evaluation of online learning, game-based learning, cybersecurity education, and learning analytics take place.

Major Research Areas
E-learning design and development; Cybersecurity education; Big data and learning analytics; and Game-based learning and analytics.

ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements, as well as requirements for admission to the major, listed below.

- Two Letters of Recommendation
- Resume or vita documenting their work and educational experiences to date
- A one-page Goals Statement describing the applicant’s motivation for entering the M.Ed. program, what s/he hopes to achieve upon completion of the program, and the number of courses s/he plans to take each semester while in the program.

The College of Education and the University Graduate Admissions office may impose additional requirements. Please be sure to review the admission information and requirements for BOTH the College of Education and the Graduate Admissions office.

http://www.usf.edu/education/
CURRICULUM REQUIREMENTS

Total Minimum Credit Hours - 33 hours

Core – 21 hours
Concentration or Electives – 9 hours
Capstone – 3 hours

Core (21 hours)
- EDF 6481 3 Foundations of Educational Research
- EME 6055 3 Current Trends in Instructional Technology
- EDF 6284 3 Problems in Instructional Design for Computers
- EME 6457 3 Online Teaching and Learning
- EME 6347 3 Digital Media and Learning
- EME 6207 3 Web Programming and Design
- EME 6356 3 Introduction to Big Data and Learning Analytics

Students either choose one of the concentrations below or complete 9 hours of electives chosen in consultation with the Graduate Director.

Concentrations (9 hours)

**E-learning Design and Development (LDTE)**
- EME 6419 3 Motivational design for Learning Technology
- EME 6235 3 Technology Project Management
Choose one:
- EME 6208 3 Interactive Media
- EME 6215 3 Instructional Graphics
- EME 6209 3 Digital Video

**Cybersecurity Education (LDTC)**
- EME 6016 3 Digital Citizenship and Online safety
- EDG 6436 3 Cybersecurity in the Schools
Choose one:
- RED 6449 3 Technology and Literacy
- EME 6053 3 Internet in Education
- EME 5317 3 Technology Leadership in Education

**Big Data and Learning Analytics (LDTD)**
- EME 6348 3 Predictive Learning Analytics (Using big data for understanding student success)
- EME 6346 3 Data visualization (Using data in reporting)
Choose one:
- EME 6817 3 Data in Assessment and Accreditation
- EME 6614 3 Game Analytics for Learning

**Game-Based Learning and Analytics (LDTG)**
- EME 6157 3 Game Design for Learning
- EME 6614 3 Game Analytics for Learning
Choose one:
- EME 6215 3 Instructional Graphics
- EME 6209 3 Digital Video
- EME 6930 3 Web Programming

**Electives 9 hours**
Students who choose electives in lieu of a concentration select 9 hours of graduate coursework in consultation with the Graduate Director.
Capstone – (3 hours, choose one)
EME 6613  3  Development of Technology-based Instruction
EME 6936  3  Internship

Comprehensive Exam
The portfolio that is part of the Capstone is used in lieu of a comprehensive exam.

During the final semester of the program, each Master’s candidate is required to submit an electronic portfolio (E-Portfolio) that highlights his/her Instructional Design/Technology (IDT) abilities, skills, and performance they acquired from the program course work. Through the collection of digital projects/products (aka. course artifacts), Masters’ candidates present not only a record of their studies but also their competencies in IDT to potential employers or institutions for doctoral studies. The E-Portfolio may be developed with any Website development services (USF Webspace or other free hosting services such as google site, Weebly, Wix etc.) where reviewers can access without login credentials. The E-Portfolio takes the place of a comprehensive exam and must address five areas of national standards developed by the Association for Educational Communications & Technology (AECT) in 2012.

Thesis/Non-Thesis
This is a non-thesis program.

COURSES
See  https://www.systemacademics.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

www.grad.usf.edu

This degree is designed primarily for secondary school teachers desiring to improve their skills in the teaching of mathematics to secondary students.

ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements 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.

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

<table>
<thead>
<tr>
<th>Course Requirement</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDF 6432 Foundation of Measurement</td>
<td>3</td>
</tr>
<tr>
<td>EDF 6481 Foundation of Ed Research</td>
<td>3</td>
</tr>
</tbody>
</table>

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 INFORMATION

<table>
<thead>
<tr>
<th>Priority Admission Application Deadlines</th>
<th>CONTACT INFORMATION</th>
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</thead>
<tbody>
<tr>
<td>Fall: June 1</td>
<td>College: Education</td>
</tr>
<tr>
<td>Spring: October 15</td>
<td>Department: Teaching and Learning</td>
</tr>
<tr>
<td>Summer: February 15</td>
<td>Contact Information: <a href="http://www.grad.usf.edu">www.grad.usf.edu</a></td>
</tr>
</tbody>
</table>

Minimum Total Hours: 40
Level: Masters
CIP Code: 13.1311
Dept. Code: EDI
Major/College Codes: TSM ED
Approved: 2005

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 Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- Meet one of the following criteria:
  - Have completed 21 credit hours in mathematics at or above the level of college algebra and a passing score on the Florida Subject Area Exam in Mathematics 6-12 (FTCE)
  - have completed at least 30 credit hours in mathematics at or above the level of College Algebra
  - Passed the Florida General Knowledge Test (GKT). For the graduate level teacher preparation programs, GRE scores of 150 (48th percentile) verbal and 156 (60th percentile) quantitative or higher, taken within the last five years may be accepted in place of GKT, for admission to the program.

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**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Pre-requisites</td>
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<tr>
<td>Core Requirements</td>
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<tr>
<td>Required Courses</td>
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<tr>
<td>EDF 6432  Foundations of Measurement</td>
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<td>ESE 5344  Classroom Management for a Diverse School and Society</td>
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<td>ESE 5342  Teaching the Adolescent Learner</td>
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<tr>
<td>TSL 5325  ESOL Strategies for Content for Content Area Teachers</td>
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<tr>
<td>Current Trends in Teaching Concentration</td>
<td>3</td>
</tr>
<tr>
<td>MAE 6136  Current Trends Secondary Math Education</td>
<td>3</td>
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<tr>
<td>Concentration</td>
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<tr>
<td>Students may waive up to 6 hours of course credit based upon approval of their academic advisor and the department.</td>
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<tr>
<td>MAE 6643  Communication Skills in Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>MAE 6337  Topics in Teaching Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MAE 6338  Topics in Teaching Geometry</td>
<td>3</td>
</tr>
<tr>
<td>MAE 6317  Topics in Teaching Probability and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>MAE 6336  Topics in Teaching Calculus</td>
<td>3</td>
</tr>
<tr>
<td>MAE 6370  Mathematics for High School Teachers</td>
<td>3</td>
</tr>
</tbody>
</table>
MAE 6362  Senior High Mathematics Methods  3

**Practicum, Internship, Field Work, etc.**  10 hours
MAE 6945  Practicum in Mathematics Education  3
MAE 6947  Internship in Secondary Education for Mathematics  6
MAE 6899  Internship Seminar in Mathematics Education  1

**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/)
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 Council for the Accreditation of Educator Preparation (CAEP)

ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

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
- Passed the Florida General Knowledge Test (GKT). For the graduate level teacher preparation programs, preferred GRE scores of 150 verbal and 156 quantitative or higher, taken within the last five years may be accepted in place of GKT, for admission to the program.

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)
* 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

<table>
<thead>
<tr>
<th>Total Minimum Hours</th>
<th>39 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-Requisites</strong></td>
<td>6 hours</td>
</tr>
<tr>
<td>EDF 6432 Foundations of Measurement (Or Equivalent)</td>
<td>3</td>
</tr>
<tr>
<td>FLE 5366 ESOL Competencies in Content Area</td>
<td>3</td>
</tr>
<tr>
<td><strong>Core Requirements</strong></td>
<td></td>
</tr>
<tr>
<td>Required Courses</td>
<td>6 hours</td>
</tr>
<tr>
<td>ESE 5344 Classroom Management</td>
<td>3</td>
</tr>
<tr>
<td>ESE 5342 Teaching the Adolescent Learner</td>
<td>3</td>
</tr>
<tr>
<td><strong>Concentration Requirements</strong></td>
<td>9 hours</td>
</tr>
<tr>
<td>MAE 6328 Algebra for Middle Grade Teachers</td>
<td>3</td>
</tr>
<tr>
<td>MAE 6329 Geometry for Middle Grade Teachers</td>
<td>3</td>
</tr>
<tr>
<td>MAE 6127 Probability &amp; Statistics for Middle Grade Teachers</td>
<td>3</td>
</tr>
<tr>
<td><strong>Math Education</strong></td>
<td>18 hours</td>
</tr>
<tr>
<td>MAE 6356 Teaching Pre-secondary Math</td>
<td>3</td>
</tr>
<tr>
<td>MAE 6126 Current Trends Middle Grade Math</td>
<td>3</td>
</tr>
<tr>
<td>MAE 6643 Comm. Skills in Math</td>
<td>3</td>
</tr>
<tr>
<td>MAE 6945 Practicum in Math Education</td>
<td>3</td>
</tr>
<tr>
<td>MAE 6947 Graduate Internship in Math Education</td>
<td>6</td>
</tr>
</tbody>
</table>

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/](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

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

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 Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

Requirements:

- A bachelor’s degree from a regionally accredited institution OR the equivalent bachelors 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
- Proof of initial certification (Plan I)

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

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 3
EDF 6481 Foundations of Educational Research 3

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 3
EDF 6481 Foundations of Educational Research 3

Other Requirements
PET 6419 Clinical Supervision in Physical Education 3
PET 6443 Instructional Design and Content: Games 3
PET 6444 Instructional Design and Content: Dance and Gymnastics 3
PET 6516 Learner Assessment in School Based Physical Education 3
PET 6706 Analysis of Research in Physical Education 3
PET 6716 Analysis of Teaching in Physical Education 3

Electives 6 hours
PET 6419 Sport Psychology 3
PET 6447 Grant Writing in PE 3
PET 6447 Adapted PE 3

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

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. The MA in Reading Education includes spiraled competencies in Digital/Media Literacies as well Disciplinary Literacies and Global Literacies in its coursework.

Accreditation: Accredited by the National Council for the Accreditation of Teacher Education, and the Department of Education.

ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

In order to be considered for admission, first-time or transferring graduate applicants must:

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 focuses on non-school literacies and does not grant Reading Certification

Exceptions to minimum requirements will be considered for National Board Certification and an outstanding professional record.

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 for purposes of State testing, internship and practica.
CURRICULUM REQUIREMENTS

Program of Study

Two options are available:
Option 1: Reading Education Plan I leading to State of Florida K-12 add-on Certification
Option 2: Reading Education Plan II

Core – 30
Additional courses – 3
Practicum – 3

Core Requirements – 30 hours
EDF 6481 3 Foundations of Educational Research
RED 6656 3 Trends in Literature in a Diverse Society
RED 6247 3 District and School Level Supervision and Coaching in Reading
RED 6449 3 Literacy and Technology
RED 6540 3 Assessment in Literacy
RED 6544 3 Cognition, Comprehension, and Content Area Reading: Remediation of Reading Problems
RED 6545 3 Learning Disciplinary Texts through Vocabulary and Word Study
RED 6747 3 History and Foundations of Reading in STEM Disciplines: Prevention and Intervention of Reading Difficulties
RED 6068 3 Adolescent Literacy
LAE 6315 3 Composing Disciplinary Texts: Research and Practice for Writers and Writing

Additional Requirements – 3 hours
For Option 1, students also complete:
TSL 5085 3 ESOL I: Teaching limited English Proficiency Students in K-12
This course may be waived with appropriate documentation by the COEDU ESOL Coordinator.

For Option 2, students also complete:
EDF 6517 3 Historical Foundations of American Education OR
EDF 6211 3 Psychological Foundations of Education

Comprehensive Examination
Successful performance on a Comprehensive Examination is required for degree completion.

Practicum – 3 hours
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

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 Admission and English Proficiency requirements 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
- 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 - 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 course work.
• 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.

CURRICULUM REQUIREMENTS

Core Requirements
- EDF 6938 Issues in Child Development 3
- EDF 6214 Classroom Learn 4
- EDF 6217 Behavior Learn 4

Concentration Requirements
- SPS 6936 Seminar in School Psychology 3
- EDF 6407 Statistics I 4
- SPS 6197 Assessment I 4
- SPS 6198 Assessment II 4
- EDF 6288 Instructional Des 3
- EDF 6166 Consultation 3

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
SCHOOL PSYCHOLOGY

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: 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: www.grad.usf.edu

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 Admission and English Proficiency requirements 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 submit passing TOEFL scores.

Prerequisite Coursework for Admission
- 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 - 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.

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>Credits</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
  SPS 6101 Behavior Disorders 3
  EDF 6938 Social Psychology 3
  EDF 6883 Issues in Multicultural Education 4
  EDF 6213 Biological Bases of Behavior 3

Consultation/Intervention/Problem-Solving
  SPS 6700 Intervention I 4
  SPS 6701 Intervention II 4
  SPS 6702 Intervention III 4
  SPS 7205 Advanced Consultation 3
  SPS 7700 Advanced Behavioral Intervention 3

Professional Practice
  SPS 7936 Advanced Seminar 2
  SPS 6940 Intervention Practicum 2
  SPS 6941 Intervention Practicum 2
  EDG 7931 Advanced Practicum 2
  SPS 7090 Supervision 4
  SPS 6947 Internship 16

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 course work, 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

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 Admission and English Proficiency requirements 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).
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/](http://www.ugs.usf.edu/course-inventory/)
The Master of Arts in Teaching (MAT) Science Education program prepares students to teach science at the middle or high school levels. There are four science subject areas that students can choose from: Biology, Chemistry, Earth Science, and Physics. The MAT program is a state approved program for certification in Biology, Chemistry, and Physics, but not Earth Science. However, students who complete the MAT in Earth Science can apply directly to the State for certification. Students interested in certification in Earth Science should seek academic advising to identify how this impacts initial teacher certification and reciprocity with other states. Candidates for the Master of Arts in Teaching (MAT) Science Education should have a degree in a science discipline (e.g., biology, chemistry, physics, earth science) that is taught in a middle or high school, or a closely related field.

**ADMISSION INFORMATION**

Must meet University Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

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](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**

<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>
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**Concentrations**

Students select from the following Concentrations:

**Biology**

SCE 6947 Internship

(Starting at 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

(Starting at 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 Major Options:
The MAT in Science Education has the following Accelerated Major 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
Accelerated B.S. in Biomedical Sciences/M.A.T. in 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: [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.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/
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) 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.

**Accelerated B.A. in Chemistry/M.A.T. in 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](http://www.usf.edu/education/)

**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.
   b. 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.in Environmental Biology/M.A.T. in 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.
   b. 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. in Environmental Microbiology/M.A.T. in 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.
b. 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. in Integrative Animal Biology /M.A.T. in 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.
   b. 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. in Interdisciplinary Sciences /M.A.T. in 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

http://www.usf.edu/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.
   b. 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. in Marine Biology /M.A.T. in 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.

   b. 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. in Physics/M.A.T. in 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.
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.
   b. 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

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 Admission and English Proficiency requirements 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:

- 3.00 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

<table>
<thead>
<tr>
<th>Total Minimum hours</th>
<th>39 hours Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>The requirements are as follows or as recommended by the graduate advisor and approved by the college and/or Office of Graduate Studies.</td>
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</tr>
</tbody>
</table>

#### Core Requirements

- **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

- **SSE 6636 Trends in Social Science Education** 3

#### Concentration Requirements

- **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.

- **SSE 5946 Practicum in SSE (Prereq: SSE 5331)** 3
- **SSE 6947 Internship** 6

http://www.usf.edu/education/
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

<table>
<thead>
<tr>
<th>Priority Admission Application Deadlines</th>
<th>CONTACT INFORMATION</th>
</tr>
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<tr>
<td>Fall: February 15</td>
<td>College: Education</td>
</tr>
<tr>
<td>Spring: October 15</td>
<td>Department: Teaching and Learning</td>
</tr>
<tr>
<td>Summer: February 15</td>
<td>Contact Information: <a href="http://www.grad.usf.edu">www.grad.usf.edu</a></td>
</tr>
</tbody>
</table>

Minimum Total Hours: 36
Level: Masters
CIP Code: 13.1004
Dept. Code: EDS
Major/College Codes: AGI ED
Approved: 1966

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 online 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 Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- 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 athvallen@usf.edu or to Department of Teaching and Learning, Gifted Education Admissions, EDU 105, College of Education, University of South Florida, Tampa, FL 33620

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
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
    - EME 6053 Internet in Education (May be taken As Core Requirement) (3 hours)
    - 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)
EME 6457 Distance Learning OR EME 7458 Research in Distance Learning (May be taken as core requirement) (3 hours)

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:
  - EME 6053 Internet in Education (May be taken as core requirement) (3 hours)
  - EME 6207 Web Design (May be taken as core requirement) (3 hours)
  - EME 6457 Distance Learning OR EME 7458 Research in Distance Learning (May be taken as core requirement) (3 hours)

And choose 1 of the following:

- EME 6235* Technology Project Management (3 hours) OR
- 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/
**SPECIAL EDUCATION, MOTOR DISABILITIES**

Master of Arts (M.A.) Degree

### DEGREE INFORMATION

- **Closed for new admissions**
- **Minimum Total Hours:** 36
- **Level:** Masters
- **CIP Code:** 13.1001
- **Dept. Code:** EDS
- **Major/College Codes:** AMD ED
- **Approved:** 1985

### CONTACT INFORMATION

- **College:** Education
- **Department:** Teaching and Learning
- **Contact Information:** [www.grad.usf.edu](http://www.grad.usf.edu)

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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: 13.1401
Dept. Code: EDI
Major/College Codes: TLD ED

CONTACT INFORMATION

Colleges: Education
Department: Secondary Education
Contact Information: www.grad.usf.edu

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 Admission and English Proficiency requirements 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 “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

In addition to 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 of 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
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/
SECTION 16

COLLEGE OF ENGINEERING

http://www.eng.usf.edu/
### Changes to Note

The USF Graduate Council approved the following on the date noted:

#### Degree Program Termination

<table>
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<tr>
<th>Program</th>
<th>Degree</th>
<th>CIP #</th>
<th>Date</th>
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<tbody>
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#### Major Termination

<table>
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<tbody>
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#### Accelerated Majors

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<th>From</th>
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<th>Total Hours</th>
<th>Date</th>
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<tbody>
<tr>
<td>Civil Eng (BSCE)</td>
<td>Civil Eng (MCE)</td>
<td>6</td>
<td>155</td>
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<tr>
<td>Civil Eng (BSCE)</td>
<td>Civil Eng (MSCE)</td>
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<td>11/13/17</td>
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<td>Elect Eng (BSEE)</td>
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<td>Materials Science and Eng (MSMSE)</td>
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<tr>
<td>Info Tech (BSIT)</td>
<td>Information Technology (MSIT)</td>
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#### Majors

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<tbody>
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<td>Change curriculum; minor course update</td>
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<td>M.S.M.E.</td>
<td>Change curriculum; update thesis/non-thesis</td>
<td>4/02/18</td>
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*approved for less than the required 150 hours
University of South Florida
College of Engineering
4202 E. Fowler Ave ENB118
Tampa, FL  33620

Web address:  http://www2.eng.usf.edu/

Phone:  813-974-3780
Fax:  813-974-0460
Email:  n/a

College Dean:  Robert H. Bishop, Ph.D.
Associate Dean:  Jose Zayas-Castro, Ph.D.

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

Master of Civil Engineering (M.C.E.)
Civil Engineering (ECE)
Geotechnical (GTL)
Materials (MTL)
Structures (STR)
Transportation (TPT)
Water Resources (WRS)

Master of Environmental Engineering (M.E.V.E.)
Environmental Engineering (EVE)

Master of Science in Biomedical Engineering (M.S.B.E.)
Biomedical Engineering (EBI)
Pharmacy (PRMY)

Master of Science in Chemical Engineering (M.S.C.H.)
Chemical Engineering (ECH)

Master of Science in Civil Engineering (M.S.C.E.)
Civil Engineering (ECE)
Engineering for International Development (EFD)
Geotechnical (GTL)
Materials (MTL)
Structures (STR)
Transportation (TPT)
Water Resources (WRS)

Master of Science in Computer Engineering (M.S.C.P.)
Computer Engineering (ECP)

Master of Science in Computer Science (M.S.C.S.)
Computer Science (ECC)

Master of Science in Electrical Engineering (M.S.E.E.)
Electrical Engineering (EEL)

Master of Science in Engineering Management (M.S.E.M.)
Engineering Management (EMA)

Master of Science in Environmental Engineering (M.S.E.V.)
Environmental Engineering (EVE)
Engineering for International Development (EFD)

Master of Science in Industrial Engineering (M.S.I.E.)
Industrial Engineering (EIE)

Master of Science in Information Technology (M.S.I.T.)
Information Technology (ITC)
Master of Science in Materials Science and Engineering (M.S.M.S.E.)
Materials Science and Engineering (MSE)

Master of Science in Mechanical Engineering (M.S.M.E.)
Mechanical Engineering (EME)

Doctor of Philosophy (Ph.D.)
Biomedical Engineering (EBI)
Chemical Engineering (ECH)
Civil Engineering
Engineering for International Development (EFD)
Environmental Engineering (ENV)
Geotechnical (GTL)
Materials (MTL)
Structures (STR)
Transportation (TPT)
Water Resources (WRS)
Computer Science and Engineering (CSE)
Electrical Engineering (EEL)
Environmental Engineering (EVE)
Engineering for International Development (EFD)
Industrial Engineering (EIE)
Mechanical Engineering (EGR)

Accelerated Majors
Note: Accelerated Majors must total 150 hours after sharing credits, unless otherwise approved as noted.
BSCH – Chemical Engineering / MSBE – Biomedical Engineering
BSCH – Chemical Engineering / MSCCH – Chemical Engineering
BSCH – Chemical Engineering / MSEM – Engineering Management
BSCH – Chemical Engineering / MSMSE – Materials Science and Engineering
BS – Chemistry / MSBE – Biomedical Engineering
BSCE – Civil Engineering / MSCE – Civil Engineering
BSCE – Civil Engineering / MCE – Civil Engineering
BSCE – Civil Engineering / MSEV – Environmental Engineering
BSCE – Civil Engineering / MEVE – Environmental Engineering
BSCE – Civil Engineering / MSMSE – Materials Science and Engineering
BSCE – Civil Engineering / MSEM – Engineering Management
BSCP – Computer Engineering / MSCP – Computer Engineering*
BSCP – Computer Engineering / MSCP – Computer Engineering
BSCP – Computer Engineering / MSCP – Computer Engineering
BSCP – Computer Engineering / MSCS – Computer Science*
BSCP – Computer Engineering / MSIT – Information Technology*
BSEE – Electrical Engineering / MSEM – Engineering Management
BSEE – Electrical Engineering / MSEE – Electrical Engineering
BSEE – Electrical Engineering / MSMSE – Materials Science and Engineering
BSIE – Industrial Engineering / MSBME – Biomedical Engineering
BSIE – Industrial Engineering / MSEM – Engineering Management
BSIT – Information Technology / MSIT – Information Technology
BSME – Mechanical Engineering / MSBME – Biomedical Engineering
BSME – Mechanical Engineering / MSEM – Engineering Management
BSME – Mechanical Engineering / MSMSE – Materials Science and Engineering
BSME – Mechanical Engineering / MSME – Mechanical Engineering

*approved for less than 150 total combined hours
Concurrent Degrees:
Note: Concurrent Degrees must total 60 hours combined unless otherwise approved.

- Biomedical Engineering (Ph.D.) and Medicine (M.D.)
- 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.

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

Also offered as a Concurrent Degree
Biomedical Engineering (MSBE) / Entrepreneurship in Applied Technologies (MS)

CONTACT INFORMATION

College: Engineering
Department: Medical Engineering
Contact Information: www.grad.usf.edu

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 Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- GRE with preferred Minimum scores of Quantitative >75% and Analytical Writing 4 or >;
- An undergraduate Bachelor’s degree in Engineering or Science;
- Two (2) letters of recommendation; and
- A statement of purpose
- CV

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 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

Note – Due to accreditation guidelines, Accelerated Majors must total 150 combined credit hours after sharing credit hours. Contact the department for information.

Accelerated B.S. in Chemistry / M.S.B.E. in Biomedical Engineering – PENDING SACSCOC Approval

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.

Refer to each major for specific admission and curriculum requirements. For consideration in the Accelerated Major, students 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

Accelerated Chemical Engineering (BSCH)/Biomedical Engineering (MSBE)

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.

Refer to each major for specific admission and curriculum requirements. For consideration in the Accelerated Major, students 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.

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
**Accelerated B.S.I.E. in Industrial Engineering and M.S.B.E. in Biomedical Engineering**

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.

Refer to each major for specific admission and curriculum requirements. For consideration in the Accelerated Major, students 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.

**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

**Accelerated B.S.M.E. in Mechanical Engineering and M.S.B.E. in Biomedical Engineering**

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.

Refer to each major for specific admission and curriculum requirements. For consideration in the Accelerated Major, students 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.

**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

**Concurrent Degree Options**

Students may apply to pursue one of the Concurrent Degree Options. Applicants must meet University Admission and English Proficiency Requirements, as well as the requirements for each major. Refer to the individual listings for each major for admission and curriculum requirements specific to the major. Admission into one major does not guarantee admission in the other major. **Note:** Due to accreditation requirements, all Concurrent degrees must total 60 hours after sharing credits.
Concurrent M.S./M.S.B.E.

M.S. in Entrepreneurship in Applied Technologies – 33 hours
M.S.B.E. in Biomedical Engineering – 30 hours

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.

Shared Courses – 9 hours*
BME 6000 Biomedical Engineering (3)
GMS 7930 Principles of Intellectual Property (3)
EIN 6934 New Product Development (3)

Total Combined hours after sharing: 54 hours*
All 60 hours of coursework in both programs are required to earn both degrees; there are no electives.
*See note regarding the 60 hours minimum after sharing credits.

Concurrent M.S.B.E./M.D.

M.S.B.E. in Biomedical Engineering – 30 hours
M.D. in Medicine

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 healthcare 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 feels a part of both the medical/clinical and engineering worlds simultaneously, hence the need for an integrated concurrent degree.

Admissions
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.

Curriculum
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 [https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.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

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 Admission and English Proficiency requirements 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:
For students with an approved master’s degree 90 hours
90 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 https://www.systemacademics.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

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

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

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 Admission and English Proficiency requirements 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;
- Two (2) letters of reference; and
- Statement of research interests.
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.
Accelerated Major

Note – Due to accreditation guidelines, Accelerated Majors must total 150 combined credit hours after sharing credit hours. Contact the department for information.

Accelerated BSCH in Chemical Engineering to MSCH in Chemical Engineering

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.

Refer to each major for specific admission and curriculum requirements. For consideration in the Accelerated Major, students 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.

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.

COURSES
See https://www.systemacademics.usf.edu/course-inventory/
# CHEMICAL ENGINEERING

## Doctor of Philosophy (Ph.D.) Degree

### DEGREE INFORMATION

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<th>Priority Admission Application Deadlines:</th>
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<td>College: Engineering</td>
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<tr>
<td>Spring: October 15</td>
<td>Department: Chemical &amp; Biomedical Engineering</td>
</tr>
<tr>
<td>Summer: February 15</td>
<td>Contact Information: <a href="http://www.grad.usf.edu">www.grad.usf.edu</a></td>
</tr>
</tbody>
</table>

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

### 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 Admission and English Proficiency requirements 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.
- 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 https://www.systemacademics.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

Concentrations:
Geotechnical (GTL)
Materials (MTL)
Structural (STR)
Transportation (TPT)
Water Resources (WRS)

Also offered as an Accelerated Major
Civil Engineering (BSCE/MCE)

CONTACT INFORMATION

College: Engineering
Department: Civil and Environmental Engineering
Contact Information: www.grad.usf.edu

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 degrees 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 Admission and English Proficiency requirements 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) or professional engineering (PE) certificate. Verification of FE or PE certification should be obtained from the PE board where the certification was obtained. See the CEE department website for more information: http://www2.eng.usf.edu/cee/graduate/apply.htm.
- 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.

Pre-requisites – 12 hours
All students must complete the following pre-requisites or equivalent courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGN 3311</td>
<td>3</td>
<td>Statics</td>
</tr>
<tr>
<td>EGN 3343</td>
<td>3</td>
<td>Thermodynamics I</td>
</tr>
<tr>
<td>EGN 3353</td>
<td>3</td>
<td>Basic Fluid Mechanics</td>
</tr>
<tr>
<td>EGN 3615</td>
<td>3</td>
<td>Engineering Economics</td>
</tr>
</tbody>
</table>

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.

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.

Total Minimum Hours
Coursework – 24 hours
(concentration 15 hours minimum; 9 hours electives)
Thesis – 6 hours

The minimum coursework requirement is 30 graduate level credit hours for students with an undergraduate engineering degree. For students pursuing a concentration area (as detailed below), the 30 credit hours will include at least 15 credit hours of concentration course requirements, with remaining credit hours to consist of core coursework and technical electives as approved by the Department. For students pursuing no concentration 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.
Concentration Requirements - 15 hours minimum
The Department supports M.C.E. concentration 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 concentration.

Geotechnical
- 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
- 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
- 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
- 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.
Electives – 9 hours
Selected with advice from advisor

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.

Accelerated Major

Note – Due to accreditation guidelines, Accelerated Majors must total 150 combined credit hours after sharing credit hours. Contact the department for information.

Accelerated B.S.C.E. in Civil Engineering and M.C.E. in Civil Engineering

The B.S.C.E. requires a total of 131 hours and the M.S. requires 30 hours. By sharing 6 credit hours, the total credit hours earned will be 155 hours.

Refer to each major for specific admission and curriculum requirements. For consideration in the Accelerated Major, students 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.

Shared Courses (6 credit hours)
Students may choose two (2) of the following five (5) 6000-level course options to meet the upper-level undergraduate Technical elective requirement:

- TTE 4005  Transportation Engineering II, satisfied by any 6000-level TTE prefixed course (3 hours)
- CEG 4012  Geotechnical Engineering II, satisfied by any 6000-level CEG prefixed course (3 hours)
- Free Technical elective, satisfied by any 6000-level CEG, TTE, CES, CGN or CWR course (3 hours)
- Free Technical elective, satisfied by any 6000-level CEG, TTE, CES, CGN or CWR course (3 hours)

COURSES
See https://www.systemacademics.usf.edu/course-inventory/
CIVIL ENGINEERING

Master of Science in Civil Engineering (M.S.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: 1981

Concentrations:
Engineering for International Development (EFD)
Geotechnical (GTL)
Materials (MTL)
Structures (STR)
Transportation (TPT)
Water Resources (WRS)

Also offered as an Accelerated Major
Civil Engineering (BSCE/MSCE)

CONTACT INFORMATION

College: Engineering
Department: Civil and Environmental Engineering
Contact Information: www.grad.usf.edu

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 Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- Undergraduate GPA $\geq 3.0$ 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) or professional engineering (PE) certificate. Verification of FE or PE certification should be obtained from the PE board where the certification was obtained. See the CEE department website for more information: [http://www2.eng.usf.edu/cee/graduate/apply.htm](http://www2.eng.usf.edu/cee/graduate/apply.htm).
- Two Letters of Reference provided at the time of application (three required for EFD concentration).
- 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.

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.

CURRICULUM REQUIREMENTS

Total Minimum Hours 30 hours

Coursework – 24 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 concentration area (as detailed below), the 24 credit hours of coursework will include at least 12 credit hours of Concentration Requirements, with remaining credit hours to consist of technical electives as approved by the Department. For students pursuing no concentration 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. Contact the Graduate Director for more information [http://www.usf.edu/engineering/cee/graduate/prerequisites-non-engineers.pdf](http://www.usf.edu/engineering/cee/graduate/prerequisites-non-engineers.pdf).

Concentration Requirements -12 hours minimum

The Department supports M.S.C.E. concentration 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 concentrations, or may select no concentration.

**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 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. 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 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 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.

Geotechnical
CEG 5115 Foundation Engineering
CES 6118 Applied Finite Elements
6 additional credit hours of coursework in Geotechnical engineering or closely related areas.

Materials
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
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
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

Electives
Electives selected in consultation with advisor.

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 concentration, 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.

Accelerated Major

Note – Due to accreditation guidelines, Accelerated Majors must total 150 combined credit hours after sharing credit hours. Contact the department for information.

Accelerated B.S.C.E. in Civil Engineering and M.S.C.E. in Civil Engineering

The B.S.C.E. requires a total of 131 hours and the M.S. requires 30 hours. By sharing 6 credit hours, the total credit hours earned will be 155 hours.

Refer to each major for specific admission and curriculum requirements. For consideration in the Accelerated Major, students 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.

Shared Courses (6 credit hours)
Students may choose two (2) of the following five (5) 6000-level course options to meet the upper-level undergraduate Technical elective requirement:
TTE 4005 Transportation Engineering II, satisfied by any 6000-level TTE prefixed course (3 hours)
CEG 4012 Geotechnical Engineering II, satisfied by any 6000-level CEG prefixed course (3 hours)
Free Technical elective, satisfied by any 6000-level CEG, TTE, CES, CGN or CWR course (3 hours)
Free Technical elective, satisfied by any 6000-level CEG, TTE, CES, CGN or CWR course (3 hours

COURSES
See https://www.systemacademics.usf.edu/course-inventory/
CIVIL 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 post-master’s
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 (EFD)
Environmental Engineering (EVE)
Geotechnical (GTL)
Materials (MTL)
Structures (STR)
Transportation (TPT)
Water Resources (WRS)

CONTACT INFORMATION

College: Engineering
Department: Civil and Environmental Engineering
Contact Information: www.grad.usf.edu

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 Admission and English Proficiency requirements 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)
- 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
Concentration/primary area of study – 15 hours
Electives – 33 hours
Dissertation – 20 hours
Other course requirement – 8 hours

An additional 50 credit hours of coursework are required. The following requirements apply to the 50 credit hours of additional coursework:

- At least 15 credit hours must be in the student’s primary area of study (see also Concentration 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, 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.

Core Requirement 2 hours
CGN 6945 2 Graduate Research Methods

Concentration Requirements - 15 hours minimum
The Department supports Ph.D. concentration 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 concentrations, or may select no concentration.
Engineering for International Development (EFD) – 15 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: 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  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  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

Additional 6 graduate level credit hours of coursework in Engineering for International Development 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 (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 (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 (MTL) - 15 hours

At least 2 courses (6 credit hours) from the following list:
CGN 6933  3  Selected Topics: Advanced 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
STRUCTURES (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 (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
- CWR 6105  3 Vadose Zone Hydrology
- CGN 6933  3 Selected Topics: Groundwater Hydraulics
- CGN 6933  3 Selected Topics: 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 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
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
https://www.systemacademics.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

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: 14.0901
Dept. Code: ESB
Major/College Codes: ECP EN
Approved: 1960

Also offered as an Accelerated Major:
Computer Engineering (BSCP/MSCP)

CONTACT INFORMATION

College: Engineering
Department: Computer Science and Engineering
Contact Information: www.grad.usf.edu

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 Admission and English Proficiency requirements 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 (81st percentile) and a minimum of 150 (44th 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.

http://www.eng.usf.edu/
- 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:**
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. Non-thesis students need to take a minimum of 6 credits from the list of electives that are hardware related:

- **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 taken from the list of electives that are hardware related 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 success completion of 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

Note – Due to accreditation guidelines, Accelerated Majors must total 150 combined credit hours after sharing credit hours. Contact the department for information.

Accelerated B.S.C.P. in Computer Engineering and M.S.C.P. in Computer Engineering
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.

Refer to each major for specific admission and curriculum requirements. For consideration in the Accelerated Major, students 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.

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

COURSES
See https://www.systemacademics.usf.edu/course-inventory/
# COMPUTER SCIENCE

## Master of Science in Computer Science (M.S.C.S.) Degree

### DEGREE INFORMATION

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<td>Department: Computer Science and Engineering</td>
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<td>Summer: No admit</td>
<td>Contact Information: <a href="http://www.grad.usf.edu">www.grad.usf.edu</a></td>
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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 Major:
Computer Engineering (BSCP) / Computer Science (MSCS)

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 Admission and English Proficiency requirements 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 (81st percentile) and a minimum of 150 (44th 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.

- 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. Non-thesis students need to take a minimum of 6a credits from the list of electives that are software related:

- 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 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 taken from the list of electives that are software related 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**

*Note – Due to accreditation guidelines, Accelerated Majors must total 150 combined credit hours after sharing credit hours. Contact the department for information.*

**Accelerated B.S.C.P. in Computer Engineering and M.S.C.S. in Computer Science**
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.

Refer to each major for specific admission and curriculum requirements. For consideration in the Accelerated Major, students 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.

**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

**COURSES**
See [https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.usf.edu/course-inventory/)
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 Admission and English Proficiency requirements 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.
- If consideration of an assistantship is desired, the speaking score component of the TOEFL must be 26 or above.
- 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 https://www.systemacademics.usf.edu/course-inventory/

http://www.eng.usf.edu/
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

Minimum Total Hours: 30
Level: Masters
CIP Code: 14.1001
Dept. Code: EGE
Major/College Codes: EEL EN
Approved: 1981

Also offered as an Accelerated Major
Electrical Engineering (BSEE/MSEE)

CONTACT INFORMATION

College: Engineering
Department: Electrical Engineering
Contact Information: www.grad.usf.edu

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 Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- Minimum 3.00 GPA
- Three Letters of Recommendation
- Resume
- Statement of Purpose

http://www.eng.usf.edu/
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: 18 hours
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)

Accelerated Major

Note – Due to accreditation guidelines, Accelerated Majors must total 150 combined credit hours after sharing credit hours. Contact the department for information.

Accelerated B.S.E.E. in Electrical Engineering and M.S.E.E. in Electrical Engineering

Refer to each major for specific admission and curriculum requirements. For consideration in the Accelerated Major, students 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.

Shared Courses (6 credit hours):
Upper division EE elective courses (2) typically taken Semesters 7 and 8 will be replaced by EE MS program core courses chosen from the list below:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGN 5421</td>
<td>Engineering Applications of Vector Analysis</td>
<td>3</td>
</tr>
<tr>
<td>EGN 5422</td>
<td>Engineering Applications of Partial Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>EGN 5423</td>
<td>Mathematics for Communications Engineering</td>
<td>3</td>
</tr>
<tr>
<td>EGN 5424</td>
<td>Engineering Applications of Complex Analysis</td>
<td>3</td>
</tr>
<tr>
<td>EGN 5425</td>
<td>Matrix Theory</td>
<td>3</td>
</tr>
<tr>
<td>EEL 6542</td>
<td>Random Processes</td>
<td>3</td>
</tr>
<tr>
<td>PHC 6050</td>
<td>Biostatistics</td>
<td>3</td>
</tr>
</tbody>
</table>

COURSES
See [https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.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

Approved:
1982

CONTACT INFORMATION

College: Engineering
Department: Electrical Engineering

Contact Information: www.grad.usf.edu

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 Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- GRE (with preferred minimum scores of Q> 155 (61%), V>146 (28%))
- Three (3) Letters of Reference
- Statement of Purpose
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 https://www.systemacademics.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

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

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)
Civil Engineering (BSCE) / Engineering Management (MSEM)
Electrical Engineering (BSEE) / Engineering Management (MSEM)
Industrial Engineering (BSIE) / Engineering Management (MSEM)
Mechanical Engineering (BSME)/Engineering Management (MSEM)

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 Admission and English Proficiency requirements as well as requirements for admission to the major, listed below.

- BS in Engineering or equivalent.
- GRE may be required
- Letter of recommendation.
- 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
EIN 6430 Overview of Regulated Industries  
EIN 6336 Production Control Systems  
EIN 6145 Project Management  
EIN 6431 Regulatory Quality Systems & Controls for Medical Devices  
EIN 6432 Regulated Product Approval Process  
ESI 5236 Reliability Engineering  
EIN 6935 Strategic Marketing Assessment  
EIN 6936 Strategies in Technical Entrepreneurship  
ESI 6213 Stochastic Decision Models I  
EIN 6934 Tech Venture Strategy  
EIN 6145 Technical Entrepreneurship  
EIN 6106 Technology & Law  
EIN 6121 Technology & Markets  
EIN 5174 Total Quality Management (TQM) Concepts  
EIN 6225 Total Quality Management (TQM) Seminar  
EIN 6936 Venture Capital & Private Equity  
EIN 5275 Work Physics / Biomechanics

**Comprehensive Exam**

**Accelerated Majors**

*Note – Due to accreditation guidelines, Accelerated Majors must total 150 combined credit hours after sharing credit hours. Contact the department for information.*

**Accelerated BSCH in Chemical Engineering / MSEM in Engineering Management**

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.

Refer to each major for specific admission and curriculum requirements. For consideration in the Accelerated Major, students 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.

**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

**Accelerated B.S.C.E. in Civil Engineering and M.S.E.M. in Engineering Management**

The B.S.C.E. 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 credit hours.

Refer to each major for specific admission and curriculum requirements. For consideration in the Accelerated Major, students 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.
Shared Courses (6 credit hours)
Students can take two approved EGX-prefix courses at the 6000-level that meet the upper-level Technical elective requirement.

Accelerated B.S.E.E. in Electrical Engineering and M.S.E.M. in Engineering Management
The B.S.C.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.

Refer to each major for specific admission and curriculum requirements. For consideration in the Accelerated Major, students 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.

Shared Courses (6 credit hours)
Students can take two approved EEL-prefix courses at the 6000-level that meet the upper-level Technical elective requirement.

Accelerated B.S.I.E. in Industrial Engineering and M.S.E.M. in Engineering Management
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.

Refer to each major for specific admission and curriculum requirements. For consideration in the Accelerated Major, students 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.

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

Accelerated B.S.M.E. in Mechanical Engineering and M.S.E.M. in Engineering Management
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.

Refer to each major for specific admission and curriculum requirements. For consideration in the Accelerated Major, students 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.

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

COURSES
See [https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.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

Also offered as an Accelerated Major
Civil Engineering (BSCE) / Environmental Engineering (MEVE)

CONTACT INFORMATION

College: Engineering
Department: Civil and Environmental Engineering
Contact Information: www.grad.usf.edu

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 Admission and English Proficiency requirements 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.
- 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 66173 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.

Accelerated Major

Note – Due to accreditation guidelines, Accelerated Majors must total 150 combined credit hours after sharing credit hours. Contact the department for information.

Accelerated B.S.C.E in Civil Engineering and M.E.V.E Environmental Engineering

The B.S.C.E. requires a total of 131 hours and the M.S. requires 30 hours. By sharing 6 credit hours, the total credit hours earned will be 155 hours.

Refer to each major for specific admission and curriculum requirements. For consideration in the Accelerated Major, students 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.
Shared Courses (6 credit hours)
Students may choose two (2) of the following three (3) 6000-level course options to meet the upper-level undergraduate Technical elective requirement:


COURSES
See https://www.systemacademics.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)

Also offered as an Accelerated Major:
Civil Engineering B.S.C.E. / Environmental Engineering M.S.E.V.

CONTACT INFORMATION

College: Engineering
Department: Civil and Environmental Engineering
Contact Information: www.grad.usf.edu

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 Admission and English Proficiency requirements 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.
- 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

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENV 6002</td>
<td>3</td>
</tr>
<tr>
<td>EES 6107</td>
<td>3</td>
</tr>
<tr>
<td>ENV 6666</td>
<td>3</td>
</tr>
</tbody>
</table>

And at least one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENV 6617</td>
<td>3</td>
</tr>
<tr>
<td>CGN 6933</td>
<td>3</td>
</tr>
<tr>
<td>ENV 6510</td>
<td>3</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENV 6510</td>
<td>3</td>
</tr>
</tbody>
</table>

A minimum of 1 course (3 credits) from the following applied anthropology courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANG 6766</td>
<td>3</td>
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<tr>
<td>ANG 6730</td>
<td>3</td>
</tr>
<tr>
<td>ANG 6469</td>
<td>3</td>
</tr>
</tbody>
</table>

A minimum of 1 course (3 credits) from the following global public health courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHC 6764</td>
<td>3</td>
</tr>
<tr>
<td>PHC 67613</td>
<td>3</td>
</tr>
</tbody>
</table>
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.

Accelerated Major

Note – Due to accreditation guidelines, Accelerated Majors must total 150 combined credit hours after sharing credit hours. Contact the department for information.

Accelerated B.S.C.E. in Civil Engineering and M.S.E.V. Environmental Engineering

The B.S.C.E. requires a total of 131 hours and the M.S. requires 30 hours. By sharing 6 credit hours, the total credit hours earned will be 155 hours.

Refer to each major for specific admission and curriculum requirements. For consideration in the Accelerated Major, students 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.

Shared Courses (6 credit hours)
Students may choose two (2) of the following three (3) 6000-level course options to meet the upper-level undergraduate Technical elective requirement:

1. CWR 4812 Capstone Water Resources/Environmental Design satisfied by ENV 6564 Environmental Engineering Design.
2. Free Technical elective, satisfied by any (3credit) 6000-level ENV course.
3. Free Technical elective, satisfied by any (3credit) 6000-level ENV course.

COURSES
See [https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.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: EVE EN
Approved: 2013

Concentration:
Engineering for International Development (EFD)

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 Admission and English Proficiency requirements 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)
- 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 – 9 credit hours
Additional requirements – 5 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 – 9 hours
ENV 6002  3 Physical & Chemical Principles in Environmental Engineering
EES 6107  3 Biological Principles in Environmental Engineering
ENV 6666  3 Aquatic Chemistry

Additional requirements – 5 hours
CGN 6945  2 Graduate Research Methods

1 course (3 credits) from the following list of sustainability courses:
ENV 6617  3 Green Engineering for Sustainability
CGN 6933  3 Selected Topics: 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
- ANG 6730 3 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:
- 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 https://www.systemacademics.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

Minimum Total Hours: 30
Level: Masters
CIP Code: 14.3501
Dept. Code: EGX
Major/College Codes: EVE EN
Approved: 1981

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 Admission and English Proficiency requirements 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
- 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 6179 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)

**Comprehensive Exam**

**Thesis (6 credit hours)**

**COURSES -** See [https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.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

ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements 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
- 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**  
12 hours minimum

- ESI 6213 Stochastic Decision Models I  
- EIN 6935 Systems Modeling and Performance Analysis  
- ESI 6245 Advanced Statistical Design Models  
- ESI 6491 Linear Programming and Network Optimization

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**  
40 hours minimum

- ESI 5522 Computer Simulation  
- EIN 6119 Decision Support Systems  
- ESI 6324 Engineering the Supply Chain  
- EIN 6433 Human Factors in Engineering Medical Devices  
- EIN 6112 Information Systems Design  
- ESI 6448 Integer Programming  
- EIN 6435 International Regs for Med Devices  
- EIN 6386 Management of Technology Change  
- EIN 6420 Non-Linear Programming  
- EIN 6336 Production Control Systems  
- EIN 6145 Project Management  
- ESI 5236 Reliability Engineering  
- EIN 6319 Work Design and Productivity  
- EIN 6608 AdvancedAnalytics I  
- EIN 6609 Advanced Analytics II

**Directed Research**  
9 hours

**Dissertation**  
11 hours

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 [https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.usf.edu/course-inventory/)
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 Admission and English Proficiency requirements 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.
- If consideration of an assistantship is desired, the speaking score component of the TOEFL must be 26 or above.
- 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

Note – Due to accreditation guidelines, Accelerated Majors must total 150 combined credit hours after sharing credit hours. Contact the department for information.

Accelerated B.S.C.P. in Computer Engineering and M.S.I.T. in Information Technology
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.

Refer to each major for specific admission and curriculum requirements. For consideration in the Accelerated Major, students 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.

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

Accelerated B.S.I.T. in Information Technology and M.S.I.T. in Information Technology
The B.S.I.T. requires a total of 120 hours and the M.S.I.T. requires 30 hours. By sharing six (6) credit hours, the total credit hours earned will be 144 hours.

Refer to each major for specific admission and curriculum requirements. For consideration in the Accelerated Major, students 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.

Shared Courses (6 credit hours):
Students can take two approved courses at the 6000-level that meet the upper level Technical elective requirement.

COURSES
See [https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.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 Major
Chemical Engineering (BSCH)/Materials Science and Engineering (MSMSE)
Civil Engineering (BSCE) / Materials Science and Engineering (MSMSE)
Electrical Engineering (BSEE) / Materials Science and Engineering (MSMSE)
Mechanical Engineering (BSME) / 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

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 Admission and English Proficiency requirements 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.
- GRE with preferred minimum scores of V 50%, Q 50% and AW 50%.
- Three letters of recommendation
- Statement of purpose
CURRICULUM REQUIREMENTS

Total Minimum Hours: 30 credit hours

Core Requirements - 5 credit hours
EMA 6510  Characterization of Materials  3
ECH 6931  Graduate Seminar      2

Electives - 19 credit hours minimum
Students will select electives in consultation with the Graduate Director.

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.

Non-Thesis Option - 6 credit hours
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.

Thesis Option - 6 credit hours
At least 16 credit hours must be at 6000 level with a maximum of 2 hours of Independent Study.

ECH 6971 Thesis

Accelerated Majors

Note – Due to accreditation guidelines, Accelerated Majors must total 150 combined credit hours after sharing credit hours. Contact the department for information.

Chemical Engineering (BSCH) / Materials Science and Engineering (MSMSE)

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.

Refer to each major for specific admission and curriculum requirements. For consideration in the Accelerated Major, students 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.

Shared Courses (6 credit hours)
The following courses will satisfy six (6) credit hours of Chemical Engineering undergraduate elective coursework:
EML 6105
EML 6713

Accelerated Civil Engineering (BSCE) / Materials Science and Engineering (MSMSE)

The B.S.C.E. 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.

Refer to each major for specific admission and curriculum requirements. For consideration in the Accelerated Major, students 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.
Shared Courses (6 credit hours):
Students can take two approved ECE-prefixed courses at the 6000-level that meet the upper-level Technical elective requirement.

Accelerated Electrical Engineering (BSEE) / Materials Science and Engineering (MSMSE)
The B.S.E.E. requires a total of 128 hours and the M.S.M.S.E. requires 30 hours. By sharing six (6) credit hours, the total credit hours earned will be 152 hours.

Refer to each major for specific admission and curriculum requirements. For consideration in the Accelerated Major, students 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.

Shared Courses (6 credit hours):
Students can take approved EEL-prefixed courses at the 6000-level that meet the upper-level Technical elective requirement.

Accelerated Mechanical Engineering (BSME) / Materials Science and Engineering (MSMSE)
The B.S.M.E. requires a total of 128 hours and the M.S.M.S.E. requires 30 hours. By sharing six (6) credit hours, the total credit hours earned will be 152 hours.

Refer to each major for specific admission and curriculum requirements. For consideration in the Accelerated Major, students 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.

Shared Courses (6 credit hours):
EML 6105 Advanced Thermodynamics and Statistical Mechanics 3
EML 6713 Advanced Fluid Mechanics 3

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

Minimum Total Hours: 30
Level: Masters
CIP Code: 14.1901
Dept. Code: EGR
Major/College Codes: EME EN
Approved: 1981

CONTACT INFORMATION

College: Engineering
Department: Mechanical Engineering
Contact Information: www.grad.usf.edu

Also offered as an Accelerated Major:
Mechanical Engineering (BSME) / Mechanical Engineering (MSME)

The Department offers graduate majors leading to the M.S.M.E. and Ph.D. in Mechanical Engineering.


ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements 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.
- 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 – 12 credit hours
Additional courses – 18 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 - 18 credit hours
In addition to these 12 credit hours, the non-thesis option MSME degree requires a minimum of 18 credit hours of approved graduate level coursework, for a total of 30 semester hours. Thesis option M.S.M.E. degree requires 12 credit hours of approved graduate level coursework and a minimum of 6 thesis hours for a total of 30 semester hours.

Comprehensive Exam
For the thesis option, successful defense of the thesis satisfies the comprehensive exam requirement.

For the non-thesis option, in lieu of the comprehensive exam, a portfolio containing project reports submitted as part of the coursework requirement for two out of three specialization areas will be submitted to the Department upon application of graduation. The Graduate Coordinator and Graduate Committee members of the Department will evaluate and approve the portfolio. The portfolio must be successfully completed and approved to satisfy the comprehensive exam requirement for graduation.

Thesis Option - 6 credit hours
EML 6971 Thesis: Master’s
Thesis option M.S.M.E. degree requires a minimum of 6 thesis hours. Thesis option MSME students must present a typed final draft to the Supervisory Committee and Graduate Advisor one week before the final 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.

http://www.eng.usf.edu/
Accelerated Major

Note – Due to accreditation guidelines, Accelerated Majors must total 150 combined credit hours after sharing credit hours. Contact the department for information.

Accelerated B.S.M.E. in Mechanical Engineering and M.S.M.E. in Mechanical Engineering

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.

Refer to each major for specific admission and curriculum requirements. For consideration in the Accelerated Major, students 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.

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

COURSES
See https://www.systemacademics.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

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

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

The Department offers graduate majors leading to the M.S. and Ph.D. in Mechanical Engineering.


ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements 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.
- 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 https://www.systemacademics.usf.edu/course-inventory/
COLLEGE OF GLOBAL SUSTAINABILITY
## Changes to Note

Graduate Council approved the changes on the date noted.

**Major**

<table>
<thead>
<tr>
<th>Program</th>
<th>Degree</th>
<th>Change Description</th>
<th>Date</th>
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<tr>
<td>Global Sustainability</td>
<td>M.A.</td>
<td>Change Major – add new Concentration in <strong>Sustainability Policy</strong>; delete <strong>Coastal Sustainability</strong>; Change <strong>Water</strong> to <strong>Water Sustainability</strong></td>
<td>3/5/18</td>
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<tr>
<td>Global Sustainability</td>
<td>M.A.</td>
<td>Change from direct receipt to standard application</td>
<td>4/23/18</td>
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</table>
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)  
   Entrepreneurship (ETR)  
   Food Sustainability and Security (FOO)  
   Sustainable Business (SBU)  
   Sustainable Energy (SUSE)  
   Sustainability Policy (GLP)  
   Sustainable Tourism (SUT)  
   Sustainable Transportation (STN)  
   Water Sustainability ()
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)
- Entrepreneurship (ETR)
- Food Sustainability and Security (FOO)
- Sustainable Business (SBU)
- Sustainable Energy (SUSE)
- Sustainability Policy
- Sustainable Tourism (SUT)
- Sustainable Transportation (STN)
- Water Sustainability (WSR)

Graduate Certificates Offered:
See 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
www.patel.usf.edu

The Patel College of Global Sustainability fosters sustainable urban communities and environments through collaborative research, education, and community engagement. Its research generates innovations and new knowledge that help communities and nations around the world, including those in developing countries, to reduce their ecological footprint while improving their social, economic, and environmental sustainability parameters to make them healthier, more livable, equitable and more resilient.

In this innovative 30 credit hour graduate major, the students will apply their passion for the environment with hands-on experiential learning through internships to find sustainability solutions. The major offers a multidisciplinary study of the environment and social and economic dimensions of sustainability, as well as training in research methodology to enable practitioners to make informed decisions and to create tangible change toward sustainable futures. All students are required to perform a mandatory internship in the public or private sector. Upon graduation, the students will be ready for careers in global sustainability that require a systems approach, teamwork, program planning, and policy development skills to solve sustainability issues in developing and developed nations.

Major Research Areas: Sustainable development, sustainability policy, environmental policy, green communities, ecotourism.
ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements, as well as requirements for admission to the major, listed below.

- GPA of at least 3.25 or greater; alternatively a GPA of at least 3.00 along with a GRE Verbal score of 153 (61 percentile) or higher, Quantitative of 153 (51 percentile) or higher and Analytical Writing of 3.5 or higher, all taken within 5 years of application.
- At least two letters of recommendation from professors or supervisors (signed, dated, and on official letterhead). Resume
- Letter of Interest (up to 350 words explaining why the student is interested in Sustainability)

English Proficiency Requirement
International applicants from non-English speaking countries or who have not earned a degree in the United States must demonstrate English Proficiency. A minimum of 100 on the Internet-based Test (iBT), IELTS score of 7.0, or a PTE-A score of 68 is required for admission. For University 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 – 12 credit hours
- Concentration courses – 9 credit hours
- Electives – 6 credit hours
- Internship/Research – 3 credit hours
- Comprehensive Exam

CORE COURSES – 12 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
IDS 6225 3 Research Methods for Sustainability

CONCENTRATION REQUIREMENTS - 9 credits minimum
Students select at least one concentration.

**Climate Change and Sustainability (CLT)**
Choose three of the following courses:
IDS 6208 3 Renewable Power Portfolio
IDS 6210 3 Bioresources for a Sustainable Future
IDS 6222 3 Navigating the Sustainable Food Energy Water Nexus
IDS 6223 3 Waste Not, Want Not: Reconsidering Waste, Re-purposing Wasted Resources
IDS 6247 3 Climate Change Adaptation and Mitigation
EVR 6216 3 Water Quality Policy and Management
PHI 6680 3 Climate Change and Civil Evolution

**Entrepreneurship (ETR)**
Choose three of the following courses
ENT 6116 3 Business Plan Development
ENT 6186 3 Strategic Market Assessment
ENT 6706 3 Global Entrepreneurship
ENT 6930 3 Special Topics/Seminars: Social Entrepreneurship
Or
IDS6239 3 Entrepreneurship with a Social Impact
Food Sustainability and Security (FOO)
Choose three of the following courses:
IDS 6210  3  Biomass for a Sustainable Future
IDS 6222  3  Sustainable Food Energy Water Nexus
IDS 6223  3  Waste Not, Want Not: Reconsidering Waste, Re-purposing Wasted Resources
IDS 6270  3  Sustainable Food Production
IDS 6271  3  Future of Food: Environment, Health, and Policy
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
MAR 6466  3  Supply Chain Management
MAR 6936  3  Selected Topics in Marketing: Sustainable Marketing

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  Navigating the Sustainable Food Energy Water Nexus
ECH 5931  3  Solar Energy and Applications
EEL 6935  3  Sustainable Energy

Sustainability Policy (GLP)
Choose three of the following courses:
IDS 6239  3  Implementing the United Nations Sustainable Development Goals
EVR 6937  3  Seminar in Environmental Policy
PAD 6307  3  Policy Analysis, Implementation, and Program Evaluation
URP 6403  3  Planning for Resilient Communities
URP 6406  3  Urban Environmental Policy

Choose two of the following courses. Other courses may be considered by concentration Director and PCGS Academic Program Director.
IDS 6247  3  Climate Change Adaptation and Mitigation
URP 6316  3  Land Use Planning
URP 6422  3  Environmental Planning in Coastal Communities
URP 6444  3  Global Food Systems Planning
URP 6930C  3  The Disaster Resilient Community

Sustainable Tourism (SUT)
IDS 6236  3  Sustainable Tourism Development: Principles & Practices
IDS 6237  3  Ecotourism and Sustainable Tourism Management for Coastal & Marine Habitat

Choose one of the following courses:
IDS 6239  3  Implementing the United Nations Sustainable Development Goals
IDS 6247  3  Climate Change Adaptation and Mitigation

Choose two of the following courses. Other courses may be considered by concentration Director and PCGS Academic Program Director.
IDS 6223  3  Waste Not, Want Not: Reconsidering Waste, Re-purposing Wasted Resources
HMG 6246  3  Organizational Effectiveness in Hospitality
OCE 6085  3  Ocean Policy
Sustainable Transportation (STN)
Choose three of the following courses:
IDS 6207  3  Renewable Transportation Fuels
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

Choose two of the following courses. Other courses may be considered by concentration Director and PCGS Academic Program Director.
CGN 6933  3  Sustainable Transportation
TTE 5205  3  Traffic Systems Engineering
TTE 6507  3  Travel Demand Modeling
TTE 6315  3  Transportation Safety

Water Sustainability (WSR)
Choose three of the following courses:
IDS 6222  3  Navigating the 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 6247  3  Water Resources Planning
EVR 6216  3  Water Quality Policy and Management

An additional 6 graduate hours is required. Any other concentration’s courses are preferred electives. Other courses may be considered by concentration Director and PCGS Academic Program Director.

Internship/Research Requirement – 3 credit hours
Choose one of the following:
IDS 6946  3  Sustainability Internship
IDS 6935  3  : Capstone Research Project

The required 3 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 3 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.

CONCURRENT DEGREES

Concurrent M.S./M.A.

M.S. in Entrepreneurship in Applied Technologies – 33 hours
M.A. in Global Sustainability – 30 hours

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.
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)*

- ENT 6016  New Venture Formation 3
- ENT 6116  Business Plan Development 3
- GMS 6095 Principles of Intellectual Property 3
- ENT 6186  Strategic Market Assessment 3
- ENT 6947  Applied Topics in Entrepreneurship 3
- ENT 6606  Product Development 3
- ENT 6415  Venture Capital and Private Equity 3

All Concurrent Degree 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.

**Total Combined hours after sharing: 60 hours***

*See note regarding the 60 hours minimum after sharing credits

**COURSES**

[https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.usf.edu/course-inventory/)
SECTION 18

COLLEGE OF
GRADUATE STUDIES
(ADMINISTERED BY THE OFFICE OF GRADUATE STUDIES)
Changes to Note

Graduate Council approved the following changes on the date noted.

Major

Cybersecurity       M.S.       Change Major: curriculum       12/4/17
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)
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 Admission and English Proficiency requirements, as well as requirements for admission to the major, listed below.

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

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<th>Credits</th>
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<tr>
<td>EEL 6935</td>
<td>3</td>
<td>Special Topics: Data Networks, Sys &amp; Securities (Proposed EEL 6808; pending SCNS approval)</td>
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<tr>
<td>MAT 5932</td>
<td>3</td>
<td>Special Topics: Applied Cryptography</td>
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<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>
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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.

<table>
<thead>
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<th>Credits</th>
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<tr>
<td>CJE 6688</td>
<td>3</td>
<td>Cybercrime and Criminal Justice</td>
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<tr>
<td>CJE 6627</td>
<td>3</td>
<td>Digital Evidence Recognition and Collection</td>
</tr>
<tr>
<td>CJE 6624</td>
<td>3</td>
<td>Introduction to Digital Evidence</td>
</tr>
<tr>
<td>CJE 6625</td>
<td>3</td>
<td>Network Forensic Criminal Investigations</td>
</tr>
<tr>
<td>CJE 6626</td>
<td>3</td>
<td>Digital Forensic Criminal Investigations</td>
</tr>
</tbody>
</table>
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:
EEL 6764 3 Principles of Computer Architecture
COP 6611 3 Operating Systems
COT 6405 3 Introduction to the Theory of Algorithms
CIS 6930 3 Special Topics: Computer Systems Security (New Course Number Pending)
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.

LIS 6107 3 Advanced Professional and Technical Communication for Analysts
LIS 6700 3 Information Strategy & Decision Making
LIS 6703 3 Core Concepts in Intelligence
LIS 6702 3 Advanced Intelligence Analytic Methods
LIS 6709 3 Cyber Intelligence
LIS 6670 3 Advanced Cyber intelligence

Information Assurance - 15 hours

Area of emphasis in securing critical information and systems. The concentration requires students to take five out of the following six courses:
ISM 6124 3 Advanced Systems Analysis and Design
ISM 6145 3 Seminar on Software Testing (prerequisite: ISM 6124)
ISM 6218 3 Advanced Database Management
ISM 6316 3 Project Management
BUL 5842 3 Risk Management and Legal Compliance
ACG 6457 3 Accounting Systems Audit, Control and Security (prerequisite: BUL 5842)

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/
COLLEGE OF MARINE SCIENCE
Changes to Note

There were no curricular changes for 2018-2019.
University of South Florida
College of Marine Science
140 7th Avenue S, MSL119
St. Petersburg, FL 33701

Web address: http://www.marine.usf.edu/
Email: marinescience@usf.edu
Phone: 727-553-1130
Fax: 727-553-1189

College Dean: Jacqueline E. Dixon, Ph.D.
Associate Dean: Gary Mitchum, Ph.D.
Director of Academic Affairs: David F. Naar, Ph.D.

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 – presently 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

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 Admission and English Proficiency requirements 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

- Bachelor’s degree or equivalent from a regionally accredited university (Preferable majors include biology, chemistry, geology, physics, and math).

- 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 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

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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCB 6050</td>
<td>Biological Oceanography</td>
<td>3</td>
</tr>
<tr>
<td>OCC 6050</td>
<td>Chemical Oceanography</td>
<td>3</td>
</tr>
<tr>
<td>OCG 6051</td>
<td>Geological Oceanography</td>
<td>3</td>
</tr>
<tr>
<td>OCP 6050</td>
<td>Physical Oceanography</td>
<td>3</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>Fish Biology</td>
<td>3</td>
</tr>
<tr>
<td>Dynamics of Marine Ecosystems</td>
<td>3</td>
</tr>
<tr>
<td>Applied Multivariate Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>

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.

http://www.marine.usf.edu/
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 https://www.systemacademics.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)
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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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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 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.

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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.

Marine Resource Assessment
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ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements 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 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

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 degree

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.

Dissertation 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 https://www.systemacademics.usf.edu/course-inventory/
See http://www.marine.usf.edu/students/courses-offered
Changes to Note

Graduate Council approved the curriculum as noted on the date below.

### Degree Program Suspension

<table>
<thead>
<tr>
<th>Program</th>
<th>Degree</th>
<th>Change</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>Rehabilitation Sciences Ph.D.</td>
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</tr>
</tbody>
</table>

### All Majors

Remove University Admission and English Proficiency requirements that are listed elsewhere in the Catalog.

### Majors

<table>
<thead>
<tr>
<th>Major</th>
<th>Degree</th>
<th>Change Major</th>
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</thead>
<tbody>
<tr>
<td>Athletic Training</td>
<td>M.S.</td>
<td>update curriculum</td>
<td>4/2/18</td>
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<tr>
<td>Biotechnology</td>
<td>M.S.B.</td>
<td>update admissions, core</td>
<td>4/2/18</td>
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<tr>
<td>Health Informatics</td>
<td>M.S.H.I.</td>
<td>course updates; curriculum</td>
<td>4/2/18</td>
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<tr>
<td>Medical Sciences</td>
<td>M.S.M.S.</td>
<td>Anatomy Concentration</td>
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<tr>
<td>Physician Assistant Studies</td>
<td>M.P.A.S.</td>
<td>update admissions, curriculum, core</td>
<td>1/8/18</td>
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</tbody>
</table>

### New Certificates

<table>
<thead>
<tr>
<th>Certificate</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>Hand and Upper Limb Rehabilitation (XUL)</td>
<td>3/5/18</td>
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### Concurrent Degrees

<table>
<thead>
<tr>
<th>Degree Options</th>
<th>Change</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>Biomedical Engineering (Ph.D.) and Medicine (M.D.)</td>
<td>Non-substantive updates</td>
<td></td>
</tr>
<tr>
<td>Public Health (M.P.H.) and Physical Therapy (D.P.T.)</td>
<td>Terminate Concurrent Degree option</td>
<td>12/4/18</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 interdisciplinary 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.)
*refer to the USF Medical School or the College of Engineering for information.

Graduate Certificates:
- Aging and Neuroscience
- Anatomy
- Biochemistry & Molecular Biology – inactive for admissions
- Bioinformatics
- Biotechnology
- Brain Fitness and Memory Management
- Cardiovascular Engineering – inactive for admissions
- Clinical Investigation
- Hand and Upper Limb Rehabilitation (XUL)
- Health Analytics
- Health Informatics
- Health Sciences
- Integrative Health Coaching – inactive for admissions
- Integrative Oncology – inactive for admissions
- Medical Biochemistry, Microbiology and Immunology – inactive for admissions
- Medicine and Gender
- Molecular Medicine – inactive for admissions
- 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
www.usathletictraining.com

USF Athletic Training Admissions Office – Professional Degree Program
Attn: Angela Moore
13220 USF Laurel Drive, MDF 5th Floor, MDC106,
Tampa, FL 33612

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 Admission and English Proficiency requirements, as well as requirements for admission to the major, listed below.

- 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 6626 3 Capstone Project I
ATR 6446 3 Medical Conditions of Adolescents
ATR 6627 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 6626 Capstone Project I & ATR 6627 Capstone Project 2). 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/
ATHLETIC TRAINING

Master of Science (M.S.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:

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<thead>
<tr>
<th>Season</th>
<th>Deadline</th>
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<tbody>
<tr>
<td>Fall</td>
<td>No Admission</td>
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<tr>
<td>Spring</td>
<td>No Admission</td>
</tr>
<tr>
<td>Summer</td>
<td>February 15</td>
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</tbody>
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International applicant deadlines: [http://www.grad.usf.edu/majors](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](http://www.grad.usf.edu)
[www.usfathletictraining.com](http://www.usfathletictraining.com)

USF Athletic Training Admissions Office – Professional Degree Program
Attn: Angela Moore
13220 USF Laurel Drive, MDF 5th Floor, MDC106,
Tampa, FL 33612

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 Board of Certification examination.

Major Research Areas:
Athletic Training, Rehabilitation, Biomechanics, Prevention of Sudden Death in Athletics

ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements, as well as requirements for admission to the major, listed below.

- 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](https://atcas.liaisoncas.com/applicant-ux/#/login)
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 – 51 hours

Additional courses – 6 hours

Elective Practicum – 3 hours

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ATR 5105C</td>
<td>Athletic Training Techniques</td>
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<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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<tr>
<td>ATR 5348C</td>
<td>Health and Wellness Promotion across the Lifespan III</td>
<td>1</td>
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<tr>
<td>ATR 5306C</td>
<td>Therapeutic Interventions I</td>
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<tr>
<td>ATR 5307C</td>
<td>Therapeutic Interventions II</td>
<td>4</td>
</tr>
<tr>
<td>ATR 5308C</td>
<td>Therapeutic Interventions III</td>
<td>1</td>
</tr>
<tr>
<td>ATR 5346C</td>
<td>Health and Wellness Promotion across the Lifespan I</td>
<td>3</td>
</tr>
<tr>
<td>ATR 5347C</td>
<td>Health and Wellness Promotion across the Lifespan II</td>
<td>1</td>
</tr>
<tr>
<td>ATR 5435</td>
<td>Medical Conditions</td>
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</tr>
<tr>
<td>ATR 5534</td>
<td>Documentation in Athletic Training</td>
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</tr>
<tr>
<td>ATR 5612</td>
<td>Evidence Based Medicine in Athletic Training</td>
<td>2</td>
</tr>
<tr>
<td>ATR 6114</td>
<td>Preventing Sudden Death in Sport I</td>
<td>2</td>
</tr>
<tr>
<td>ATR 6115</td>
<td>Preventing Sudden Death in Sport II</td>
<td>2</td>
</tr>
<tr>
<td>ATR 6226</td>
<td>Advanced Athletic Training</td>
<td>3</td>
</tr>
<tr>
<td>ATR 6517</td>
<td>Professional Practice</td>
<td>4</td>
</tr>
<tr>
<td>ATR 6616</td>
<td>Research in Athletic Training</td>
<td>3</td>
</tr>
<tr>
<td>ATR 6835</td>
<td>Clinical Experience in Athletic Training III</td>
<td>3</td>
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Additional Course Requirements –6 hours minimum

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<tr>
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<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ATR 5815</td>
<td>Clinical Experience in Athletic Training I</td>
<td>1-3</td>
</tr>
<tr>
<td>ATR 5825</td>
<td>Clinical Experience in Athletic Training II</td>
<td>1-3</td>
</tr>
<tr>
<td>ATR 6845</td>
<td>Clinical Experience IV</td>
<td>1-3</td>
</tr>
</tbody>
</table>

Elective –3 hours minimum

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATR 5835</td>
<td>Clinical Practicum in Athletic Training (proposed course)</td>
<td>1-3</td>
</tr>
</tbody>
</table>

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 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 (ATR6616).

**Other Information:**
Graduation Requirements - Students will complete all 60 hours of didactic coursework with a minimum GPA of 3.00. Twelve (12) of these hours will be in Clinical Experience/Clinical Practicum. Students will complete at least 1000 hours of clinical education under an approved Preceptor.

Sequence: [http://health.usf.edu/medicine/orthopaedic/athletictraining/professional/curriculum](http://health.usf.edu/medicine/orthopaedic/athletictraining/professional/curriculum)

**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

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 Admission and English Proficiency requirements, 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:
  - Calculus I-III
  - Linear algebra

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:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GMS 7930</td>
<td>Principles of Molecular Medicine Sec I &amp; II</td>
<td>4</td>
</tr>
<tr>
<td>GMS 7930</td>
<td>Python Programming</td>
<td>3</td>
</tr>
<tr>
<td>BCH 6886</td>
<td>Fundamentals of Structural Bioinformatics</td>
<td>4</td>
</tr>
<tr>
<td>GMS 7930</td>
<td>Applied Bioinformatics</td>
<td>3</td>
</tr>
<tr>
<td>BSC 6932</td>
<td>Computational Biology</td>
<td>3</td>
</tr>
<tr>
<td>GMS 6901</td>
<td>Research Ethics</td>
<td>1</td>
</tr>
<tr>
<td>PHC 6050</td>
<td>Biostatistics I</td>
<td></td>
</tr>
<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**

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
Epidemiology & Biostatistics/CPH:

- PHC 6051 Biostatistics II 3
- PHC 6053 Categorical Data Analysis 3
- PHC 6054 Design of Experimental Studies for Health Researchers 3
- PHC 6057 Biostatistical Inference I 3

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

COURSES
See [http://ugs.usf.edu/course-inventory](http://ugs.usf.edu/course-inventory)
BIOTECHNOLOGY

Master of Science in Biotechnology (M.S.B.) Degree

<table>
<thead>
<tr>
<th>DEGREE INFORMATION</th>
<th>CONTACT INFORMATION</th>
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<tbody>
<tr>
<td><strong>Priority Admission Application Deadlines:</strong></td>
<td>College: Medicine</td>
</tr>
<tr>
<td><strong>Fall:</strong> June 1</td>
<td>Department: Molecular Medicine</td>
</tr>
<tr>
<td><strong>Spring:</strong> October 15</td>
<td></td>
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<td><strong>Summer:</strong> February 15</td>
<td>Contact Information:</td>
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<tr>
<td><strong>International applicant deadlines:</strong></td>
<td><a href="http://www.grad.usf.edu">www.grad.usf.edu</a></td>
</tr>
<tr>
<td><a href="http://www.grad.usf.edu/majors">http://www.grad.usf.edu/majors</a></td>
<td><a href="mailto:biotech@health.usf.edu">biotech@health.usf.edu</a></td>
</tr>
<tr>
<td><strong>In select cases, late admission is possible.</strong></td>
<td>Other Resources:</td>
</tr>
<tr>
<td><strong>Minimum Total Hours:</strong> 36</td>
<td>Website:</td>
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<td><strong>Level:</strong> Masters</td>
<td><a href="http://health.usf.edu/medicine/">http://health.usf.edu/medicine/</a></td>
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<td><strong>Dept Code:</strong> MED</td>
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<td><strong>Major/College Codes:</strong> MSB MD</td>
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<td><strong>Approved:</strong> 2007</td>
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</table>

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 Admission and English Proficiency requirements, 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 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 a course-by-course transcript evaluation, see Office of Admissions
- A completed USF Application to Graduate Studies

*The GRE may be waived in special circumstances where the applicant can demonstrate substantial graduate level experience. This experience can include (but is not limited to) a post-graduate degree, 2-3 years of research and/or development experience in an academic or industrial settings, or participation in research projects leading to published papers. The decision on the waiver of GRE will be at the Graduate Director’s discretion.
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 fulfill certain 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

Core – 21 credit hours
Electives – 12 credit hours
Internship – 3 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. Twenty-four credits of core courses will provide the foundation and basics and include an internship. Twelve credits of electives allow the curriculum to 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, 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 choose from available graduate 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 – 17 hours
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
GMS 6194 Biotechnology Forum  1cr
GMS 6066 Basic Principles in Molecular Medicine Sec I & II  4cr

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 - 12 hours
Students may select from the lists below, or other courses based on availability and approval by the Graduate Director.
### Science:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>GMS 6773</td>
<td>Stem Cells in Brain Repair</td>
<td>3</td>
</tr>
<tr>
<td>GMS 6513</td>
<td>Principles of Pharmacology and Therapeutics</td>
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</tr>
<tr>
<td>GMS 6771</td>
<td>Aging and Neuroscience</td>
<td>3</td>
</tr>
<tr>
<td>GMS 6114</td>
<td>Vaccines and Applied Immunology</td>
<td>2</td>
</tr>
<tr>
<td>GMS 7939</td>
<td>Graduate Seminar</td>
<td>1</td>
</tr>
<tr>
<td>GMS 6141</td>
<td>Basic Medical Microbiology/Immunology</td>
<td>3</td>
</tr>
<tr>
<td>GMS 6115</td>
<td>Medical Parasitology and Mycology</td>
<td>3</td>
</tr>
<tr>
<td>GMS 6110</td>
<td>Microbial Pathogenesis and Host parasite interactions</td>
<td>3</td>
</tr>
<tr>
<td>BCH 6746</td>
<td>Structural Biology</td>
<td>3</td>
</tr>
<tr>
<td>GMS 6103</td>
<td>Foundations in Med Microbiology &amp; Immunology</td>
<td>4</td>
</tr>
<tr>
<td>GMS 7930</td>
<td>Applied Bioinformatics</td>
<td>3</td>
</tr>
<tr>
<td>BMD 6627</td>
<td>Molecular Basis of Disease</td>
<td>4</td>
</tr>
<tr>
<td>GMS 6101</td>
<td>Molecular Cellular Immunology</td>
<td>3</td>
</tr>
<tr>
<td>GMS 6012</td>
<td>Basic Medical Genetics</td>
<td>3</td>
</tr>
<tr>
<td>GMS 6107</td>
<td>Advances in Virology</td>
<td>2</td>
</tr>
<tr>
<td>BCH 6886</td>
<td>Fundamentals of Structural Bioinformatics</td>
<td>4</td>
</tr>
<tr>
<td>GMS 7930</td>
<td>Python Programming</td>
<td>3</td>
</tr>
<tr>
<td>GMS 7930</td>
<td>FDA Regulations</td>
<td>2</td>
</tr>
<tr>
<td>GMS 7910</td>
<td>Directed Research</td>
<td>1-4</td>
</tr>
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</table>

### Engineering:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMD 6931</td>
<td>Intro to Bioengineering</td>
<td>3</td>
</tr>
<tr>
<td>BME 6000</td>
<td>Biomedical Engineering I</td>
<td>3</td>
</tr>
<tr>
<td>BME 6931</td>
<td>Biomedical Engineering II</td>
<td>3</td>
</tr>
<tr>
<td>BME 6107</td>
<td>Biomaterials I: Material Properties</td>
<td>3</td>
</tr>
<tr>
<td>BME 6108</td>
<td>Biomaterials II: Biocompatibility</td>
<td>3</td>
</tr>
<tr>
<td>BME 6634</td>
<td>Biotransport Phenomena</td>
<td>3</td>
</tr>
<tr>
<td>ECH 6417</td>
<td>Bioseparations</td>
<td>3</td>
</tr>
<tr>
<td>ECH 5740</td>
<td>Theory and Design of Bioprocesses</td>
<td>3</td>
</tr>
<tr>
<td>BME 5040</td>
<td>Pharmaceutical Engineering</td>
<td>2</td>
</tr>
<tr>
<td>ENV 6667</td>
<td>Environmental Biotechnology</td>
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</table>

### Public Health:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHC 6310</td>
<td>Environmental Occupational Toxicology</td>
<td>3</td>
</tr>
<tr>
<td>PHC 6050</td>
<td>Biostatistics I</td>
<td>3</td>
</tr>
<tr>
<td>PCH 6051</td>
<td>Biostatistics II</td>
<td>3</td>
</tr>
<tr>
<td>PHC 6000</td>
<td>Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>PHC 6017</td>
<td>Design and Conduct of Clinical Trials</td>
<td>3</td>
</tr>
</tbody>
</table>

### Business/Law:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENT 6186</td>
<td>Strategic Market Assessment for New Technologies</td>
<td>3</td>
</tr>
<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>Entrepreneurship Strategy</td>
<td></td>
</tr>
<tr>
<td>ENT 6415</td>
<td>Fundamentals of Venture Capital and Private Equity in Entrepreneurship</td>
<td>3</td>
</tr>
<tr>
<td>GMS 6095</td>
<td>Principles of Intellectual Property</td>
<td>3</td>
</tr>
<tr>
<td>GMS 6933</td>
<td>Case Studies: Intellectual Property in Biotechnology</td>
<td>2</td>
</tr>
</tbody>
</table>
Comprehensive Exam/Internship:
GMS 6943  Biotechnology Internship  3cr
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.

SEQUENCE
Required Courses:

<table>
<thead>
<tr>
<th>Fall Semester</th>
<th>11 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GMS 7930</td>
<td>Basic Principles in Molecular Medicine Set I &amp; II</td>
</tr>
<tr>
<td>BSC 6436</td>
<td>Introduction to Biotechnology</td>
</tr>
<tr>
<td>BCH 6135C</td>
<td>Methods in Molecular Biology</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spring Semester</th>
<th>7 hours</th>
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<tbody>
<tr>
<td>GMS 6194</td>
<td>Biotech Forum</td>
</tr>
<tr>
<td>GMS 6847</td>
<td>Translational Biotechnology</td>
</tr>
<tr>
<td>EIN 6106</td>
<td>Technology and Law</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUMMER</th>
<th>6 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GMS 6943</td>
<td>Biotechnology Internship (all semesters)</td>
</tr>
<tr>
<td>BSC 6437</td>
<td>Biotechnology and Bioethics</td>
</tr>
</tbody>
</table>

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

Refer to individual Majors for deadlines
Minimum Total Hours: 57
Level: Masters
CIP Code: 26.1201
Dept Code: MED
Major/College Codes: MSB MD

CONTACT INFORMATION

Colleges: Business and Medicine
Department: Center for Entrepreneurship and Molecular Medicine
Contact Information: www.grad.usf.edu

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 Admission and English Proficiency requirements, 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 3.00 on a 4.00 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>
<td>5</td>
</tr>
<tr>
<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>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>Elective from Biotechnology Major</td>
<td>3</td>
</tr>
<tr>
<td>GMS 7939</td>
<td>Graduate Seminar</td>
<td>1</td>
</tr>
<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>
</tr>
<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>
</tr>
<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>
</tr>
<tr>
<td>GEB 6930</td>
<td>Adv Topics in Entrepreneurship/Internship</td>
<td>3</td>
</tr>
<tr>
<td>GEM 7930</td>
<td>Biomedical Ethics</td>
<td>3</td>
</tr>
<tr>
<td>GMS 6141</td>
<td>Basic Medical Microbiology/Immunology</td>
<td>3</td>
</tr>
<tr>
<td>GMS 6115</td>
<td>Medical Parasitology and Mycology</td>
<td>3</td>
</tr>
<tr>
<td>GMS 6110</td>
<td>Microbial Pathogenesis and Host Parasite Interaction</td>
<td>3</td>
</tr>
</tbody>
</table>

**COURSES**

See [http://ugs.usf.edu/course-inventory](http://ugs.usf.edu/course-inventory)

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

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 Admission and English Proficiency requirements, 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.

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. Contact the program and International Admissions for more information on which visas are eligible to apply to this major.

CURRICULUM REQUIREMENTS

Total Minimum Hours 32 credit hours
### CORE REQUIREMENTS

<table>
<thead>
<tr>
<th>Course ID</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIM 6667</td>
<td>Foundation in Management Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>HIM 6017</td>
<td>Legal Aspects of Health Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>HIM 6217</td>
<td>Health Data Management</td>
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</tr>
<tr>
<td>HIM 6018</td>
<td>e-Healthcare Ethics</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>
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<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIM 6840</td>
<td>Case Studies in Health Information Management</td>
<td>3</td>
</tr>
<tr>
<td>HIM 6118</td>
<td>Introduction to Health Informatics</td>
<td>3</td>
</tr>
<tr>
<td>HIM 6350</td>
<td>E-Medicine Business Models</td>
<td>3</td>
</tr>
<tr>
<td>HIM 6114</td>
<td>Integrated Electronic Medical Records</td>
<td>3</td>
</tr>
<tr>
<td>HIM 6320</td>
<td>Managerial Communication</td>
<td>3</td>
</tr>
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#### Healthcare Analytics Concentration (15 hours):

<table>
<thead>
<tr>
<th>Course ID</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIM 6141</td>
<td>Introduction to Healthcare Analytics</td>
<td>3</td>
</tr>
<tr>
<td>HIM 6628</td>
<td>Health Data Visualization</td>
<td>3</td>
</tr>
<tr>
<td>HIM 6623</td>
<td>Statistics for Healthcare Analytics</td>
<td>3</td>
</tr>
<tr>
<td>HIM 6655</td>
<td>Healthcare Data Mining and Predictive Analytics</td>
<td>3</td>
</tr>
<tr>
<td>HIM 6844</td>
<td>Health Outcomes Research</td>
<td>3</td>
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</table>

#### 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
  - HIM 6141 Introduction to Healthcare Analytics 3
  - HIM 6686 Healthcare Decision Support 3
  - HIM 6844 Health Outcomes Research 3
  - HIM 6664 Healthcare Project Management 3
  - HIM 6477 Medical Terminology for Health Informatics Professionals 3

**Concentration Electives (6 hours)**

- Two or more required:
  - HIM 6686 Healthcare Decision Support 3
  - HIM 6629 Applied Healthcare Analytics 3
  - HIM 6908 Health Informatics Independent Study 3
  - HIM 6671 Advanced Healthcare Analytics Applications 3
  - HIM 6943 Health Informatics Internship 3
  - HIM 6118 Introduction to Health Informatics 3
  - HIM 6477 Medical Terminology for Health Informatics Professionals 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

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 Admission and English Proficiency requirements, 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
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

APPLICATION PROCEDURES
Please refer to http://health.usf.edu/medicine/graduatestudies/mscus/apply_domestic.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
GMS7935   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
GMS 6908 Medical Science in Anatomy Independent Study 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>
</tr>
<tr>
<td>or another Basic Science course for 3 credits with approval</td>
<td></td>
<td></td>
</tr>
<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>
</tr>
<tr>
<td>GMS6921</td>
<td>Colloquium on Building a Successful Academic Patient-Oriented Research Career</td>
<td>1</td>
</tr>
<tr>
<td>Mentored Clinical and Translational Research/Directed Research</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Electives/Mentored Clinical and Translational Research/Directed Research</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

### 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>
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
- GMS6707 Medical Neuroscience 6 credits
- GMS6411 Cardiovascular and Pulmonary Systems 6 credits
- GMS6419 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
- GMS6141 Basic Medical Microbiology and Immunology 3 credits
- GMS7930 Selected Topics 1-3 credits
- GMS6908 Medical Sciences Independent Study 1-3 credits

Total minimum hours: 31

MEDICAL MICROBIOLOGY AND IMMUNOLOGY - currently inactive for admissions

Core Course
- GMS6200C Biochemistry, Cell & Molecular Biology 5

Required Courses
- GMS6100C Medical Microbiology 3
- GMS7930 Medical Parasitology and Mycology 2
- GMS6101 Molecular and Cell Immunology 3
- GMS6107 Adv in Virology 2
- GMS6110 Microbial Pathogenesis and Host-parasite Interactions 3
- BCH6411 Biomedical Genomics and Genetics 4
### Electives

Select one course of the following (2 hrs minimum):

- BCH6935 Grant Writing and Scientific Communication 2
- BSC6436 Intro to Biotech 3
- GMS6876 Current Topics in Molecular Medicine 1

Select one or more from the following (9 hrs minimum):

- GMS7910 Directed Research 3-9
- GMS6114 Vaccines and Applied Immunology 2
- BCH6135C Methods in Molecular Biology 4
- BCH6420 Clinical Correlations in Molecular Medicine 3

Total minimum hours: 32

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### METABOLIC AND NUTRITIONAL MEDICINE – not currently available

Total Minimum Hours: 32

**Core Courses (2 hours)**

- GMS 6871 Health Sciences Ethics 2

**Required Courses**

- GMS6455 Clinical Intensives in Metabolic and Nutritional Medicine 3
- GMS6441 Clinical Approach to Endocrinology 3
- GMS6543 Diabetes and Coronary Heart Disease 3
- GMS6751 Integrated Clinical Neurobiology 3
- GMS6451 Nutrition and Metabolism 3
- GMS6454 Functional Medicine and Infectious Disease 3
- GMS6752 Autoimmune Diseases and Cognitive Function 3
- GMS6340 Laboratory Fundamentals and Adjunct Cancer Therapies 3

**Electives**

- GMS 6240 Metabolic Approaches to Pediatrics 3
- GMS 6550 Introduction to IV Therapies 3
- GMS 6310 Toxic Metal and Functional Toxicology 3
- GMS 6770 A Metabolic Approach to Pain Management 3
- GMS6753 The Basics of Brain Fitness and Memory Management 3
- GMS 6331 Stem Cell Biology 3
- GMS 6456 Integrated Bariatrics 3
- GMS 7930 Selected Topics 3
- GMS 6908 Medical Sciences Independent Study 3
- GMS7910 Directed Research 3
- GMS 6053 Cancer Prevention 3
- GMS 6055 Cancer Immunology 3
- GMS 6408 Cardiovascular Disease 3
- GMS 6410 Cardiovascular Health 3
- GMS 6411 Metabolic Cardiology 3
- GMS 6709 Neuropsychiatry 3
- GMS 6715 Lifestyle Coaching 3
- GMS 6716 Nutrition Counseling 3
- GMS 6717 Co-Active Coaching 3
- GMS 6718 Integrated Lifestyle Medicine 3
- GMS 6720 Sports Medicine and Nutrition 3
- GMS 6755 How the Brain Learns 3
- GMS 6756 Brain Fitness Therapies 3

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[http://health.usf.edu/medicine/](http://health.usf.edu/medicine/)
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: 6 hours
GMS6200C  Biochemistry, Molecular and Cellular Biology  1
BCH6935   Grant Writing and Scientific Communication  2
GMS6100  Medical Microbiology  3

Course Requirements:
BCH6411   Biomedical Genomics and Genetics  4
GMS6101  Molecular and Cellular Immunology  3-4
GMS6110  Microbial Pathogenesis and Host-Parasite Interactions 3
GMS7930  Clinical Correlations in Molecular Medicine
BCH6627   Metabolic and Genetic Basis of Human Diseases  3
GMS6114  Vaccines and Applied Immunology

Electives 3
BCH6135C  Methods in Molecular Biology  3
GMS6104  Cellular Immunology  3
GMS6107  Advances in Virology  3
BCH6746   Proteomics and Structural Biology  3
BCH6888  Bioinformatics  3
PHC6050   Biostatistics I  3
BCH6876   Current Topics in Molecular Medicine  3

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 3.00 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
- GMS7930 Women’s Health Lab (1-2 Interd.) 2-3
- Elective 2-3 hours
  
- GMS6334 Pathobiology of Human Cancer 3
- GMS 6452 Clinical Nutrition 3
- PHC6532 Women’s Health Issues 3
- GMS7910 Directed Research (Women’s Health) 3-6 hours Interdisciplinary
- Elective 3
  
- PCH 6050 Biostatistics 3
- GMS7910 Directed Research (Women’s Health) 3-6 hours Interdisciplinary
- Elective 5-6 hours

Comprehensive Exam

COURSES

See http://ugs.usf.edu/course-inventory
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 Admission and English Proficiency requirements, 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</th>
<th>Title</th>
<th>Hours</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</th>
<th>Title</th>
<th>Hours</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 how 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 stroke 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.

http://health.usf.edu/medicine/
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
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

CONTACT INFORMATION

College: Medicine
Department: MD
Contact Information:
www.health.usf.edu/medicine/mdprogram

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.
- **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 subspecialities and simulation training at the Center for Advanced Medical Learning and Simulation (CAMLs) 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.
MEDICINE AND
BIOMEDICAL ENGINEERING
CONCURRENT DEGREES

Doctor of Medicine (M.D.) Degree in Medicine
Doctor of Philosophy (Ph.D.) Degree in Biomedical Engineering and

DEGREE INFORMATION

Priority Admission Application Deadlines:

Fall: November 1
Spring: No Admit
Summer: No Admit

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

CONTACT INFORMATION

Colleges: Engineering/Medicine
Departments: Chemical & Biomedical Engineering; Medicine
Contact Information: www.grad.usf.edu

Minimum Total Hours: 90/
Level: Doctoral/Professional
CIP Code: 14.0501
Dept. Code: ECH
Major/College Codes: EBI EN

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 feels 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 Admission and English Proficiency requirements, as well as requirements for admission to 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
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, students’ 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.
ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements, as well as requirements for 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
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
Must meet University Admission and English Proficiency requirements, 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.
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/

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)**

<table>
<thead>
<tr>
<th>Fall 2</th>
<th>Contact hours @ 19 weeks = 26.6</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PHT 6178</td>
<td>Movement Science 2</td>
<td>3</td>
</tr>
<tr>
<td>PHT 6285</td>
<td>Scientific &amp; Professional Foundations of Physical Therapy 2</td>
<td>3</td>
</tr>
<tr>
<td>PHT 6352</td>
<td>Pharmacology for Healthcare Professionals</td>
<td>4</td>
</tr>
<tr>
<td>PHT 6609</td>
<td>Critical Assessment of the Literature/EBP</td>
<td>3</td>
</tr>
<tr>
<td>PHT 7264</td>
<td>Neuromuscular Clinical Problem Solving</td>
<td>3</td>
</tr>
<tr>
<td>PHT 7265</td>
<td>Cardiopulmonary &amp; Integumentary Clinical Problem Solving (year-long, concludes in Spring)</td>
<td>0</td>
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<tr>
<td>PHT 7421</td>
<td>Professional Issues 1</td>
<td>2</td>
</tr>
<tr>
<td>PHT 7540A</td>
<td>Principles of Patient/Client Management &amp; Seminar 1</td>
<td>1</td>
</tr>
<tr>
<td>PHT 7866</td>
<td>Integrated Clinical Experience 1</td>
<td>1</td>
</tr>
<tr>
<td>Spring 2</td>
<td>Contact hours @ 15 weeks = 22.7</td>
<td>20</td>
</tr>
<tr>
<td>PHT 7265</td>
<td>Cardiopulmonary &amp; Integumentary Clinical Problem Solving (year-long, continued from Fall)</td>
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</tr>
<tr>
<td>PHT 7328</td>
<td>Pediatric Physical Therapy</td>
<td>3</td>
</tr>
<tr>
<td>PHT 7402</td>
<td>Psychosocial Aspects of Physical Therapy Practice</td>
<td>3</td>
</tr>
<tr>
<td>PHT 7531</td>
<td>Professional Issues 2</td>
<td>3</td>
</tr>
<tr>
<td>Course</td>
<td>Title</td>
<td>Credit</td>
</tr>
<tr>
<td>----------</td>
<td>-------------------------------------------------</td>
<td>--------</td>
</tr>
<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>
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<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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</table>

**Year 3 (43 weeks)**

<table>
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<tr>
<th>Term</th>
<th>Contact hours @ 15 weeks = 26.5</th>
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<tbody>
<tr>
<td>Fall 3</td>
<td>PHT 7151 Health Promotion and Wellness</td>
</tr>
<tr>
<td></td>
<td>PHT XXXX Seminar: Contemporary Issues in Physical Therapy</td>
</tr>
<tr>
<td></td>
<td>PHT 8179 Movement Science 3</td>
</tr>
<tr>
<td></td>
<td>PHT 8266 Advanced Clinical Problem Solving</td>
</tr>
<tr>
<td></td>
<td>PHT 8550 Professional Issues 3</td>
</tr>
<tr>
<td></td>
<td>PHT 8702 Prosthetics and Orthotics</td>
</tr>
<tr>
<td></td>
<td>* Optional Elective</td>
</tr>
</tbody>
</table>

| Spring / Summer 3 | Clinical Education 2 (12 weeks @ 40 hours) | 6      |
|                  | Clinical Education 3 (16 weeks @ 40 hours)  | 8      |

| Graduation in August of Year 3 | 122 |

**Comprehensive / Qualifying Exam Information**

Licensure Examination following graduation and prior to initiating practice – the National Physical Therapy Examination (NPTE)
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.

<table>
<thead>
<tr>
<th>Minimum Total Hours:</th>
<th>Contact departments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level:</td>
<td>Professional/Masters</td>
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<tr>
<td>Status:</td>
<td>Active</td>
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<tr>
<td>CIP Codes:</td>
<td>51.2308/</td>
</tr>
<tr>
<td>Dept Code:</td>
<td>PHT/</td>
</tr>
<tr>
<td>Major/College Codes:</td>
<td>MPT MD</td>
</tr>
</tbody>
</table>

CONTACT INFORMATION

Colleges: Medicine and Public Health
Departments: School of Physical Therapy and Rehabilitation Sciences and Public Health
Contact Information: www.grad.usf.edu

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 enrolment 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 Admission and English Proficiency requirements, 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.
- 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 accepted.
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/

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.)
- Degree and prerequisite coursework taken outside of the U.S. is not accepted (regardless if made equivalent by a U.S. institution).
- Overall GPA of 3.0 and Science GPA 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.
- GRE Scores are to be sent directly to CASPA. The Univ South Florida PA Prgm CASPA GRE code 8854. (DO NOT use USF institution code of 5828).
- 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 Coursework
- CLEP (College Level Examination Program), AP (Advanced Placement), IB (International Baccalaureate), and AICE (Advanced International Certificate of Education) course credit may not be used or substituted to meet prerequisite requirements. Dual enrollment course credits from an accredited college or university are acceptable for prerequisites.
- Prerequisite coursework must be completed by the end of the fall semester preceding matriculation.
- Courses designed for non-science majors will not be accepted.
- All prerequisites are required for an applicant to be considered for acceptance into the PA program.
- Veterans are encouraged to apply, and as all other applicants, must meet all the prerequisites for admissions. Veterans with questions regarding prerequisite course work should contact the PA program. Please provide a copy of the Joint Services Transcript with course descriptions to determine if the course in question satisfies the prescribed prerequisite.
- The courses listed below are required for acceptance into the PA program.
  - Biology with Laboratory – 1 semester
  - Microbiology with Laboratory – 1 semester
  - Chemistry with Laboratory – 2 semesters
  - Organic Chemistry with Laboratory – 1 semester
  - Organic Chemistry II OR Biochemistry – 1 semester
  - Anatomy & Physiology with Laboratory – 2 semesters
  - Medical Terminology – 1 semester or course

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.
- Hands-on patient care experiences may come from a variety of places. The extent to which an applicant is actually involved in patient care will be weighed based on the description of the applicant’s duties during those hours. The title of a position is not as important as the duties the applicant performed in terms of patient contact and interaction with the patients and other healthcare providers (physicians, PAs, nurses, etc.)
- Example as of direct patient care experiences may include, but are not limited to EMT, paramedic, medical assistant, scribe, patient care tech, nurse, surgical tech, athletic trainer, physical therapy aide, etc.
- Applicants will submit verifiable information regarding their health care experiences on CASPA.
- Shadowing experiences are not accepted as direct patient care.

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: 90 hours post-baccalaureate

Curriculum for Year 1

Summer – 18 Credits

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anatomy I</td>
<td>2</td>
</tr>
<tr>
<td>Pathophysiological Basis of Disease I</td>
<td>3</td>
</tr>
<tr>
<td>Clinical Medicine I</td>
<td>5</td>
</tr>
<tr>
<td>Clinical Pharmacology I</td>
<td>3</td>
</tr>
<tr>
<td>Physical Diagnosis I</td>
<td>2</td>
</tr>
<tr>
<td>Role of the Physician Assistant in American Healthcare</td>
<td>1</td>
</tr>
<tr>
<td>Clinical Laboratory and Diagnostics I</td>
<td>2</td>
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</tbody>
</table>

Fall – 18 Credits

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
</tr>
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<tr>
<td>Anatomy II</td>
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<td>Pathophysiological Basis of Disease II</td>
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<td>Clinical Medicine II</td>
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<td>Clinical Pharmacology II</td>
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<tr>
<td>Physical Diagnosis II</td>
<td>2</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

<table>
<thead>
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<tr>
<td>Clinical Medicine III</td>
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<tr>
<td>Advanced Clinical Pharmacotherapeutics</td>
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<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>
<thead>
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<th>Course Name</th>
<th>Length of Clerkship Weeks</th>
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<tr>
<td>Capstone Research Project</td>
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<tr>
<td>Internal Medicine</td>
<td>5</td>
<td>4</td>
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<tr>
<td>Surgery</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Family Medicine</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Women’s Health</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Emergency Medicine</td>
<td>5</td>
<td>4</td>
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<tr>
<td>Behavioral and Mental Health</td>
<td>5</td>
<td>4</td>
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<tr>
<td>Elective</td>
<td>10</td>
<td>8</td>
</tr>
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</table>

Core Course Requirements
All courses above.

Electives
Students chose clinical electives in year two of the major.

http://health.usf.edu/medicine/
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 (NCCPA).
REHABILITATION SCIENCES

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
This program is currently suspended for admissions

Minimum Total Hours: 66
Level: Doctoral
CIP Code: 51.2314
Dept Code: SPTRS
Major/College Codes: RHS/MD

CONTACT INFORMATION

College: Medicine
Department: School of Physical Therapy and Rehabilitation Sciences

Contact Information:
www.grad.usf.edu
http://health.usf.edu/medicine/dpt/

Concentrations
Veteran’s Health/Reintegration (VHR)
Chronic Disease (CHD)
Neuromusculoskeletal Disability (NMD)

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 Admission and English Proficiency requirements, 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

Total Minimum Hours:  66 credit hours (post-masters)

Core Requirements  15 hours
- RSD 6111 Introduction to Rehabilitation Science  3
- RSD6112 Advanced Rehabilitation Science  3
- RSD7930 Research Pro-seminar in Rehabilitation Science  2
- RSD7300 Rehabilitation Ethics  3
- RSD7910 Mentored Research Apprenticeship 1 and 2  1-2
- RSD 6921 Colloquium in Rehabilitation Sciences 1 and 2  1-2

Statistics/Research Methods Core  15 hours
- PHC 6051 Biostatistics II  3
- PHC 7936 Seminar in Health Care Outcomes Measurements  3

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  15 hours

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
- MHS 6311 Online Services in Counseling and Helping Professions  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

Other Information:

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4***</th>
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<tbody>
<tr>
<td>Semester</td>
<td>Course</td>
<td>Cr.</td>
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<tr>
<td>Fall</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</td>
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<td>Apprenticeship Concentration</td>
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<td>Spring</td>
<td>Advanced Rehabilitation Sciences</td>
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<td>Mentored Research</td>
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<td>Colloquium 2 Concentration</td>
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<td>Apprenticeship Concentration</td>
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<td>Statistics/Research Methodology</td>
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<tr>
<td></td>
<td>Rehabilitation Ethics Concentration</td>
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<td>Elective(s)</td>
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<tr>
<td></td>
<td>Statistics/Research Methodology</td>
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</table>

* A wide range of electives within the Rehabilitation Sciences major and from other departments on the USF and USF Health campuses are available to students. Student may select electives that complement their course work and provide knowledge and skills that they will find useful upon graduation.

** Once accepted into candidacy, a student may begin work on their dissertation.

*** While some students may complete the PhD requirements in three years, others may require more time to complete all requirements. Fourth year credit hours and courses would be directed toward fulfilling requirement.

COURSES
http://ugs.usf.edu/course-inventory
SECTION 21

COLLEGE OF NURSING

http://health.usf.edu/nursing/
# Changes to Note

The USF Graduate Council approved the following on the dates noted.

## New Majors

<table>
<thead>
<tr>
<th>Major</th>
<th>Degree</th>
<th>Description</th>
<th>Date</th>
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<tbody>
<tr>
<td>Nurse Anesthesia</td>
<td>D.N.P.</td>
<td>New Major under existing CIP 51.3818</td>
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## Changes to Existing Majors

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<th>Major</th>
<th>Degree</th>
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<tr>
<td>Nursing</td>
<td>M.S.</td>
<td>Change Curriculum; updated core</td>
<td>3/5/18</td>
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<tr>
<td>Nursing</td>
<td>D.N.P.</td>
<td>Add adv. Practice to admissions, update courses</td>
<td>3/5/18</td>
</tr>
<tr>
<td>Nursing Science</td>
<td>Ph.D.</td>
<td>Add continuous enrollment policy</td>
<td>3/5/18</td>
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## Concurrent Degree Options

<table>
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<tr>
<th>Major</th>
<th>Description</th>
<th>Date</th>
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<tbody>
<tr>
<td>Nursing M.S./Public Health MPH</td>
<td>Terminated concurrent degree option</td>
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## Certificates

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<tr>
<td>Advanced Pain Management</td>
<td>Change Certificate Title to <em>Simulation Based Academic Fellowship in Advanced Pain Management</em></td>
<td>9/25/17</td>
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[http://health.usf.edu/nursing/](http://health.usf.edu/nursing/)
University of South Florida  
College of Nursing  
12901 Bruce B. Downs Blvd. MDC22  
Tampa, FL 33612

Web address: [http://health.usf.edu/nocms/nursing/](http://health.usf.edu/nocms/nursing/)  
Email: nurstudent@health.usf.edu  
Phone: 813-974-2191  
Fax: 813-974-5418

Dean  
Victoria Rich, Ph.D., RN, FAAN

Vice Dean, Academic Programs  
Melanie Michael, D.N.P., M.S., FNP-C, CAPPM, CPHQ

Associate Dean, D.N.P. & Masters/CRNA Programs  
Catherine Gaines-Ling, Ph.D., FNP-BC, FAANP

Director, Student Affairs  
Katherine Mccay, M.S.

Accreditation:  
The Doctor of Nursing Practice program and the master’s degree programs at the University of South Florida are accredited by the Commission on Collegiate Nursing Education, 655 K Street, NW, Suite 750, Washington, DC 20001, 202-887-6791. In addition, the Nurse Anesthesia program 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.)**
- Nurse Anesthesia (NRA)
- Nursing (NRS)
  - Adult-Gerontology Acute Care Nursing (NAG)
  - Adult-Gerontology Primary Care Nursing (NPG)
  - Occupational Health Nursing /Adult-Gerontology Primary Care (NOC)
  - Oncology Nursing (NOA)/Adult-Gerontology Primary Care (NOA)
  - Family Health Nursing (NFH)
  - Pediatric Health Nursing (NPH)

**Doctor of Philosophy (Ph.D.)**
- Nursing Science (NUS)

**Concurrent Degree:**
D.N.P./Ph.D. – 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. and D.N.P. in Nurse Anesthesia Major and for the Ph.D. in Nursing Major.

PROGRESSION POLICY

1. All graduate students with the exception of Ph.D. 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. Ph.D. students only:

2.1. All Ph.D. 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. Ph.D. 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 Ph.D. 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.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: December 15

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

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

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 Admission and English Proficiency requirements, 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:

- 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, and/or, pediatric, 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.

Total Minimum Hours 72 post bachelors

Core Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NGR 6440L</td>
<td>Nurse Anesthesia Simulation Lab I</td>
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<tr>
<td>NGR 6002C</td>
<td>Advanced Health Assessment Across the Lifespan</td>
<td>4</td>
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<tr>
<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 6422</td>
<td>Principles of Nurse Anesthesia throughout the Lifespan</td>
<td>3</td>
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<tr>
<td>NGR 7848</td>
<td>Fundamentals of Statistics for Clinicians</td>
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<tr>
<td>NGR 6442L</td>
<td>Nurse Anesthesia Simulation Lab III</td>
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<td>NGR 6420</td>
<td>Foundations &amp; Methods of Nurse Anesthesia Practice</td>
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<td>Principles of Cardiothoracic Nurse Anesthesia</td>
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<td>Nurse Anesthesia Clinical Residency I</td>
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<td>NGR 6803</td>
<td>Research and Evidence-Based Practice</td>
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<td>NGR 6929</td>
<td>Clinical Correlational Conferences</td>
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<tr>
<td>NGR 6432</td>
<td>Nurse Anesthesia Clinical Residency II</td>
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<td>NGR 6929</td>
<td>Clinical Correlational Conferences</td>
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<tr>
<td>NGR 6492</td>
<td>Nurse Anesthesia Role Development</td>
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<td>Nurse Anesthesia Clinical Residency III</td>
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<td>NGR 6929</td>
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<tr>
<td>NGR 6434</td>
<td>Nurse Anesthesia Clinical Residency IV</td>
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<td>NGR 6929</td>
<td>Clinical Correlational Conferences</td>
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<tr>
<td>NGR 6491</td>
<td>Nurse Anesthesia Practice Comprehensive</td>
<td>2</td>
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</tbody>
</table>

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/)
The major in nursing leading to a Doctor of Nursing Practice degree prepares its graduates for careers as nurse Anesthetists. Successful completion of the Doctor of Nursing Practice’s Nurse Anesthesia degree program qualifies students to take appropriate national certification examinations and apply for state licensure.

Graduate Major Objectives:
1. Develop, implement and evaluate new evidence based practice approaches to caring for patients in the peri-anesthetic environment.
2. Ensure accountability for quality care and patient safety for varied patient populations, displaying sensitivity to various cultural norms in the application of scientific principles of care.
3. Demonstrate the ability to apply appropriate analytics for the evaluation and application of scientific evidence to inform clinical practice.
4. Utilize technological information systems to evaluate outcomes of care, healthcare delivery and quality improvement.
5. Provided the leadership necessary to develop health care policy in order to improve patient safety, improve health care financing, reducing the barriers to pain management and improving patient access to care.
6. Develop trans-disciplinary teams who collaboratively address the health care needs of individuals and populations.
7. Analyze epidemiological, bio-statistical, environmental and occupational data for the development, implementation and evaluation of programs of population health.
8. Provide clinical practice incorporating bio/psycho/social, cultural, economic, ethical and scientific principles.

Accreditation:
Accredited by the Commission on Collegiate Nursing Education. In addition Nurse Anesthesia Doctor of Nursing Practice’s degree program is accredited by the Council of Accreditation of Nurse Anesthesia Educational Programs.
ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements, as well as requirements for admission to the major and requirements listed in the introductory portion of the college catalog section.

- Bachelor of Science degree from a regionally accredited program.
- Competitive applicants to the CRNA Program 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.
- 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 completed prior to matriculation into the program.
- Current Basic Life support (BLS), Advanced Cardiac Life Support (ACLS) certifications are required.
- Critical Care Registered Nurse (CCRN) Certification is highly recommended.

“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), Advanced Cardiac Life Support (ACLS) and Pediatric Advanced Life support (PALS) Certifications must be maintained while in program.
- A personal interview with the CRNA Program Panel is required
- Statement of good physical, mental and emotional health to be verbally provided during interview.

Applicants who do not meet these requirements may petition the Student Affairs Committee for consideration for admission.
CURRICULUM REQUIREMENTS

The D.N.P. 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 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.

Total Minimum Hours - 94 post bachelors

NGR 7892  3  Health Care Policy and Clinical Prevention for Improving Population Health
NGR 7874  3  Informatics and Patient Care Technology
NGR 7766  3  Health Systems Leadership and Interprofessional Practice
NGR 6404  4  Anatomy/Physiology for Nurse Anesthetist
NGR 6157  4  Advanced Physiology and Pharmacology for Nurse Anesthetist
NGR 6002C  4  Advanced Health Assessment Across the Lifespan
NGR 6400  3  Chemistry, Biochemistry and Physics for Nurse Anesthetists
NGR 6152  4  Advanced Pathophysiology
NGR 6460  3  Nurse Anesthesia Pharmacology II
NGR 6420  4  Foundations of Nurse Anesthesia
NGR 6440L  2  Anesthesia Simulation I: Intro to Clinical Practicum
NGR 6492  3  Nurse Anesthesia Role: Practice Management, QI and Patient Safety
NGR 6422  3  Principles of Anesthesia Across the Lifespan
NGR 6423  3  Theoretical Foundations of Nurse Anesthesia: Advanced Principles I
NGR 6444L  1  Nurse Anesthesia Clinical Practicum I
NGR 6431  1  Nurse Anesthesia Clinical Practicum I
NGR 6432  2  Nurse Anesthesia Clinical Practicum II
NGR 6703  3  Research and Evidence Based Practice
NGR 6471  3  Pharmacology of Pain Management
NGR 7974  2  D.N.P. Project: Implementation and Analysis
NGR 6433  4  Nurse Anesthesia Clinical Practicum III
NGR 6472  3  Pharmacology of Pain Management
NGR 7974  2  D.N.P. Project: Proposal Development
NGR 6434  4  Nurse Anesthesia Clinical Practicum IV
NGR 6491  2  Nurse Anesthesia Comprehensive Seminar
NGR 7945  1  D.N.P. Clinical Residency
NGR 6435  3  Nurse Anesthesia Clinical Practicum V
NGR 6491  2  Nurse Anesthesia Comprehensive Seminar
NGR 6436  4  Nurse Anesthesia Clinical Practicum VI

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. The SEE is required twice during the major.

Dissertation – this is a clinical program; no dissertation is required

COURSES

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

Master of Science (M.S.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:

Fall: February 15*

Minimum Total Hours: 37
Level: Masters
CIP Code: 51.3801
Dept Code: NUR
Major Codes: NUR (BS to MS)

College Code: 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)

CONTACT INFORMATION

College: Nursing
Contact Information: www.grad.usf.edu

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.
- 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.

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.
• 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 Admission and English Proficiency requirements, as well as requirements 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:

• 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 vita.
• A personal interview with a designated faculty member may also be required
• Applicants to the M.S. program are required to complete both a NursingCAS application and a USF Graduate Studies Application.

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.

• 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 M.S. 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:
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>NUR3078</td>
<td>Information Technology Skills for Nurses</td>
<td>1</td>
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<tr>
<td>NUR3805</td>
<td>Nursing as a Profession</td>
<td>2</td>
</tr>
<tr>
<td>NUR4169C</td>
<td>Evidence Based Practice for Baccalaureate Nurses</td>
<td>3</td>
</tr>
<tr>
<td>NUR4634C</td>
<td>Population Health</td>
<td>3</td>
</tr>
<tr>
<td>NUR4828C</td>
<td>Foundations of Nursing Leadership &amp; Management</td>
<td>3</td>
</tr>
<tr>
<td>NUR4895</td>
<td>Educational Role of Nurse in Healthcare</td>
<td>3</td>
</tr>
</tbody>
</table>

*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.

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 for all MS Majors (NUR, NAS, NBM) - 12 credit hours

<table>
<thead>
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<th>Credit Hours</th>
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<tbody>
<tr>
<td>NGR6803</td>
<td>Research and Evidence-Based Practice</td>
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<tr>
<td>NGR6638</td>
<td>Health Promotion, Clinical Prevention, &amp; Population Health</td>
<td>3</td>
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<tr>
<td>NGR6733</td>
<td>Organizational &amp; Systems Leadership &amp; Quality Improvement for Advanced Practice Nursing</td>
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<tr>
<td>NGR6893</td>
<td>Systems and Populations in Healthcare</td>
<td>3</td>
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Advanced Nursing Core: Nurse Practitioner (Acute, Adult-Gerontology, Family & Pediatric) – 24 credit hours

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>NGR6002C</td>
<td>Advanced Health Assessment Across the Lifespan</td>
<td>4</td>
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<tr>
<td>NGR6152</td>
<td>Advanced Physiology &amp; Pathophysiology</td>
<td>4</td>
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<tr>
<td>NGR6172</td>
<td>Pharmacology for Advanced Nurse Practitioner</td>
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</tr>
<tr>
<td>NGR6064C</td>
<td>Advanced Diagnostics and Procedures</td>
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Advanced Generalist Core (Nursing Education) - 6 credit hours

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<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>NGR6055</td>
<td>Health Assessment for the Advanced Generalist Nurse</td>
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</tr>
<tr>
<td>NGR6146</td>
<td>Pathophysiology/Pharmacology for the Adv. Generalist Nurse</td>
<td>4</td>
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Specialty Concentration Core:

Note: Courses with a “C” in the course number designate a combined didactic and clinical format.

Adult-Gerontology Primary Care Nursing Concentration (NPG) 45 Total Credit Hours

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Clinical Hours</th>
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<tbody>
<tr>
<td>NGR6207C</td>
<td>Health Management of Adults &amp; Older Adults I</td>
<td>6</td>
<td>180</td>
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<tr>
<td>NGR 6244C</td>
<td>Health Management of Adults &amp; Older Adults II</td>
<td>6</td>
<td>180</td>
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<tr>
<td>NGR6291C</td>
<td>Special Topics: Health Management of Adults &amp; Older Adults</td>
<td>6</td>
<td>180</td>
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</table>

Family Health Nursing (NFH) Concentration 52 Total Credit Hours

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<th>Course Title</th>
<th>Credit Hours</th>
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<tr>
<td>NGR6207C</td>
<td>Health Management of Adults &amp; Older Adults I</td>
<td>6</td>
<td>180</td>
</tr>
<tr>
<td>NGR6244C</td>
<td>Health Management of Adults &amp; Older Adults II</td>
<td>6</td>
<td>180</td>
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<tr>
<td>NGR6301C</td>
<td>Primary Care of Children and Adolescents I</td>
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<tr>
<td>NGR6342</td>
<td>Primary Care of Childbearing Family</td>
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<tr>
<td>NGR6342L</td>
<td>Primary Care of Childbearing Family Practicum</td>
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<tr>
<td>NGR6613C</td>
<td>Health Management of Families – Special Topics</td>
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Pediatric Health Nursing (NPH) Concentration 45 Total Credit Hours

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<th>Course Title</th>
<th>Credit Hours</th>
<th>Clinical Hours</th>
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</thead>
<tbody>
<tr>
<td>NGR6301C</td>
<td>Primary Care of Children &amp; Adolescents I</td>
<td>6</td>
<td>180</td>
</tr>
<tr>
<td>NGR6302C</td>
<td>Primary Care of Children &amp; Adolescents II</td>
<td>6</td>
<td>180</td>
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<tr>
<td>NGR 6339C</td>
<td>Special Topics: Primary Care of Children and Adolescents</td>
<td>6</td>
<td>180</td>
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Acute-Gerontology Acute Care Nursing Concentration (NAG) 48 Total Credit Hours

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Clinical Hours</th>
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<tbody>
<tr>
<td>NGR6210C</td>
<td>Clinical Management of Acutely &amp; Chronically Ill Adults</td>
<td>7</td>
<td>180</td>
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<tr>
<td>NGR6232C</td>
<td>Clinical Management of Acute &amp; Critically Ill Ad &amp; Older Ad</td>
<td>7</td>
<td>180</td>
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<tr>
<td>NGR6211C</td>
<td>Acute Care of Adults &amp; Older Adults: Special Topics</td>
<td>7</td>
<td>180</td>
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Clinical Nurse Leader (NCL) Concentration (admissions on hold)

This concentration is currently not available.
Nursing Education (NED) Concentration

Concentration Requirements – 19 credit hours

NGR6713  Foundations of Nursing Education  3
NGR6710  Teaching Strategies in Nursing Education  3
NGR6718  Evaluation Strategies for Nursing Education  3
NGR6947  Practicum in Nursing Education  2
NGR 6940 Classroom/Online Teaching Practicum  2
NGR 6719 Clinical Case Studies in Nursing Education Cognate  3
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)

Concurrent Concentrations:

Nutritional/Metabolic Concentration (NEM) (admissions on hold)

Occupational Health Nursing (NOC)/Adult-Gerontology Primary Care Nurse  61 Total Credit Hours

NGR6207C Health Management of Adults & Older Adults I  6  180 Clinical Hours
NGR6244C Health Management of Adults & Older Adults II  6  180 Clinical Hours
NGR6291C Health Management of Adults & Older Adults – Special Topics  6  180 Clinical Hours
NGR6650 Occupational Health Nursing I  2
NGR6651 Occupational Health Nursing II  2
PHC 6360 Safety Principles and Practices  2

OR  Industrial Hygiene Aspects of Plant Operations  2

OR  Supervised Field Experience: Plant Operations Interdisciplinary Field Experience

OR  EOH Field course

PHC6356 Industrial Hygiene  2
PHC6351 Occupational Medicine  3
PHC 6354 Safety Health for Health Professionals  2
PHC6977 Special Project  3
PHC 6936 Public Health Capstone  3

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 speciality 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

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 Admission and English Proficiency requirements, 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 and/or advanced practice nurse in the United States upon matriculation. Current license as a registered nurse and/or advanced practice 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 work 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

<table>
<thead>
<tr>
<th>Minimum Hours</th>
<th>30 credit hours post masters</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>75 credit hours post-bacc</td>
</tr>
</tbody>
</table>

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.
**Knowledge Building Core (Required all D.N.P. Students)**  
30 Minimum Credit Hours

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NGR 6673</td>
<td>Epidemiology for Advanced Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NGR 7767</td>
<td>Practice Management, Quality Improvement, &amp; Patient Safety</td>
<td>3</td>
</tr>
<tr>
<td>NGR 7848</td>
<td>Fundamentals of Statistics for Clinicians</td>
<td>3</td>
</tr>
<tr>
<td>NGR 7874</td>
<td>Informatics and Patient Care Technology</td>
<td>3</td>
</tr>
<tr>
<td>NGR 7766</td>
<td>Health System Leadership and Interprofessional Practice</td>
<td>3</td>
</tr>
<tr>
<td>NGR 7892</td>
<td>Health Care Policy &amp; Clinical Prevention for Improv Pop Health</td>
<td>3</td>
</tr>
<tr>
<td>NGR 7974</td>
<td>Doctor of Nursing Practice Project</td>
<td>4</td>
</tr>
<tr>
<td>NGR 7945</td>
<td>Doctor of Nursing Practice Practicum</td>
<td>8*</td>
</tr>
</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.*

Additional coursework will be determined through individual student evaluation.

The B.S.-D.N.P. option consists of BS-D.N.P. core courses; the BS-D.N.P. concentration courses; and the D.N.P. Knowledge Building Core courses (minimum 75 credit hours)

**B.S.-D.N.P. Core - 27 minimum credit hours**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NGR 6002C</td>
<td>Advanced Health Assessment Across the Lifespan</td>
<td>4</td>
</tr>
<tr>
<td>NGR 6152</td>
<td>Advanced Physiology and Pathophysiology</td>
<td>4</td>
</tr>
<tr>
<td>NGR 6733</td>
<td>Organizational &amp; Systems Leadership &amp; Quality Improvement for Advanced Nurses</td>
<td>3</td>
</tr>
<tr>
<td>NGR 6803</td>
<td>Research and Evidence-Based Practice</td>
<td>3</td>
</tr>
<tr>
<td>NGR 6064C</td>
<td>Advanced Diagnostics &amp; Procedures</td>
<td>3</td>
</tr>
<tr>
<td>NGR 6172</td>
<td>Pharmacotherapeutics for Advanced Nurse Practitioners</td>
<td>4</td>
</tr>
<tr>
<td>NGR 6638</td>
<td>Health Promotion, Clinical Prev, &amp; Pop Health for Adv Nurs</td>
<td>3</td>
</tr>
<tr>
<td>NGR 6893</td>
<td>Systems &amp; Populations in Healthcare</td>
<td>3</td>
</tr>
</tbody>
</table>

**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)**  
21 Credit Hours

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NGR 6210C</td>
<td>Clinical Management of the Acutely Ill Adult</td>
<td>7</td>
</tr>
<tr>
<td>NGR 6211C</td>
<td>Acute Care of Adults &amp; Older Adults: Special Topics</td>
<td>7</td>
</tr>
<tr>
<td>NGR 6232C</td>
<td>Clinical Management of Acute &amp; Critically Ill Ad &amp; Older Ad</td>
<td>7</td>
</tr>
</tbody>
</table>

**Adult-Gerontology Primary Care (NPG)**  
18 Credit Hours

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NGR 6207C</td>
<td>Health Management of Adults and Older Adults I</td>
<td>6</td>
</tr>
<tr>
<td>NGR 6244C</td>
<td>Health Management of Adults and Older Adults II</td>
<td>6</td>
</tr>
<tr>
<td>NGR 6291C</td>
<td>Health Management of Adults and Older Adults: Special Topics</td>
<td>6</td>
</tr>
</tbody>
</table>

**Concurrent Oncology/Adult-Gerontology Primary Care (NOA)**  
24 Credit Hours

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NGR 6207C</td>
<td>Health Management of Adults and Older Adults I</td>
<td>6</td>
</tr>
<tr>
<td>NGR 6244C</td>
<td>Health Management of Adults and Older Adults II</td>
<td>6</td>
</tr>
<tr>
<td>NGR 6291C</td>
<td>Health Management of Adults and Older Adults: Special Topics</td>
<td>6</td>
</tr>
<tr>
<td>NGR 6220</td>
<td>Pathobiology of Neoplasia</td>
<td>3</td>
</tr>
<tr>
<td>NGR 6221</td>
<td>Oncology Nursing Concepts</td>
<td>3</td>
</tr>
</tbody>
</table>

**Concurrent Occupational Health/Adult-Gerontology Primary Care (NOC)**  
36 Credit Hours

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NGR 6207C</td>
<td>Health Management of Adults and Older Adults I</td>
<td>6</td>
</tr>
<tr>
<td>NGR 6244C</td>
<td>Health Management of Adults and Older Adults II</td>
<td>6</td>
</tr>
</tbody>
</table>

For more information, visit [http://health.usf.edu/nursing/](http://health.usf.edu/nursing/)
NUR 6291C  Health Management of Adults and Older Adults: Special Topics  6 180 Clinical Hours
NUR 6650  Occupational Health Nursing I  2
NUR 6651  Occupational Health Nursing II  2
PHC 6360  Safety Principles and Practices  2
PHC 6364  Industrial Hygiene Aspects of Plant Operations  2
OR
PHC 6945  Supervised Field Experience  1-2
PHC 6356  Industrial Hygiene  2
PHC 6351  Occupational Medicine for Health Professionals  3
PHC 6354  Safety and Health Administration  2
PHC 6977  Special Project: MPH  3

**Family Health (NFH)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Clinical Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NGR 6207C</td>
<td>Health Management of Adults and Older Adults I</td>
<td>6</td>
<td>180</td>
</tr>
<tr>
<td>NGR 6244C</td>
<td>Health Management of Adults and Older Adults II</td>
<td>6</td>
<td>180</td>
</tr>
<tr>
<td>NGR 6301C</td>
<td>Primary Care of Children and Adolescents I</td>
<td>6</td>
<td>180</td>
</tr>
<tr>
<td>NGR 6342</td>
<td>Primary Care of the Childbearing Family</td>
<td>1</td>
<td></td>
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<tr>
<td>NGR 6342L</td>
<td>Primary Care of the Childbearing Family Practicum</td>
<td>1</td>
<td></td>
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<tr>
<td>NGR 6613C</td>
<td>Health Management of Families: Special Topics</td>
<td>5</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Clinical Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NGR 6301C</td>
<td>Primary Care of Children and Adolescents I</td>
<td>6</td>
<td>180</td>
</tr>
<tr>
<td>NGR 6302C</td>
<td>Primary Care of Children and Adolescents II</td>
<td>6</td>
<td>180</td>
</tr>
<tr>
<td>NGR 6339C</td>
<td>Primary Care of Children and Adolescents: Special Topics</td>
<td>6</td>
<td>180</td>
</tr>
</tbody>
</table>

**Pediatric Health (NPH)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Clinical Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NGR 6301C</td>
<td>Primary Care of Children and Adolescents I</td>
<td>6</td>
<td>180</td>
</tr>
<tr>
<td>NGR 6302C</td>
<td>Primary Care of Children and Adolescents II</td>
<td>6</td>
<td>180</td>
</tr>
<tr>
<td>NGR 6339C</td>
<td>Primary Care of Children and Adolescents: Special Topics</td>
<td>6</td>
<td>180</td>
</tr>
</tbody>
</table>

**Knowledge Building Core Courses (names)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NGR 6673</td>
<td>Epidemiology for Advanced Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NGR 7766</td>
<td>Health Systems Leadership and Interprofessional Practice</td>
<td>3</td>
</tr>
<tr>
<td>NGR 7767</td>
<td>Practice Management, Quality Improvement, and Patient Safety</td>
<td>3</td>
</tr>
<tr>
<td>NGR 7848</td>
<td>Fundamentals of Statistics for Clinicians</td>
<td>3</td>
</tr>
<tr>
<td>NGR 7874</td>
<td>Informatics and Patient Care Technology</td>
<td>3</td>
</tr>
<tr>
<td>NGR 7892</td>
<td>Health Care Policy &amp; Clinical Prevention for Imprv Pop Health</td>
<td>3</td>
</tr>
<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>
</tr>
</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:
http://www.grad.usf.edu/majors

Minimum Total Hours:
Post masters 57
Post bachelors 87
Post clinical doctorate 45

Level: Doctoral
CIP Code: 51.3808
Dept Code: NUR
Major/College Codes: NUS NR
Approved: 2003

CONTACT INFORMATION

College: Nursing
Contact Information: www.grad.usf.edu

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 Admission and English Proficiency requirements, as well as requirements for admission to the major, listed below.

• 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
• 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: M.S.-Ph.D., B.S.-Ph.D, and Clinical Doctorate-Ph.D.

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>NGR 7111</td>
<td>Disciplinary Perspectives of Nursing Science</td>
</tr>
<tr>
<td>NGR 7125</td>
<td>Model Development for Nursing</td>
</tr>
<tr>
<td>NGR 7810</td>
<td>Design, Measurement and Analysis in Nursing Research I</td>
</tr>
<tr>
<td>NGR 7812</td>
<td>Design, Measurement and Analysis in Nursing Research II</td>
</tr>
<tr>
<td>NGR 7813</td>
<td>Design, Measurement and Analysis in Nursing Research III</td>
</tr>
<tr>
<td>NGR 7814</td>
<td>Design, Measurement and Analysis in Nursing Research IV</td>
</tr>
<tr>
<td>NGR 7881</td>
<td>Responsible Conduct of Research</td>
</tr>
<tr>
<td>NGR 7930</td>
<td>Scientific Inquiry Forum – required each semester prior to candidacy (4 hours minimum)</td>
</tr>
<tr>
<td>NGR 7837</td>
<td>Innovative Programs in Biobehavioral Research</td>
</tr>
<tr>
<td>NGR 7838</td>
<td>Innovative Programs in Symptom Management Research</td>
</tr>
<tr>
<td>NGR 7954</td>
<td>Communicating Nursing Science</td>
</tr>
</tbody>
</table>

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

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 M.S. degree must meet the progression and graduation requirements for the M.S. 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.

Ph.D. Continuous Enrollment Policy
All degree-seeking students in the Nursing Ph.D. program must be continuously enrolled. Continuous enrollment for the Ph.D. program is defined as completing a minimum of 2 hours of graduate credit every semester. Students who have been Admitted to Doctoral Candidacy must follow the Dissertation Hour Enrollment Policy in place of the continuous enrollment requirement, as specified in the USF Graduate Catalog.

COURSES
See http://www.ugs.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>Degree</th>
<th>Change Description</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmaceutical Nanotechnology</td>
<td>M.S.</td>
<td>Change Major – New Concentrations in Biomedical Engineering (PNB) and Drug Discovery, Delivery, Development and Manufacturing (DDD)</td>
<td>4/2/18</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>Pharm.D.</td>
<td>New Accelerated Program Option: BS (Honors) to Pharm.D.</td>
<td>2/5/18</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>Pharm.D.</td>
<td>Change Major – update curriculum; increase to 152 hours</td>
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</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 (CAMLs)
• 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 (Pharm.D.) 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 Ph.D. degree program in addition to concurrent degree programs at the COP.

Degrees, Majors, and Concentrations Offered:

Master of Science in Pharmaceutical Nanotechnology (M.S.)
  Pharmaceutical Nanotechnology (PNT)
  Biomedical Engineering (PNB)
  Drug Discovery, Delivery, Development & Manufacturing (DDD)

Doctor of Pharmacy (Pharm.D.)
  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 (M.S.) 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

International applicant deadlines: [http://www.grad.usf.edu/majors](http://www.grad.usf.edu/majors)

The Master's of Science (M.S.) 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 Admission and English Proficiency requirements, 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
- GRE, MCAT, PCAT, 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.
- 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.
CURRICULUM REQUIREMENTS

Total Minimum Hours – 32 credit hours

Core Requirements - 11 credit hours
Concentration/Track – 13 to 18 hours
Capstone (3 hours) or Thesis (8 hours)

Core Requirements - 11 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 6797 1 Scientific Writing and Communication
- PHA 6277 1 Ethics in Pharmaceutical Practice and Research

Students select from the following Tracks or Concentrations:

General Track - 18 hours
Electives 18
Plus the Capstone requirement

Entrepreneurship Track – 18 hours
PHA 6225 3 Invention, Innovation & Entrepreneurship
PHA 7001 6 Graduate Program Internship in Pharmacy
Electives 9
Plus the Capstone requirement

The one-semester internship in a matched industry, institute or center must be approved by the Associate Dean of Graduate Programs. The Internship will culminate in a final project, which will be presented at the end of the Capstone course. Students must receive an evaluation of Satisfactory or higher from their internship supervisor to successfully complete the Internship course.

Research Track – 13 hours
Electives - 13
Plus the thesis requirement

Biomedical Engineering Concentration (PNB) - 18 hours

- GMS 6440 3 Basic Medical Physiology OR BME 6409 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
Electives 3
Plus the Capstone requirement

Drug Discovery, Delivery, Development & Manufacturing Concentration (DDD) – 13 hours

- PHA 6124 3 Principles of Pharmacokinetics and Pharmacodynamics
- PHA 6147 3 Nanotechnology and Risk Management
- PHA 6185 3 Drug Discovery and Frontier
Electives 4
Plus the thesis requirement

Approved Electives

- PHA 6124 3 Principles of Pharmacokinetics and Pharmacodynamics
- PHA 6147 3 Nanotechnology and Risk Management
- PHA 6148 3 Nanoformulations and Nanopharmaceutics
- PHA 6185 3 Drug Discovery and Frontier
- PHA 6222 3 Pharmacy Practice Management

http://health.usf.edu/pharmacy/
PHA 6225  3  Invention, Innovation & Entrepreneurship  
PHA 6245  3  Pharmaceutical Informatics  
PHC 6319  3  Modern Human Diseases, Diagnosis and Treatment  
PHA 6449  3  Pharmacogenomics - Current and Future Prospects  
PHA 6336  3  Tissue Engineering and Regenerative Medicine  
PHA 6618  3  Principles of Geriatric Medicine  
PHA 6622  3  Advanced Geriatric Pharmacy Care  
PHA 6756  3  Bioengineering and Nano-biomedical Prospects  
PHA 7930  1-3  Special Topics in Pharmacy  
GMS 6010  3  Personalized Medicine  
GMS 6183  3  Clinical Research Methods  
GMS 6201  3  Basis Medical Biochemistry  
GMS 6440  3  Basic Medical Physiology  
GMS 6505  3  Basics Medical Pharmacology  
GMS 6605  3  Basic Medical Anatomy  

**Capstone – 3 hours**  
PHA 69523  Graduate Program Capstone in Pharmacy  

As part of the Capstone course, students will also submit and present an e-portfolio outlining their understanding of Pharmaceutical Nanotechnology as a whole with artifacts from previous courses that demonstrate their learning throughout the program. Students must successfully complete PHA 6533, including submission and presentation of e-Portfolio.

**Thesis – 8 hours minimum**  
PHA 6971  8  Thesis (to be taken over the final three semesters in a 3-3-2 credit hour sequence)  

Students will conduct original research in a lab approved by the Associate Dean of Graduate Programs and submit a final Committee-Approved Thesis, including oral defense, following guidelines from the Office of Graduate Studies. Students must submit a final Committee-Approved Thesis, including oral defense, following ETD guidelines from the Office of Graduate Studies ([http://www.grad.usf.edu/ETD-res-main.php](http://www.grad.usf.edu/ETD-res-main.php)).  

**Comprehensive Exam**  
For non-thesis students, successful completion and presentation of the e-Portfolio in the Capstone course will be used in lieu of a comprehensive exam. For thesis students, the final Committee-Approved thesis, including defense, 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  
Track/Concentration requirements and/or 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  
Track/Concentration requirements and/or Electives 6 Cr  
**Summer - total 8 credit hours**  
Final Thesis hours and/or Capstone 2-3 Cr  
Electives 5 Cr  

**COURSES**  
See [http://www.ugs.usf.edu/course-inventory/](http://www.ugs.usf.edu/course-inventory/)  

[http://health.usf.edu/pharmacy/]
PHARMACY

Doctor of Pharmacy (Pharm.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines
Fall  
Early Decision: September 6
Regular Decision: February 1

Minimum Total Hours:  
152 hours

Level  
Doctoral / Professional

CIP Code  
51.2001

Dept Code  
PHA

Major/College Codes  
Rx / PRY

Approved  
Effective Fall 2016

CONTACT INFORMATION

College  
College of Pharmacy
Department  
Department of Pharmacy

Contact information  
www.health.usf.edu/pharmacy

Concentration:  
Pharmacy and Health Education (RXHE)

Also offered as an Accelerated Major

The USF College of Pharmacy (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.

Curriculum Requirements:
Minimum Total Hours: 152 credit hours
Common Core Requirement: 136 hours
Concentration (Optional): 11 hours and 5 hours electives
Required Electives: 16-18 hours

Four year (9 term) major including 1 summer term

Common Core Requirements - Curriculum (Didactic and Experiential) – 136 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>
<td>3</td>
<td>Drug Delivery Systems I (with lab)</td>
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<td>PHA 6115C</td>
<td>3</td>
<td>Drug Delivery Systems II (with lab)</td>
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<tr>
<td>PHA 6124</td>
<td>3</td>
<td>Principles of Pharmacokinetics / Pharmacodynamics I</td>
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<td>PHA 6129</td>
<td>3</td>
<td>Clinical Pharmacokinetics / Pharmacodynamics</td>
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<td>PHA 6130C</td>
<td>3</td>
<td>Translational Pharmacogenomics- Principles and Clinical Application</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 6562</td>
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<td>Physiologic Basis of Disease</td>
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<td>PHA 6575</td>
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<td>Introduction to Principles of Drug Action</td>
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<td>Grant Writing &amp; Clinical Research</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>Pharmacotherapeutics IV</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>
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<td>Pharmaceutical Calculations</td>
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<td>PHA 6870C</td>
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<td>PHA 6874C</td>
<td>3</td>
<td>Pharmaceutical Skills V</td>
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<td>PHA 6875C</td>
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<td>Pharmaceutical Skills VI</td>
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<td>PHA 6898</td>
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<td>Foundations in Public Health</td>
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<td>IPPE – Community Pharmacy Practice II</td>
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<td>IPPE - Institutional Pharmacy Practice II</td>
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<td>(APPE) Advanced Health- System Pharmacy Experience (Institutional)</td>
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<td>6</td>
<td>(APPE) Advanced Community Pharmacy Practice Experience</td>
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<td>PHA 7644</td>
<td>6</td>
<td>(APPE) Geriatrics Patient Care Pharmacy Practice Experience</td>
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<td>PHA 7692</td>
<td>6</td>
<td>(APPE) Advanced Ambulatory Pharmacy Practice Experience</td>
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<td>PHA 7694</td>
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<td>(APPE) Advanced Adult Medicine Pharmacy Practice Experience</td>
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<tr>
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<td>Var (2)</td>
<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, in-services). 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 minimum
HSC 6261 2 Teaching Essentials
HSC 6261L 1 Teaching Essentials Lab
PHA 7684± 6 Elective 1 Pharmacy Practice Experience: Academia

And one of the following:
PHA 6877C 2 Critical Care Pharmacotherapy
PHA 6780C 2 Oncology Pharmacy Practice
PHA 6907* 2-3 Directed Independent Study
PHA 6935* Var (1-5) Special Topics in Pharmacy
PHA 6915* 4 Pharmacy Longitudinal Research Project

± In the instance this course is unavailable, an amended rotation with a faculty member to meet concentration requirements may suffice, pending Concentration Coordinator and Academic Affairs Dean approval.

* Concentration Coordinator must approve courses to ensure content 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. Support from your student success coach and at least (1) course coordinator via signature on the application 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* 2 Directed Independent Research
PHA 7684* 12 Elective 1 Pharmacy Practice Experience X 2
PHA 6177 3 Advanced Compounding and Industrial Pharmacy
PHA 6185 3 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

http://health.usf.edu/pharmacy/
COURSE SEQUENCES / SCHEDULE
Go to http://health.usf.edu/pharmacy/curriculum for course sequence/schedule information

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
Accelerated Majors Option

B.S./Pharm.D.
Complete a B.S. in Biomedical Sciences (College of Arts and Sciences) and a Doctor of Pharmacy (USF Health College of Pharmacy) over the span of seven (7) years. Students completing this program will be well trained to perform as skilled intermediaries to effectively communicate with patients, their health providers, insurance companies, and pharmaceutical companies. Requires students to complete the first year (36 credits) of the Pharm.D. during their senior year of their B.S.

This accelerated program shares 10 credits between already existing degrees:
- B.S. in Biomedical Sciences
- Pharm.D./Pharm.D. in Pharmacy

Target Students and Expected Outcomes
The accelerated Bachelor’s to Pharm.D. program is a collaborative effort between the College of Arts and Sciences, the Honors College, and USF Health’s College of Pharmacy. This program is an attractive and viable career path for students in the Chemistry degree program that results in professional training in pharmacy. Students who complete this program receive the necessary training to become advanced pharmacist clinicians that will collaborate with other health professionals.

For initial eligibility a student must:
- be admitted to the Honors College as a first year student (at least a 1360 CR+M SAT or 29 ACT and 3.80 High School weighted GPA as calculated by USF’s Office of Admissions;
- hold US citizenship or permanent resident status.

Undergraduate Degree Requirements: B.S. in Biomedical Sciences (BMS)
All BMS students will complete FLENT and Summer Enrollment requirements as well as graduation requirements listed in the Undergraduate Catalog. The entire undergraduate program will total no more than 120 credits.

Graduate Degree Requirements: Pharm.D. in Pharmacy
All requirements of the Pharm.D. as posted in the Graduate Catalog must be satisfactorily completed.

SHARED 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 Biomedical Sciences students will take up to 21 credits of additional 3000+ level coursework in addition to their required major and exit courses listed below. Out of these 21 credits, up to 10 credits will be shared with the Pharm.D. program. The shared courses are listed below:
- PHA 6451 Clinical Biochemistry (2)
- PHA 6792C Drug Information/Literature Evaluation (2)
- PHA 6577 Biochemical & Molecular principles of Drug Action (4)
- PHA 6755 Medical Microbiology & Immunology (2)

Timeline and Benchmarks
Eligible students may follow the 7-Year BS/Pharm.D. Track during their first year of undergraduate enrollment. By a specified date at the end of the first year, students must submit a declaration of intent to the Honors College to formally join the program. The declaration of intent is not an official application. The official application must be submitted through PharmCAS after the second year of undergraduate study. If at the end of the spring semester of Year 1, students have attained an overall and science grade point of average (GPA) of 3.50, they may proceed onto Year 2 of the 7-Year Track.

Honors College
Students pursuing the 7-Year BS/Pharm.D. must also complete Honors College requirements and co-curricular program benchmarks which may be found at: http://honors.usf.edu/ap_pharm.html

Curricular Requirements (Years 1-3)
Grade Point Average (GPA); GPAs are not rounded.
- USF overall and science GPA of 3.50 or higher at the completion of the spring semester of Year 1;
- USF overall and science GPA 3.50 or higher at completion of Year 2;
- USF overall and science GPA of 3.50 or higher at completion of Year 3;

If students transfer in a GPA from dual enrollment or transient coursework completed at another institution, the overall and science GPAs from all coursework completed at USF must also be a 3.50 or higher.
Prerequisite Coursework: the courses for the B.S. in Biomedical Sciences must be completed for admission to the USF COP in addition to any other General Education Core/Foundations of Knowledge and Learning and Upper Division requirements for the student’s major. Curricular revision is an ongoing process at USF COP, so the prerequisite courses listed may change.

First and Second Years: Courses and credits as designated for freshman and sophomore years

Between Second and Third Year: USF COP Application Process: Students who meet all specified benchmarks must officially apply to the USF COP during the summer between their second and third undergraduate years.

Advising: Students, who submitted a declaration of intent to formally join the 7-Year BS/Pharm.D. program and met the first year GPA requirement, must with the USF College of Pharmacy Admissions Advisor/Recruiter between the end of year one and start of year two. Students must meet with the USF COP Director of Admissions at least once prior to the end of the second year.

Non-medical Community Service Volunteering: Completion of a minimum of 60 contact hours of volunteering is required. Community service is defined as involvement in a service activity without receiving monetary compensation. Service performed as part of employment or a service learning course will NOT satisfy this requirement. This requirement must be completed by the end of the second year.

Students must adhere to the following timeline to submit their applications through the Pharmacy College Application Service (PharmCAS)

• E-submit PharmCAS application (including transcripts and letters of recommendation) by the early decision deadline. The early decision deadline typically falls on the first Tuesday in September. Applying through the regular decision application process is not an option.

• Two letters of recommendation must be submitted to PharmCAS. One of the two letters must be from a science professor. Do not submit letters of recommendation directly to the USF COP.

• PharmCAS applications may be submitted beginning in July of each year. Since PharmCAS reviewers need four to six (4-6) weeks to verify applications prior to forwarding information to medical schools, we strongly encourage students to submit their applications by the end of July.

• PCAT: For students entering the program a 65th percentile composite PCAT score is preferred, with no individual sub-score lower than 40 is permitted. Students with lower scores that may have other strong academic indicators providing evidence of success will be reviewed. The PCAT must be taken prior to the early decision deadline. Students should visit PCATWeb.info for PCAT testing dates. PCAT scores older than 3 years will NOT be accepted.

• Applicants who have met all GPA, PCAT, and curricular and co-curricular requirements, and have submitted required application materials by the deadlines will receive an invitation for a formal interview by the USF COP.

• Invited students will participate in the early decision interview process. Successful completion of the interview at the beginning of the third year is a requirement for acceptance into the USF COP.

Conferring of BS degree (fourth year; first professional year of pharmacy)

Students must successfully complete all requirements of the Doctor of Pharmacy curriculum to graduate. Successful completion of the academic program of study contained within the first professional pharmacy year is required for the completion of the bachelor’s degree in the accelerated (3+4) program and to continue in the pharmacy program. Curricular revision is an ongoing process at USF COP, so the courses listed may change. Please refer to the COP Pharm.D. section within the catalog for the most up-to-date course listing.

COURSES
See http://www.ugs.usf.edu/course-inventory/
College of Public Health
Changes to Note

Graduate Council approved the following on the dates noted.

Majors

Health Administration M.H.A.  Change Admissions to fall only; curriculum 3/5/18
Public Health M.P.H.  Inactivate concentrations: PEB, FOS, OCC, OCP, OMR, SFM, TXY, PHA 11/6/17
Public Health M.S.P.H.  Inactivate concentrations: PBC, PIP, POH, POM, POS, PTX 11/6/17
Public Health M.P.H.  Change curriculum; change Biostats (BST) to Applied Biostatistics (ABT); Env Health (EVH) to Env &Occ Health (EOH); Terminate concentrations: FOS, OCC, OCP, OMR, SFM, PHA, TXY, Exec Prog for Health Prof. 12/4/17

Public Health M.S.P.H.  Change curriculum; change Bioinformatics (BIF) to Genomics (GEO); Change Env Health(PEH) to Env and Occupational Health (EOV); Terminate Biostati, Occ. Hlth, Occ Med Res, Occ Safety, Toxicology 12/4/17

Public Health Ph.D.  Change Env and Occ Health Conc curriculum 12/4/17
Public Health Dr.Ph.  New Conc: PH and Clinical Lab Science and Practice (LSP) 12/4/17
Public Health M.P.H.  Revise accreditation language 1/8/18
Public Health M.S.P.H.  Revise accreditation language 1/8/18
Public Health M.P.H.  Suppress summer admission for HCO Conc. 3/5/18
Public Health M.P.H.  Suppress summer admission for HPP Conc. 3/5/18
Public Health M.P.H.  Supress spring admission for Epi Conc. 3/5/18
Public Health M.P.H.  Update delivery mode for EPY (Face to face) and online: (EPO, HLE, IFC, NUD, PHA, SOM) 3/5/18

Public Health M.P.H.  Update Admissions information; suppress admission dates 4/2/18
Public Health M.S.P.H.  Update Admissions information; suppress admission dates 4/2/18
Public Health Ph.D.  Update Admissions information; suppress admission dates 4/2/18

Concurrent Degrees

Public Health MPH / Anthro MA  Change curriculum 4/16/18
Public Health MPH / Anthro PhD  Change curriculum 4/16/18
Public Health PhD / Anthro MA  Change curriculum 4/16/18
Public Health MPH/Nursing MS  Change curriculum 3/5/18
Public Health MPH/Physical Therapy DPT  Terminate Concurrent option 12/4/17
Public Health MPH / Social Work MSW  Change curriculum 3/5/18

Graduate Certificates

Environmental Health Place inactive 4/2/18
Pharmacoepidemiology New Certificate 4/2/18
Safety Management Terminate Certificate 3/5/18
Toxicology New Certificate 4/2/18
Toxicology and Risk Assessment Terminate Certificate 4/2/18
University of South Florida
College of Public Health
13201 Bruce B. Downs Blvd MDC56
Tampa, FL  33612

Web address:  http://health.usf.edu/publichealth/index.htm
Email:  coph-grad@health.usf.edu
Phone:  813-974-6505
Fax:  813-974-8121

College Dean:  Donna Petersen, Sc.D., M.H.S., CPH
Vice Dean:  Tricia Penniecook, M.D., M.P.H.
Associate Dean:  Kay Perrin, Ph.D., M.P.H., CPH

Accreditation:
The College is accredited by the Council on Education for Public Health and the concentration of Occupational Exposure Science (Industrial Hygiene) in the M.S.P.H. degree is accredited by the Applied Science Accreditation Commission of ABET, 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. For the concentration in Nutrition and Dietetics in the M.P.H degree the USF Dietetic Internship has been granted Candidacy Status for Accreditation by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) http://www.eatrightpro.org/resources/acend. The concentration in Genetic Counseling in the M.S.P.H. degree is accredited by the Accreditation Council for Genetic Counseling.

Degrees, Majors, Concentrations

**Master of Health Administration (M.H.A.)**
Health Administration (MHA)

**Master of Public Health (M.P.H.)**
Public Health (MPH)
- Applied Biostatistics (ABT)
- Behavioral Health (BHH)
- Environmental and Occupational Health (EOH)
- Epidemiology (EPY)
- Epidemiology (ONLINE) (EPO)
- Epidemiology and Global Communicable Disease (EGC) – concurrent concentration
- Epidemiology and Global Health (EGH) - concurrent concentration
- Epidemiology and Maternal & Child Health (EMC) – concurrent concentration
- 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)
- Public Health Education (PHN)
- Public Health Practice Program (PHP)
- Social Marketing (SOM)
Master of Science in Public Health (M.S.P.H.) Degree
Public Health (MSP)
- Behavioral Health (PBH)
- Environmental and Occupational Health (EVO)
- Epidemiology (PEY)
- Genetic Counseling (GTC)
- Genomics (GEO)
- Global Communicable Disease (PGD)
- Maternal and Child Health (PMH)
- Occupational Exposure Science (OES)
- Public Health Education (PPD)

Doctor of Philosophy (Ph.D.) Degree
Public Health
- Biostatistics (BST)
- Community and Family Health (CFH)
- Environmental and Occupational Health (EOH)
- Epidemiology (EPY)
- Global Communicable Disease (TCD)
- Health Services Research (HPM)

Doctor of Public Health (Dr.P.H.) Degree
Public Health
- Advanced Practice Leadership in Public Health (APR)
- Public Health and Clinical Laboratory Science and Practice (LSP)

Accelerated majors:
- B.S. in Environmental Science and Policy and M.P.H./M.S.P.H. in Public Health
- B.S.P.H. in Public Health and MPH in Public Health: Public Health Education Concentration (3+2 program)
- 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 Applied 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 (EOH Concentration) and Nursing/Adult Nurse Practitioner M.P.H./M.S.
- Public Health and Social Work M.P.H./M.S.W.

Graduate Certificates Offered:
For the most current list go to: http://www.usf.edu/innovative-education/graduate-certificates/
- Applied Biostatistics*
- Assessing Chemical Toxicity and Public Health
- Biostatistics
- Concepts and Tools of Epidemiology*
- Diasporas and Health Disparities (shared with Africana Studies)
- Disaster Management*
- Environmental Health - inactive
- 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
Pharmacoepidemiology
Planning for Healthy Communities
Public Health Generalist*
Public Health Policy and Programs*
Social Marketing and Social Change*
Toxicology
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 ensure that his/her registration status reflects the drop by the end of the drop/add period.

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 3.00 or better in their upper division coursework, must be degree-seeking and enrolled full time.
HEALTH ADMINISTRATION

Master of Health Administration (M.H.A.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:

- Fall: May 1
- International applicant deadlines: [http://www.grad.usf.edu/majors](http://www.grad.usf.edu/majors)

Minimum Total Hours: 54

Level: Masters

CIP Code: 51.0701

Dept Code: DEA

(Major/College): MHA PH

Approved: 1988

Also offered as a Concurrent Degree

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.

Accreditation:
The College is accredited by the Council on Education in Public Health. Accredited by the Commission on Accreditation of Healthcare Management Education (CAHME).

Major Research Areas:
Health services management, Healthcare 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 and marketing.

ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements, 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.
  - 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 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: 54 hrs

**CORE REQUIREMENTS**
- PHC 6588  History and Systems of Public Health 1
- PHC 6756  Population Assessment: Part I 5
- PHC 6757  Population Assessment: Part II 3

**Management and Policy**
- PHC 6148  Strategic Planning and Healthcare Marketing 3
- PHC 6147  Managing Quality in Health Care 3
- PHC 6151  Health Policy and Politics 3
- PHC 6180  Health Services Management 3
- PHC 6181  Organizational Behavior in Health Services 3
- PHC 6420  Health Care Law, Regulation and Ethics 3
- PHC 6435  Comparative Health Insurance Systems 3

**Finance, Economics and Decision Making Skills**
- PHC 6160  Health Care Financial Management 3
- PHC 6760  Research Methods in Public Health Programs 3
- PHC 6161  Health Finance Applications 3
- PHC 6191  Quantitative Analysis in Health Services 3
- PHC 6196  Information Systems in Health Care Management 3
- PHC 6430  Health Economics I 3

**Comprehensive Exam**
The internship report serves in lieu of the final comprehensive exam.

**Culminating Requirements**
- PHC 6941  MHA Internship 2
- PHC 6943  MHA Internship Report 2
- PHC 6166  Advanced Seminar in Health Care Management 2
  (The MHA Internship report provides the final comprehensive exam)

Concurrent Degree Options

Students may apply to pursue one of the Concurrent Degree Options. Applicants must meet University Admission and English Proficiency Requirements, as well as the requirements for each major. Refer to the individual listings for each major for admission and curriculum requirements specific to the major. Admission into one major does not guarantee admission in the other major. **Note: Due to accreditation requirements, all Concurrent degrees must total 60 hours after sharing credits.**
Concurrent M.H.A./M.P.H.

M.H.A. in Health Administration – 54 hours
M.P.H. in Public Health with a Concentration in Health Policies and Programs (HPP) – 42 hours

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.

**Plan of Study**

<table>
<thead>
<tr>
<th>M.H.A. ONLY COURSES</th>
<th>29 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHC 6147</td>
<td>Managing Quality in Health Care</td>
</tr>
<tr>
<td>PHC 6148</td>
<td>Strategic Planning and Health Care Marketing</td>
</tr>
<tr>
<td>PHC 6180</td>
<td>Health Services Management</td>
</tr>
<tr>
<td>PHC 6181</td>
<td>Organizational Behavior in Health Sciences</td>
</tr>
<tr>
<td>PHC 6160</td>
<td>Health Care Financial Management</td>
</tr>
<tr>
<td>PHC 6161</td>
<td>Health Finance Applications</td>
</tr>
<tr>
<td>QMB 6305</td>
<td>Managerial Decision Making</td>
</tr>
<tr>
<td>PHC 6196</td>
<td>Information Systems in Health Care Management</td>
</tr>
<tr>
<td>PHC 6191</td>
<td>Quantitative Analysis in Health Care Services</td>
</tr>
<tr>
<td>PHC 6945</td>
<td>Supervised Field Experience</td>
</tr>
<tr>
<td>PHC 6166</td>
<td>Advanced Seminar in Health Care Management</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>M.P.H. in Health Policies and Programs ONLY COURSES</th>
<th>11 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHC 6104</td>
<td>Management of Public Health Programs</td>
</tr>
<tr>
<td>PHC 6063</td>
<td>Public Health Data, Information, and Decision Making</td>
</tr>
<tr>
<td>PHC 6760</td>
<td>Research Methods in Public Health Programs</td>
</tr>
<tr>
<td>PHC 6945</td>
<td>Supervised Field Experience</td>
</tr>
</tbody>
</table>

**Shared Courses – 27 hours**

<table>
<thead>
<tr>
<th>Public Health Core, Foundation, and Required Requirements:</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHC 6588 History and Systems of Public Health</td>
</tr>
<tr>
<td>PHC 6756 Population Assessment I</td>
</tr>
<tr>
<td>PHC 6757 Population Assessment II</td>
</tr>
<tr>
<td>PHC 6145 Translation to Public Health Practice</td>
</tr>
<tr>
<td>PHC 6977 Special Project</td>
</tr>
</tbody>
</table>

**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 |

**Total Combined hours after sharing: 69 hours**

96 hours total, less 27 hours shared.

**COURSES**

See [https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.usf.edu/course-inventory/)
# PUBLIC HEALTH

## Master of Public Health (M.P.H.) Degree

### DEGREE INFORMATION

<table>
<thead>
<tr>
<th>Priority Admission Application Deadlines:</th>
<th>CONTACT INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fall:</strong> May 1</td>
<td><strong>College:</strong> Public Health</td>
</tr>
<tr>
<td><strong>Spring:</strong> June 15</td>
<td><strong>Contact Information:</strong> <a href="http://www.grad.usf.edu">www.grad.usf.edu</a></td>
</tr>
<tr>
<td><strong>Summer:</strong> November 15</td>
<td><strong>Major Website:</strong> <a href="http://health.usf.edu/publichealth/apply/graduate-admissions/mph">http://health.usf.edu/publichealth/apply/graduate-admissions/mph</a></td>
</tr>
</tbody>
</table>

International applicant deadlines: [http://www.grad.usf.edu/majors](http://www.grad.usf.edu/majors)

**Minimum Total Hours:** 42  
**Level:** Masters  
**CIP Code:** 51.2201  
**Dept Code:** DEA  
**(Major/College):** MPH/PH  
**Approved:** 1981

**Concentrations:**  
- Applied Biostatistics (ABT)  
- Behavioral Health (BHH)  
- Environmental and Occupational Health (EOH)  
- Epidemiology (EPY)  
- Epidemiology (Online) (EPO)  
- Epidemiology and Global Communicable Disease (EGD)  
- Epidemiology and Global Health (EGH)  
- Epidemiology and Maternal and Child Health (EMC)  
- 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)  
- Public Health Education (PHN)  
- Public Health Practice (PHP)  
- Social Marketing (SOM)

**Also offered as an Accelerated Major**  
**Also offered as a Concurrent Degree**

### Accreditation:

The College is accredited by the Council on Education in Public Health. For the concentration in Nutrition and Dietetics in the M.P.H degree the USF Dietetic Internship has been granted Candidacy Status for Accreditation by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) [http://www.eatrightpro.org/resources/acend](http://www.eatrightpro.org/resources/acend).

### 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 (https://usfhealth.box.com/s/ievl84vasytoc20u3s9xsw59r44fdiyk). The GRE waiver is not automatic and must be approved by the College of Public Health.

• 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 – 18 credit hours
Concentration – 9 to 17 credit hours
Electives – 7 to 15 credit hours minimum (varies with each concentration)
Comprehensive Exam

Students must complete the Major core requirements and then the requirements as specified for the Concentration.

Core Courses – 18 hours
- PHC 6588 1 History & Systems of Public Health
- PHC 6756 5 Population Assessment: Part 1
- PHC 6757 3 Population Assessment: Part 2
- PHC 6145 3 Translation to Public Health Practice
- PHC 6949 3 Applied Practice Experience
- PHC 6943 3 Integrated Learning Experience

Concentration -
Students select from one of the concentrations listed on the following pages.

Applied Biostatistics (ABT) – 12 concentration credit hours (45 total credit hours)
- PHC 6053 3 Categorical Data Analysis
- PHC 6051 3 Biostatistics II
- HSC 6055 3 Survival Analysis
- PHC 6020 3 Design and Conduct of Clinical Trials

Behavioral Health (BHH) - 15 concentration credit hours (42 total credit hours)
- MHS 7740 3 Survey in 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

Environmental and Occupational Health (EOH) – 12 concentration credit hours (42 total credit hours)
- PHC 6300 3 Principles of Environmental Health
- PHC 6310 3 Environmental and Occupational Toxicology
- PHC 6353 3 Environmental and Occupational Health Risk Assessment
- PHC 6423 3 Occupational Health Law
Epidemiology (EPY) - 15 concentration credit hours (42 total credit 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 Research
PHC 6053  3  Categorical Data Analysis

Epidemiology (ONLINE) (EPO) - 15 concentration credit hours (42 total credit 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 Research
PHC 6053  3  Categorical Data Analysis

Epidemiology and Global Communicable Disease (EGD) - 12 concentration credit hours (52 total credit hours)
PHC 6516  3  Tropical Diseases
PHC 6514  3  Infectious Disease Control in Developing Countries
PHC 6511  3  Public Health Immunology
PHC 6010  3  Epidemiology Methods I

Epidemiology and Global Health (EGH) – 17 concentration credit hours (54 total credit 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
PHC 6945  2  Supervised Field Experience
PHC 6010  3  Epidemiology Methods I

Epidemiology and Maternal and Child Health (EMC) - 12 concentration credit hours (52 total credit hours)
PHC 6530  3  Issues and Concepts in Maternal and Child Health
PHC 6537  3  Case Studies in MCH Programs, Policies and Research
PHC 6197  3  Secondary Data Analysis in Maternal and Child Health
PHC 6010  3  Epidemiology Methods I

Global Communicable Disease (TCD) - 9 concentration credit hours (42 total credit hours)
PHC 6516  3  Tropical Diseases
PHC 6514  3  Infectious Disease Control in Developing Countries
PHC 6511  3  Public Health Immunology

Global Disaster Management, Humanitarian Relief and Homeland Security (GHH) - 9 concentration credit hours (42 total credit hours)
PHC 6183  3  Overview of US and International Emergency/Disaster Management
PHC 6230  3  Foundations of Humanitarian Assistance
PHC 6254  3  Public Health Implications and Concerns in Homeland Security

Global Health Practice (GLO) - 15 concentration credit hours (42 total credit 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
PHC 6945  3  Supervised Field Experience

Health Care Organizations and Management (HCO) - 15 concentration credit hours (42 total credit hours)
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
PHC 6181  3  Organizational Behavior in Health Services
**Health Policies and Programs (HPP)** - 15 concentration credit hours (42 total credit hours)
- PHC 6151 3 Health Policy and Politics
- PHC 6430 3 Health Economics
- PHC 6760 3 Research Methods in Public Health Programs
- PHC 6421 3 Public Health Law and Ethics
- PHC 6063 3 Public Health Data, Information and Decision Making

**Health, Safety and Environment (HLE)** - 15 concentration credit hours (42 total credit hours)
- PHC 6307 3 Principles of Exposure Assessment and Control
- PHC 6300 3 Principles of Environmental Health
- PHC 6325 3 Environmental Laboratory Principles
- PHC 6345 3 HSE Management and Administration
- PHC 6326 3 Global Issues in Environmental Health

**Infection Control (IFC)** - 15 concentration credit hours (42 total credit hours)
- 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

Pick one of the following two:
- PHC 6186 3 Public Health Emergencies in Large Populations
- PHC 6002 3 Infectious Disease Epidemiology

**Maternal and Child Health (PMC)** - 15 concentration credit hours (42 total credit 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

**Nutrition and Dietetics (NUD)** - 15 concentration credit hours (42 total credit hours)
- DIE 6127 2 Principles of Leadership and Management of Food and Nutrition
- DIE 6248 3 Advanced Clinical Nutrition
- HUN 5265 1 Methods of Nutritional Assessment
- PHC 6521 3 Public Health Nutrition
- PHC 6522 3 Nutrition in Health and Disease
- HUN 6804 3 Nutrition and Dietetics Research

**Public Health Education (PHN)** - 17 concentration credit hours (44 total credit hours)
- HSC 5036 1 Professional Foundations of Health Education
- PHC 6500 4 Theoretical and Behavioral Basis for Health Education
- 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

**Public Health Practice (PHP)** - 15 concentration credit hours (42 total credit hours)
- PHC 6063 3 Public Health Data, Information and Decision Making
- PHC 6421 3 Public Health Law and Ethics
- PHC 6104 3 Management of Public Health Programs
- PHC 6146 3 Health Services Planning and Evaluation
- PHC 6147 3 Managing Quality in Health Care

**Social Marketing (SOM)** - 12 concentration credit hours (42 total credit hours)
- PHC 6411 3 Introduction to Social Marketing for Public Health
- PHC 6705 3 Formative Research Methods in Social Marketing
- PHC 6460 3 Social Marketing Program Management
- PHC 6461 3 Advanced Social Marketing

http://health.usf.edu/publichealth/
Electives - Varies with each concentration (must meet minimum total credit hours for concentration)

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

Accelerated Major

Accelerated Public Health (BS) / Public Health: Concentration in Public Health Education (3+2) (M.P.H.)
Accelerated Env. Sci and Policy BS) / Public Health MPH/MSPH
Fast Track Honors.

Concurrent Degree Options

Students may apply to pursue one of the Concurrent Degree Options. Applicants must meet University Admission and English Proficiency Requirements, as well as the requirements for each major. Refer to the individual listings the admission and curriculum requirements specific for that major. Admission into one major does not guarantee admission in the other major.

Concurrent M.H.A./M.P.H. – Health Administration, Public Health
Concurrent M.A. /M.P.H. – Applied Anthropology, Public Health
Concurrent Ph.D. /M.P.H. – Applied Anthropology, Public Health
Concurrent M.D. /M.P.H. – Medicine, Public Health
Concurrent M.S. /M.P.H. – Nursing, Public Health
Concurrent M.S.W. /M.P.H. – Social Work, Public Health

See below for the specific requirements.

Concurrent M.H.A./M.P.H.

M.H.A. in Health Administration – 54 hours
M.P.H. in Public Health with a Concentration in Health Policies and Programs (HPP) – 42 hours

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 the admission and curriculum requirements for each degree, refer to that degree program’s listing in the Catalog. Students must meet the admission and curriculum requirements for each major.

Plan of Study Total minimum: 67 hrs

M.H.A. ONLY COURSES 29 hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHC 6147</td>
<td>Managing Quality in Health Care</td>
<td>3</td>
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<tr>
<td>PHC 6148</td>
<td>Strategic Planning and Health Care Marketing</td>
<td>3</td>
</tr>
<tr>
<td>PHC 6180</td>
<td>Health Services Management</td>
<td>3</td>
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<tr>
<td>PHC 6181</td>
<td>Organizational Behavior in Health Sciences</td>
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<td>PHC 6160</td>
<td>Health Care Financial Management</td>
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<td>PHC 6161</td>
<td>Health Finance Applications</td>
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<td>QMB 6305</td>
<td>Managerial Decision Making</td>
<td>2</td>
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<tr>
<td>PHC 6196</td>
<td>Information Systems in Health Care Management</td>
<td>3</td>
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<tr>
<td>PHC 6191</td>
<td>Quantitative Analysis in Health Care Services</td>
<td>3</td>
</tr>
</tbody>
</table>
PHC 6945  Supervised Field Experience 1
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

**Total Combined hours after sharing:** 69 hours*
96 hours total, less 27 hours shared.

**Concurrent M.A. /M.P.H.**

**M.A. in Applied Anthropology (ANT)** - total minimum hours - 40
with a concentration in Bio-cultural Medical Anthropology (BCM)

**M.P.H. in Public Health** – total minimum hours – 42
with concentrations in:
- Epidemiology (EPY)
- Global Health Practice (GLO)
- Maternal and Child Health (PMC)
- Public Health Education (PHN)

**Shared Courses-12 Credit Hours:**
Students must fulfill all the requirements for both majors, with the following exceptions: Students can share up to 15% of their courses between concurrent degrees (up to 12 credits). The shared courses for the concurrent degree need to be approved by both Colleges at the time of graduation certification. The number of shared hours cannot exceed 15% of the combined degree total.

In consultation with their major advisors, students will select two courses as electives in Anthropology and two courses as electives in Public Health. The two courses in Public Health will be selected from a concentration listed above. The two courses in Anthropology will be selected from electives. The student may choose from the following list of courses. Other courses may be selected in consultation with the advisor.

**Anthropology**
ANG 6585  Theories in Applied Bioanthropology
ANG 6469  Theory and Method in Medical Anthropology
ANG 6570  Nutritional Assessment
ANG 6730  Socio Cultural Aspects of HIV/AIDS
ANG 6733  Issues in Migrant Health
ANG 6735  Reproductive Health
USF Graduate Catalog 2018-2019

Public Health (M.P.H.)

ANG 6533 Anthropology of Human Growth and Development
ANG 6731 Health and Disasters
ANG 6732 Global Health from an Anthropological Perspective

Public Health
PHC 6053 Categorical Data Analysis
PHC 6701 Computer Applications for Public Health Research
PHC 6764 Global Health Principles and Contemporary Issues
PHC 6761 Global Health Assessment Strategies
PHC 6505 Program Planning in Community Health
PHC 6412 Health Disparities and Social Determinants of Health
PHC 6725 Focus Group Research Strategies
PHC 6530 Issues and Concepts in Maternal and Child Health
PHC 6532 Women’s Health Issues in Public Health

Total combined hours after sharing: 70

For all other curriculum requirements, including Thesis/non-Thesis, Internship, Comprehensive Examination, etc., refer to the Applied Anthropology or Public Health section of the Graduate Catalog listing for that major.

Concurrent Degree Admission Information
The two majors review applicants independently and admission to one major in no way guarantees admission into the other major. In choosing which major to apply to first, students should take into consideration the following: major requirements differ between Anthropology and Public Health; the student’s interests and future career plans. Students must be admitted and in good standing when applying for the concurrent degree. Concurrent degree students in Anthropology select a track and an optional concentration in Bio-Cultural Medical Anthropology. Concurrent degree students in Public Health select one of the above concentrations. Upon completion of all requirements for the concurrent degree major, 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 M.P.H. / Ph.D.

M.P.H. in Public Health* – total minimum hours – 42
- with concentration in:
  -Epidemiology (EPY)
    -Maternal and Child Health (PMC)
    -Public Health Education (PHN)
    -Global Health Practice (GLO)

Ph.D. in Applied Anthropology (ANT) - total minimum hours – 46 post master’s
- with a concentration in
  Bio-cultural Medical Anthropology (BCM)

Shared Courses-12 Credit Hours:
Students must fulfill all the requirements for both majors, with the following exceptions: Students can share up to 15% of their courses between concurrent degrees (up to 12 credits). The shared courses for the concurrent degree need to be approved by both Colleges at the time of graduation certification. The number of shared hours cannot exceed 15% of the combined degree total.

In consultation with their major advisors, students will select two courses as electives in Anthropology and two courses as electives in Public Health. The two courses in Public Health will be selected from a concentration listed above. The two courses in Anthropology will be selected from electives.

The student may choose from the following list of courses. Other courses may be selected in consultation with the advisor.

Anthropology
ANG 6585 Theories in Applied Bioanthropology
ANG 6469 Theory and Method in Medical Anthropology
ANG 6570 Nutritional Assessment
ANG 6730 Socio Cultural Aspects of HIV/AIDS
ANG 6733 Issues in Migrant Health
ANG 6735 Reproductive Health
ANG 6533 Anthropology of Human Growth and Development
ANG 6731 Health and Disasters
ANG 6732 Global Health from an Anthropological Perspective

Public Health
PHC 6053 Categorical Data Analysis
PHC 6701 Computer Applications for Public Health Research
PHC 6764 Global Health Principles and Contemporary Issues
PHC 6761 Global Health Assessment Strategies
PHC 6505 Program Planning in Community Health
PHC 6412 Health Disparities and Social Determinants of Health
PHC 6725 Focus Group Research Strategies
PHC 6530 Issues and Concepts in Maternal and Child Health
PHC 6532 Women’s Health Issues in Public Health

Total combined hours after sharing: 76

For all other curriculum requirements, including Thesis/non-Thesis/Dissertation, Internship, Comprehensive Examination, etc., refer to the Catalog listing for that major.

Concurrent Degree Admission Information
The two majors review applicants independently and admission to one major in no way guarantees admission into the other major. In choosing which major to apply to first, students should take into consideration the following: admission requirements differ in Anthropology and Public Health, student interests and future career plans. Students must be admitted and in good standing when applying for the concurrent degrees. Concurrent degree students in Anthropology select a track and an optional concentration in Bio-Cultural Medical Anthropology. Concurrent degree students in Public Health select one of the above concentrations. Upon completion of all requirements for the concurrent degree majors, 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 M.P.H. / M.D.

M.P.H. in Public Health – 42 hours
M.D. in Medicine – 369 hours (this is a 4 year program, resulting in 369 hours)

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.

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

Total Combined hours after sharing: 402 hours
411 Total Hours, with 9 credit hours shared, resulting in total combined: 402 hours
Concurrent M.P.H. / M.S.

M.P.H. in Public Health – 42 hours
M.S. in Nursing – 49 hours
Total hours required: 80

The College of Nursing and the College of Public Health offer an Interdisciplinary Concurrent Degree (Environmental and Occupational Health MPH / MS) Master’s program in Occupational Health Nursing/Adult Nurse Practitioner. This program provides training to prepare advanced occupational health nurses for practice at diverse work settings, including direct clinical practice and occupational health program development, administration and management. The student concurrently earns two degrees: a Master of Science (MS) from the College of Nursing as an Environmental and Occupational Health Nurse Practitioner and Adult Nurse Practitioner (ANP) and the Master of Public Health (MPH) from the College of Public Health in Occupational Health. The Program is open to RN’s with a baccalaureate degree in nursing or another discipline.

College of Nursing Courses - 49 credits

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<tr>
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<tr>
<td>NGR 6638</td>
<td>HP Theory &amp; Strategies Across the Lifespan</td>
<td>3</td>
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<tr>
<td>NGR 6152</td>
<td>Advanced Physiology &amp; Pathophysiology</td>
<td>4</td>
</tr>
<tr>
<td>NGR 6172</td>
<td>Pharmacology for Advanced Practice</td>
<td>4</td>
</tr>
<tr>
<td>NGR 6803</td>
<td>Research and Evidence-based Practice</td>
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<tr>
<td>NGR 6002</td>
<td>Advanced Health Assessment Across the Lifespan</td>
<td>4</td>
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<tr>
<td>NGR 6650</td>
<td>Occupational Health Nursing I</td>
<td>2</td>
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<tr>
<td>NGR 6651</td>
<td>Occupational Health Nursing II</td>
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<tr>
<td>NGR 6064C</td>
<td>Advanced Diagnostics and Procedures</td>
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<tr>
<td>NGR 6291C</td>
<td>Health Mgmt of Adults and Older Adults III – Special Topics / Occupational Health Nursing</td>
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<tr>
<td>NGR 6733</td>
<td>Organizational Professional Dimensions of Nursing Practice</td>
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<tr>
<td>NGR 6893</td>
<td>Systems and Populations in Healthcare</td>
<td>3</td>
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<tr>
<td>NGR 6207C</td>
<td>Health Mgmt of Adults &amp; Older Adults I</td>
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<td>NGR 6244C</td>
<td>Health Mgmt of Adults &amp; Older Adults II</td>
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College of Public Health Courses - 31 credits*

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<td>PHC 6357</td>
<td>Environmental and Occupational Health</td>
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<tr>
<td>PHC 6000</td>
<td>Epidemiology</td>
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</tr>
<tr>
<td>PHC 6050</td>
<td>Biostatistics I</td>
<td>3</td>
</tr>
<tr>
<td>PHC 6102</td>
<td>Principles of Health Policy Management</td>
<td>3</td>
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<tr>
<td>PHC 6423</td>
<td>Occupational Health Law</td>
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<tr>
<td>PHC 6360</td>
<td>Safety Principles and Practices</td>
<td>2</td>
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<tr>
<td>PHC 6364</td>
<td>Plant Operations Interdisciplinary Field Experience</td>
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</tr>
<tr>
<td>PHC 6356</td>
<td>Industrial Hygiene</td>
<td>2</td>
</tr>
<tr>
<td>PHC 6351</td>
<td>Occupational Medicine</td>
<td>3</td>
</tr>
<tr>
<td>PHC 6354</td>
<td>Occupational Health and Safety Administration</td>
<td>2</td>
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<tr>
<td>PHC 6977</td>
<td>Special Project</td>
<td>3</td>
</tr>
<tr>
<td>PHC 6936</td>
<td>Public Health Capstone</td>
<td>3</td>
</tr>
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</table>

*All MPH degrees at the College of Public Health require 42 credits minimum. In this concurrent degree the Public Health courses listed and the common Nursing/Public Health courses meet this requirement. NGR 6638 Health Promotion Theories and Strategies Across the Lifespan will substitute for the PHC 6410 core course for dual nursing M.S./M.P.H. students.

Concurrent M.P.H. / M.S.W.

M.P.H. in Public Health – 45-51 hours depending on concentration
M.S.W. in Social Work – 34 hours

The University of South Florida offers a concurrent degree program with a clinical social work concentration combined with a public health concentration in either Maternal & Child Health OR Behavioral Health. The MSW and the MPH programs were developed as mandated by the Florida legislature to respond to the public health and social welfare needs of the
Social Work is an essential component of both maternal and child health as well as behavioral health. The combination of degrees in public health and social work ideally equips graduate students to prepare for careers in both social work and public health settings with the ability to fill clinical, administrative, and evaluative roles, which positively affect the lives of women, children, and various populations-at-risk in a changing society.

The MPH/MSW concurrent degree program is a two-and-a-half to three year, full-time course of study.

**Shared Courses:**

**For the Maternal and Child Health Concentration:**
- Two foundation Courses in Social work may substitute for PHC 6410 Social and Behavioral Sciences Applied to Health. Substitutions will be reviewed on a case by case basis.
- Social Work Courses may be taken as 3 hours of Public Health approved electives or concentration support courses if approved by program advisor.

**For the Behavioral Health Concentration:**
- PHC 6410 Social and Behavioral Sciences Applied to Health may be waived for students with extensive social work, psychology, or counseling backgrounds.

**OTHER INFORMATION**

**Certificates:**
(for information click on the graduate certificates at [http://www.usf.edu/innovative-education/programs/graduate-certificates/](http://www.usf.edu/innovative-education/programs/graduate-certificates/))

**COURSES**
See [https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.usf.edu/course-inventory/)
PUBLIC HEALTH

Master of Science in Public Health (M.S.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

Minimum Total Hours: 42
Level: Masters
CIP Code: 51.2299
Dept Code: DEA
(Major/College): MSP PH
Approved: 2002

Concentrations:
- Behavioral Health (PBH)
- Environmental and Occupational Health (EOV)
- Epidemiology (PEY)
- Genetic Counseling (GTC)
- Genomics (GEO)
- Global Communicable Disease (PGD)
- Maternal and Child Health (PMH)
- Occupational Exposure Science (OES)
- Public Health Education (PPD)

Also offered as an Accelerated Major

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.

Accreditation:
The College is accredited by the Council on Education for Public Health and the concentration of Occupational Exposure Science (Industrial Hygiene) in the M.S.P.H. degree is accredited by the Applied Science Accreditation Commission of ABET, http://www.abet.org. The concentration in Genetic Counseling in the M.S.P.H. degree is accredited by the Accreditation Council for Genetic Counseling.

ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements, 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 degree 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 (https://usfhealth.box.com/s/ievl84vasytoc20u3s9xsw59r44fdiyk). The GRE waiver is not automatic and must be approved by the College of Public Health.

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 Courses – 9 hours**

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<td>1</td>
<td>History and Systems of Public Health</td>
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<tr>
<td>PHC 6756</td>
<td>5</td>
<td>Population Assessment: Part 1</td>
</tr>
<tr>
<td>PHC 6757</td>
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<td>Population Assessment: Part 2</td>
</tr>
</tbody>
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**MSPH in Public Health CONCENTRATION OPTIONS**

Students select from the Concentrations listed on the following pages.

- **Behavioral Health (PBH)** – 6 concentration credit hours (44 total credit hours)
  
<table>
<thead>
<tr>
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<th>Credits</th>
<th>Course Name</th>
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<tr>
<td>PHC 6543</td>
<td>3</td>
<td>Foundations of Behavioral Health Systems</td>
</tr>
<tr>
<td>PHC 6542</td>
<td>3</td>
<td>Epidemiology of Mental Disorders</td>
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</table>

- **Environmental and Occupational Health (EOV)** – 5 concentration credit hours (42 total credit hours)
  
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<tr>
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<td>3</td>
<td>Environmental and Occupational Toxicology</td>
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<tr>
<td>PHC 7317</td>
<td>3</td>
<td>Risk Communication in Public Health</td>
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- **Epidemiology (PEY)** – 6 concentration credit hours (48 total credit hours)
  
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<td>Categorical Data Analysis</td>
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<td>PHC 6011</td>
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<td>Epidemiology Methods II</td>
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- **Genetic Counseling (GTC)** – 8 concentration credit hours (42 total credit hours)
  
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<tr>
<td>PHC 6596</td>
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<td>Introduction to Genetic Counseling</td>
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<tr>
<td>PHC 6595</td>
<td>3</td>
<td>Applied Clinical Genetics</td>
</tr>
<tr>
<td>PHC 6593</td>
<td>1</td>
<td>Professional Development in Genetic Counseling</td>
</tr>
<tr>
<td>PHC 6940</td>
<td>3</td>
<td>Clinical Practicum in Genetic Counseling</td>
</tr>
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- **Genomics (GEO)** – 6 concentration credit hours (42 total credit hours)
  
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<th>Credits</th>
<th>Course Name</th>
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</thead>
<tbody>
<tr>
<td>PHC 6601</td>
<td>3</td>
<td>Human Genomics in Medicine and Public Health</td>
</tr>
<tr>
<td>PHC 6597</td>
<td>3</td>
<td>Quantitative Genomics and Genetics</td>
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</table>
Global Communicable Disease (PGD) – 6 concentration credit hours (42 total credit hours)
PHC 6561  3  Laboratory Techniques in Public Health
PHC 6722  3  Laboratory Rotations in Global Health Research

Maternal and Child Health (PMH) – 6 concentration credit hours (44 total credit hours)
PHC 6530  3  Issues and Concepts in Maternal and Child Health
PHC 6537  3  Case Studies in MCH Programs, Policies and Research

Occupational Exposure Science (OES) – 8 concentration credit hours (45 total credit hours)
PHC 6356  2  Industrial Hygiene
PHC 6358  2  Physical Agents – Assessment and Control
PHC 6365C  2  Analytical Methods in Industrial Hygiene I
PHC 6366C  2  Analytical Methods in Industrial Hygiene II

Public Health Education (PPD) – 6 concentration credit hours (44 total credit hours)
PHC 6500  3  Theoretical and Behavioral Basis for Health Education
PHC 6412  3  Health Disparities and Social Determinants

Electives – Varies with each concentration (must meet minimum total credit hours for concentration)

Thesis – 6 credit hours
PHC 6971  6  Thesis

Comprehensive Exam
Must be registered for at least two credit hours of coursework. Thesis proposal defense may be used in lieu of the comprehensive exam.

ACCELERATED MAJORS

Accelerated BS in Environmental Science and Policy and MPH/MSPH in Public Health

Certificates:
For information click on the graduate certificates at http://www.usf.edu/innovative-education/graduate-certificates/

COURSES
See https://www.systemacademics.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

Also offered as a Concurrent Degree with Applied Anthropology

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 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 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
ADMISSION INFORMATION

Must meet University Admission and English Proficiency requirements, 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):
  - Completed SOPHAS application (requires the following):
    - 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 (https://usfhealth.box.com/s/ievl84vasytoc20u3s9xsx59r44fdlyk). The GRE waiver is not automatic and must be approved by the College of Public Health.
    - 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.

CURRICULUM 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

Public Health Core Courses - 13 credit hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHC 7982</td>
<td>1</td>
<td>Introduction to Doctoral Training in Public Health</td>
</tr>
<tr>
<td>PHC 7154</td>
<td>3</td>
<td>Evidence-Informed Public Health I</td>
</tr>
<tr>
<td>PHC 7103</td>
<td>3</td>
<td>Transforming Public Health Practice</td>
</tr>
<tr>
<td>PHC 7149</td>
<td>1</td>
<td>Practical Applications II: Public Health Leadership</td>
</tr>
<tr>
<td>PHC 7934</td>
<td>3</td>
<td>Writing for Scholarly Publications in Health Sciences</td>
</tr>
<tr>
<td>HSC 7268</td>
<td>2</td>
<td>Professional Foundations III: Joining the Academy</td>
</tr>
</tbody>
</table>
Concentration Options (students select one of the following concentrations):

**Biostatistics (BST)** - 12 concentration 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 (CFH)** - 12 concentration 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 (EOH)** - 6 concentration credit hours
- PHC 6310 3 Environmental & Occupational Toxicology
- PHC 7317 3 Risk Communication in Public Health

**Epidemiology (EPY)** - 12 concentration credit hours
- PHC 6011 3 Epidemiology Methods II
- PHC 7045 3 Practical Issues in Epidemiology
- PHC 6081 3 Intermediate SAS in Epidemiology
- PHC 6934 3 Selected Topics: Foundations of Clinical Trials

**Global Communicable Disease (TCD)** – 6 concentration 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 (HPM) – 12 concentration 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 I 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.
Concurrent Degree Option

Students may apply to pursue a Concurrent Degree Option. Applicants must meet University Admission and English Proficiency Requirements, as well as the requirements for each major. Refer to the individual listings the admission and curriculum requirements specific for that major. Admission into one major does not guarantee admission in the other major.

Concurrent M.A. /Ph.D.

M.A. in Applied Anthropology (ANT)  - total minimum hours - 40
- with a concentration in
  Bio-cultural Medical Anthropology (BCM)

Ph.D. in Public Health* – total minimum hours – 55 post master’s
- with concentration in:
  Community and Family Health (CFH)
  Epidemiology (EPY)
  Global Communicable Disease (TCD)

Shared Courses-12 Credit Hours:
Students must fulfill all the requirements for both majors, with the following exceptions: Students can share up to 15% of their courses between concurrent degrees (up to 12 credits). The shared courses for the concurrent degrees need to be approved by both Colleges at the time of graduation certification. The number of shared hours cannot exceed 15% of the combined degree total.

In consultation with their major advisors, students will select two courses as electives in Anthropology and two courses as electives in Public Health. The two courses in Public Health will be selected from a concentration listed above. The two courses in Anthropology will be selected from electives.

The student may choose from the following list of courses. Other courses may be selected in consultation with the advisor.

**Anthropology**
- ANG 6585 Theories in Applied Bioanthropology
- ANG 6469 Theory and Method in Medical Anthropology
- ANG 6570 Nutritional Assessment
- ANG 6730 Socio Cultural Aspects of HIV/AIDS
- ANG 6733 Issues in Migrant Health
- ANG 6735 Reproductive Health
- ANG 6533 Anthropology of Human Growth and Development
- ANG 6731 Health and Disasters
- ANG 6732 Global Health from an Anthropological Perspective

**Public Health**
- PHC 6053 Categorical Data Analysis
- PHC 6701 Computer Applications for Public Health Research
- PHC 6764 Global Health Principles and Contemporary Issues
- PHC 6761 Global Health Assessment Strategies
- PHC 6505 Program Planning in Community Health
- PHC 6412 Health Disparities and Social Determinants of Health
- PHC 6725 Focus Group Research Strategies
- PHC 6530 Issues and Concepts in Maternal and Child Health
- PHC 6532 Women’s Health Issues in Public Health

Total combined hours after sharing: 83
For all other curriculum requirements, including Thesis/non-Thesis, Internship, Comprehensive Examination, etc., refer to the Catalog listing for that major.

**Concurrent Degree Admission Information**

The two majors review applicants independently and admission to one major in no way guarantees admission into the other major. In choosing which major to apply to first, students should take into consideration the following: admissions requirements differ between Anthropology and Public Health, student interests and future career plans. Students must be admitted and in good standing when applying for the concurrent degrees. Concurrent degree students in Anthropology select a track and an optional concentration in Bio-Cultural Medical Anthropology. Concurrent degree students in Public Health select one of the above concentrations. Upon completion of all requirements for the concurrent degree majors, the student submits separate applications for graduation to Anthropology and Public Health, and is certified for graduation by both majors and receives two diplomas.

**OTHER INFORMATION**

Certificates: (for information click on the graduate certificates at [http://www.usf.edu/innovative-education/majors/graduate-certificates/](http://www.usf.edu/innovative-education/majors/graduate-certificates/))

**COURSES**

See [https://www.systemacademics.usf.edu/course-inventory/](https://www.systemacademics.usf.edu/course-inventory/)
PUBLIC HEALTH

Doctor of Public Health (Dr.P.H.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:
Fall: November 15
Annually

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

Minimum Total Hours: 43 post-masters
Level: Doctoral
CIP Code: 51.2201
Dept Code: DEA
Major/College: DPH PH

Concentrations:
Advanced Practice Leadership in Public Health (APR)
Public Health and Clinical Laboratory Science and Practice (LSP)

The Doctor of Public Health (Dr.P.H.) 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 offers two concentrations: Advanced Practice Leadership in Public Health (APLPH), and Public Health and Clinical Laboratory Science and Practice (PHLSP). Each of these has a doctoral core and concentration curriculum that develops the student’s community engagement, leadership and management, communication and education, and evidence-based public health. Dr.P.H. students 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. This major requires students to be on campus for part of their experience.

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 Admission and English Proficiency requirements, 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):
  - Transcripts
  - GRE taken within five years preceding application or equivalent scores.
  - Minimum of three letters of Recommendation
  - Detailed personal statement of less than five pages that describes why you wish to obtain a Dr.P.H. degree in Public Health
  - Resume or curriculum vitae

Applicants to the Dr.P.H. 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 Master’s degree from an accredited institution with a minimum GPA of 3.00. 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 3.50 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 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 Dr.P.H. degree in Public Health. This document should explain the applicant’s public health background, current public health practice interests, and how the Dr.P.H. is expected to affect the applicant’s current practice.

4. 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. Students seeking acceptance into the Public Health Laboratory Science and Practice concentration must work at a health laboratory. 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.

5. Applicants must also be fully prepared to attend three Dr.P.H. Institutes on-campus.

Financial Aid
Students seeking financial aid should contact the USF financial aid office for federal guidelines. Dr.P.H. 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. Dr.P.H. students are eligible for current student scholarships and awards that are announced each year. Please see the college of Public Health Scholarship and Award webpage.
CURRICULUM REQUIREMENTS

Total minimum hours – 43 credits post-master’s
Common core – 13 hours
Concentration – 12 hours
Electives – 12 hours
Culminating Requirements/Doctoral Project – 6

Pre-Requisites
Students are expected to come into the Dr.P.H. 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.

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.

Core Courses - 13 credit hours
PHC 7982 1 Introduction to Doctoral Training in Public Health
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

Concentration - 12 credit hours
Students select one of the following concentrations

Advanced Practice Leadership in Public Health
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

Public Health and Clinical Laboratory Science and Practice
PHC 7565 3 Public Health Laboratory Management I
PHC 7563 3 Public Health Laboratory Management II
PHC 7564 3 Public Health Laboratory Microbiology
PHC 7085 3 Public Health Laboratory Bioinformatics

Electives – 12 credit hours minimum

Culminating Requirements – 6 credit hours minimum
PHC 7919 6 Public Health Doctoral Project

These lead to a field-based doctoral project that influences public health majors, policies, or systems:
Applied Practice Experiences
Qualifying Exam
Culminating Requirements

Applied Practice Experiences
All Dr.P.H. 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 Dr.P.H. foundational and concentration 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 Dr.P.H. 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 foundational and concentration competencies across all Dr.P.H. 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 7919: Public Health Doctoral Project. 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 Dr.P.H. 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
See https://www.systemacademics.usf.edu/course-inventory/
College of The Arts
Changes to Note

The USF Graduate Council approved the following on the date noted.

Curriculum Actions

<table>
<thead>
<tr>
<th>Program</th>
<th>Action</th>
<th>Date</th>
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<tbody>
<tr>
<td>Art History M.A.</td>
<td>New Accelerated Program Option</td>
<td>2/5/18</td>
</tr>
<tr>
<td>Music M.M.</td>
<td>Removed English Proficiency language already listed in Admissions sections</td>
<td>3/5/18</td>
</tr>
<tr>
<td>Music Ph.D.</td>
<td>Removed English Proficiency language already listed in Admissions sections</td>
<td>3/5/18</td>
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<tr>
<td>Music Education M.A.</td>
<td>Removed English Proficiency language already listed in Admissions sections</td>
<td>3/5/18</td>
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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.

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

Minimum Total Hours: 108
Level: Masters
CIP Code: 04.0201
Department Code: DEA
Major/College 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.

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.
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 Conditions and Procedures of the NAAB: “In the United States, most state registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The National Architectural 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 Admission and English Proficiency requirements, 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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>ARC 5361</td>
<td>Core Design I</td>
<td>9***</td>
</tr>
<tr>
<td>ARC 5362</td>
<td>Core Design II</td>
<td>9***</td>
</tr>
<tr>
<td>ARC 5363</td>
<td>Core Design III</td>
<td>6***</td>
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<td>ARC 5364</td>
<td>Advanced Design A</td>
<td>6***</td>
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<td>ARC 5365</td>
<td>Advanced Design B</td>
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<td>Advanced Design D</td>
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<td>ARC 5256</td>
<td>Design Theory</td>
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<td>ARC 5731</td>
<td>Architectural History I</td>
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<td>ARC 5732</td>
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<td>ARC 6398</td>
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Technology

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<td>ARC 5467</td>
<td>Materials and Methods of Construction</td>
<td>3***</td>
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<td>ARC 5587</td>
<td>Structures I</td>
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</tr>
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<td>ARC 5588</td>
<td>Structures II</td>
<td>3***</td>
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<td>ARC 5689</td>
<td>Environmental Technology</td>
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<td>ARC 6481</td>
<td>Design Development</td>
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Professional Practice

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<tr>
<td>ARC 6288</td>
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Research/Thesis

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<td>ARC 6936</td>
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<td>ARC 6974</td>
<td>Master’s Project Planning</td>
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<td>ARC 6976</td>
<td>Master’s Project</td>
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Electives

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<td>3</td>
</tr>
<tr>
<td>ARC</td>
<td>Elective 5</td>
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***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 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

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 Admission and English Proficiency requirements, 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

http://www.arts.usf.edu/
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
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

Also offered as an Accelerated Major

CONTACT INFORMATION

College: The Arts
Department: School of Art and Art History
Contact Information: www.grad.usf.edu
Other Resources: www.art.usf.edu

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 Admission and English Proficiency requirements, 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](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](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](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.
ACCELERATED MAJOR

This program allows B.A. majors in Art History to take graduate courses in the M.A. degree in Art History during their senior year. These shared credits will be applied to the M.A. degree in Art History, thus accelerating the time to completion, with successful students able to earn the M.A. degree in Art History in one year (with option of two) beyond completion of the B.A. degree.

If successful, students will be able to complete the M.A. degree in two semesters once the B.A. degree requirements have been met. This will allow qualified students to more expeditiously pursue career opportunities requiring a graduate degree in Art History, or to pursue Ph.D. studies.

While completing the shared requirements, student is classified as an undergraduate. Once the shared requirements are completed, student is conferred the B.A. degree and is converted to graduate status. Any graduate program awards or assistantships will be initiated with conferral of graduate status. If student admitted into accelerated program satisfactorily completes shared requirements but opts-out of further graduate degree requirements, student will be awarded the B.A. degree.

For admission to the program, a student must:
1. have completed at least 29 hours in the Art History undergraduate major;
2. have a minimum undergraduate 3.33 GPA overall, and
3. have a minimum undergraduate 3.50 GPA in the Art History major.

Admission to the program is by faculty invitation. Student will be contacted by faculty and invited to apply to the program, and to provide documentation affirming satisfaction of minimum requirements. To be accepted into the accelerated B.A./M.A. in Art History, students must have completed a minimum of 29 credits in the Art History undergraduate major.

Requirements for the B.A. in Art History – refer to the Undergraduate Catalog for current requirements
Requirements for the M.A. in Art History – refer to the requirements listed above in the M.A. Section

Shared B.A./M.A. Requirements
12 hours of ARH 6798 Seminar in Art History satisfies:

6 hours of Art History Survey: ARH 4170; ARH 5200; ARH 4301; ARH 4310; ARH 4312; ARH 4333; ARH 4350; ARH 4430; ARH 4450; ARH 4475C; ARH 4520; ARH 4530; ARH 4571; ARH 4930

And
6 hours of ARH 4800 Critical Studies in Art History

Total Hours of Accelerated Program Option:
BA-120; MA 42; Share 12 hours; Total Combined after sharing: 150

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

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 Admission and English Proficiency requirements, 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.

http://www.arts.usf.edu/
International students must include copies of graduation Certificates and/or Diplomas (in addition to official transcripts) with their applications.

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**
- MUE 6428 6 Learner-Centered Approaches to Music Education I - (alternative calendar)
- MUE 6785 3 Research Design and Methods in Music Education -
- MUE 6787 3 Literature Review in Music Education
- MUE 6789 3 Research Report Writing in Music Education
- MUE 6429 3 Learner-Centered Approaches in Music Education II
- MUH 6020 3 History of Blues and Rock

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:

<table>
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<tr>
<th>Season</th>
<th>Deadline</th>
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<tbody>
<tr>
<td>Fall</td>
<td>February 15</td>
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<tr>
<td>Spring</td>
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<tr>
<td>Summer</td>
<td>February 15</td>
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</tbody>
</table>

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 (MPP)
- Theory (MMT)

CONTACT INFORMATION

College: The Arts
Department: School of Music
Contact Information: www.grad.usf.edu

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 Admission and English Proficiency requirements, 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.

- 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
MVI 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
MV? 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

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<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
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<tr>
<td>MVK 5----</td>
<td>(4)</td>
<td>Applied Studio (2 credits; taken two terms)</td>
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<tr>
<td>MUL 6410</td>
<td>(2)</td>
<td>Keyboard Repertory 1 (Fall)</td>
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<tr>
<td>MUL 6411</td>
<td>(2)</td>
<td>Keyboard Repertory 2 (Spring)</td>
</tr>
<tr>
<td>MVK 6650</td>
<td>(2)</td>
<td>Graduate Piano Pedagogy 1</td>
</tr>
<tr>
<td>MVK 6651</td>
<td>(2)</td>
<td>Graduate Piano Pedagogy 2</td>
</tr>
<tr>
<td>MUN 6---</td>
<td>(2)</td>
<td>Ensemble (1 credit; taken two terms)</td>
</tr>
<tr>
<td>MUS 6976</td>
<td>(2)</td>
<td>Recital</td>
</tr>
</tbody>
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**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.ugs.usf.edu/course-inventory)
MUSIC

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Priority Admission Application Deadlines:

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<tr>
<td>Spring</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: 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>
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<tr>
<th>Graduate Assistantships</th>
<th>Feb 15</th>
<th>No Application - By Faculty Recommendation only</th>
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</table>

| Fellowships | Feb 1 | No application. By faculty recommendation only. |

$5,580 to $22,000 per year plus Tuition Waiver
Residency Requirement
One academic year of full-time study. Successive summers may be considered.

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 Admission and English Proficiency requirements, 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.

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 (post-masters)

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

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

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

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 Admission and English Proficiency requirements, as well as requirements for admission to the major, listed below.

- 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](http://www.ugs.usf.edu/course-inventory)
SECTION 25

INNOVATIVE EDUCATION

http://www.usf.edu/innovative-education/
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 at [http://www.usf.edu/innovative-education/programs/online-programs/state-authorization.aspx](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)

Arts and Sciences
M.A. in Library and Information Sciences
M.S. in Intelligence Studies - Cyber Intelligence
M.S. in Intelligence Studies - Strategic Intelligence

Behavioral and Community Sciences
M.A. in Applied Behavior Analysis
M.S. in Child and Adolescent Behavioral Health
M.S.W. in Social Work (Advance Standing master’s)

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.A. in Special Education w/concentrations in ESE, BD, LD, ID
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
  Global Disaster Management and Humanitarian Relief
  Health, Safety & Environment
  Infection Control
  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 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 curriculum requirements, refer to the following pages.

1. Academic Advising
2. Addictions and Substance Abuse Counseling
3. Africana Studies
4. Aging and Neuroscience*
5. American Culture and Society
6. Analytics and Business Intelligence**
7. Anatomy
8. Applied Biostatistics**
9. Applied Linguistics
10. Autism Spectrum Disorder (ASD)**
11. Behavioral Research to Immersion to Develop Graduate Excellence (BRIDGE) - INACTIVE
12. Biochemistry and Molecular Biology - INACTIVE
13. Bioinformatics
14. Biomedical Ethics* - INACTIVE
15. Biostatistics*
16. Biotechnology
17. Brain Fitness and Memory Management
18. Building Sustainable Enterprise
19. Business Analytics
20. Business Foundations
21. Career Counseling*
22. Children’s Mental Health**
23. Climate Change and Sustainability
24. Clinical Aging Studies
25. Clinical Investigation**
26. Coastal Sustainability
27. Coastal Sustainability Management
28. College Teaching*
29. Community Design and Development
30. Comparative Literary Studies
31. Compliance, Risk, and Anti-Money Laundering
32. Concepts and Tools of Epidemiology**
33. Creative Writing
34. Crime Scene Investigations for Violent Crimes
35. Criminal Justice Administration*
36. Cuban Studies
37. Cyber Intelligence
38. Cybersecurity Education and Awareness
39. Diasporas and Health Disparities*
40. Digital Forensics**
41. Digital Music Education**
42. Disabilities Education: Severe and/or Profound**
43. Disaster Management**
44. Diversity in Education
45. eLearning Design and Development
46. Energy Sustainability
47. Entrepreneurship**
48. Environmental Health*
49. Environmental Policy and Management
50. Epidemiology of Infectious Disease*
51. ESOL**
52. Evaluation
53. Exceptional Student Education
54. Film and New Media Studies
55. Food Sustainability and Security
56. Foreign Language Education: Professional
57. Foreign Language Education: Culture and Content
58. Genocide and Human Rights
59. Geographical Information Systems
60. Geriatric Social Work/Clinical Gerontology
61. Gerontology**
62. Gifted Education** INACTIVE
63. Global Health and Latin American and Caribbean Studies
64. Global Health Practice
<table>
<thead>
<tr>
<th>Certificate Title</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>65. Global Strategy and Decision-Making</td>
<td></td>
</tr>
<tr>
<td>66. Globalization Studies - INACTIVE</td>
<td></td>
</tr>
<tr>
<td>67. Global Sustainability</td>
<td></td>
</tr>
<tr>
<td>68. Health Analytics</td>
<td></td>
</tr>
<tr>
<td>69. Health Care Risk Management &amp; Patient Safety - INACTIVE</td>
<td></td>
</tr>
<tr>
<td>70. Health Informatics</td>
<td></td>
</tr>
<tr>
<td>71. Health Information</td>
<td></td>
</tr>
<tr>
<td>72. Health Management and Leadership*</td>
<td></td>
</tr>
<tr>
<td>73. Health, Safety &amp; Environment</td>
<td></td>
</tr>
<tr>
<td>74. Health Sciences**</td>
<td></td>
</tr>
<tr>
<td>75. Homeland Security</td>
<td></td>
</tr>
<tr>
<td>76. Hospice, Palliative Care and End of Life Studies</td>
<td></td>
</tr>
<tr>
<td>77. Human Resources</td>
<td></td>
</tr>
<tr>
<td>78. Humanitarian Assistance**</td>
<td></td>
</tr>
<tr>
<td>79. Hydrogeology</td>
<td></td>
</tr>
<tr>
<td>80. Infection Control**</td>
<td></td>
</tr>
<tr>
<td>81. Information Assurance**</td>
<td></td>
</tr>
<tr>
<td>82. Instructional Technology: Distance Education**</td>
<td></td>
</tr>
<tr>
<td>83. Instructional Technology: Florida Digital Educator**</td>
<td></td>
</tr>
<tr>
<td>84. Instructional Technology: Web Design**</td>
<td></td>
</tr>
<tr>
<td>85. Integrative Health Coaching INACTIVE</td>
<td></td>
</tr>
<tr>
<td>86. Integrative Oncology INACTIVE</td>
<td></td>
</tr>
<tr>
<td>87. Latin American &amp; Caribbean Studies</td>
<td></td>
</tr>
<tr>
<td>88. Leadership in Child and Adolescent Behavioral Health</td>
<td></td>
</tr>
<tr>
<td>89. Leadership in Developing Human Resources</td>
<td></td>
</tr>
<tr>
<td>90. Library Information Technology</td>
<td></td>
</tr>
<tr>
<td>91. Marriage and Family Therapy</td>
<td></td>
</tr>
<tr>
<td>92. Materials Science and Engineering</td>
<td></td>
</tr>
<tr>
<td>93. Maternal and Child Health</td>
<td></td>
</tr>
<tr>
<td>94. Mathematics</td>
<td></td>
</tr>
<tr>
<td>95. Medical Anthropology</td>
<td></td>
</tr>
<tr>
<td>96. Medical Biochemistry, Microbiology &amp; Immunology - INACTIVE</td>
<td></td>
</tr>
<tr>
<td>97. Medicine and Gender</td>
<td></td>
</tr>
<tr>
<td>98. Mental Health Planning, Evaluation and Accountability INACTIVE</td>
<td></td>
</tr>
<tr>
<td>99. Molecular Medicine - INACTIVE</td>
<td></td>
</tr>
<tr>
<td>100. Multimedia Journalism*</td>
<td></td>
</tr>
<tr>
<td>101. Museum Studies - INACTIVE</td>
<td></td>
</tr>
<tr>
<td>102. Music</td>
<td></td>
</tr>
<tr>
<td>103. NanoPharmaceutics</td>
<td></td>
</tr>
<tr>
<td>104. Nonprofit Management</td>
<td></td>
</tr>
<tr>
<td>105. Nursing Education INACTIVE</td>
<td></td>
</tr>
<tr>
<td>106. Nursing and Healthcare Informatics*INACTIVE</td>
<td></td>
</tr>
<tr>
<td>107. Occupational Health Nursing**INACTIVE</td>
<td></td>
</tr>
<tr>
<td>108. Pathology</td>
<td></td>
</tr>
<tr>
<td>109. Pre-professional Pharmacy **</td>
<td></td>
</tr>
<tr>
<td>110. Pharmacy Entrepreneurship, Leadership and Management</td>
<td></td>
</tr>
<tr>
<td>111. Pharmacy Update and Practice Management **</td>
<td></td>
</tr>
<tr>
<td>112. Planning for Healthy Communities</td>
<td></td>
</tr>
<tr>
<td>113. Political Science INACTIVE</td>
<td></td>
</tr>
<tr>
<td>114. Positive Behavior Support**</td>
<td></td>
</tr>
<tr>
<td>115. Post-Masters Clinical Nurse Leader - INACTIVE</td>
<td></td>
</tr>
<tr>
<td>116. Post Masters in Higher Education Leadership*</td>
<td></td>
</tr>
<tr>
<td>117. Post Master’s Nurse Practitioner - INACTIVE</td>
<td></td>
</tr>
<tr>
<td>118. Post Master’s Ed Leadership (K-12) - INACTIVE</td>
<td></td>
</tr>
<tr>
<td>119. Professional Engineering Excellence (APEX) - INACTIVE</td>
<td></td>
</tr>
<tr>
<td>120. Post-Master’s: Library and Information Science*</td>
<td></td>
</tr>
<tr>
<td>121. Project Management</td>
<td></td>
</tr>
<tr>
<td>122. Professional and Technical Communication</td>
<td></td>
</tr>
<tr>
<td>123. National and Competitive Intelligence</td>
<td></td>
</tr>
<tr>
<td>124. Public Health Generalist**</td>
<td></td>
</tr>
<tr>
<td>125. Public Health Policy and Programs**</td>
<td></td>
</tr>
<tr>
<td>126. Public Management</td>
<td></td>
</tr>
<tr>
<td>127. Qualitative Research</td>
<td></td>
</tr>
<tr>
<td>128. Reading *</td>
<td></td>
</tr>
<tr>
<td>129. Regulatory Affairs – Medical Devices**</td>
<td></td>
</tr>
<tr>
<td>130. Rehabilitation Technology</td>
<td></td>
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<tr>
<td>131. Renewable Energy</td>
<td></td>
</tr>
<tr>
<td>132. Research Administration</td>
<td></td>
</tr>
<tr>
<td>133. Robotics **</td>
<td></td>
</tr>
<tr>
<td>134. Safety Management</td>
<td></td>
</tr>
<tr>
<td>135. Scholarly Excellence, Leadership Experiences, and Collaborative Training (SELECT)</td>
<td></td>
</tr>
<tr>
<td>136. School Counseling Post-Masters*</td>
<td></td>
</tr>
<tr>
<td>137. School Library Media Specialist**</td>
<td></td>
</tr>
<tr>
<td>138. Simulation Based Academic Fellowship in Advanced Pain Management</td>
<td></td>
</tr>
<tr>
<td>139. Smart Grid Power Systems</td>
<td></td>
</tr>
<tr>
<td>140. Social Marketing &amp; Social Change**</td>
<td></td>
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<tr>
<td>141. Statistical Data Analysis</td>
<td></td>
</tr>
<tr>
<td>142. Strategic Intelligence</td>
<td></td>
</tr>
<tr>
<td>143. Sustainable Tourism</td>
<td></td>
</tr>
<tr>
<td>144. Sustainable Tourism Leadership</td>
<td></td>
</tr>
<tr>
<td>145. Sustainable Transportation</td>
<td></td>
</tr>
<tr>
<td>146. Systems Engineering**</td>
<td></td>
</tr>
<tr>
<td>147. Teacher Leadership for Student Learning **</td>
<td></td>
</tr>
<tr>
<td>148. Teaching and Communicating Ocean Sciences Broader Impacts *</td>
<td></td>
</tr>
<tr>
<td>149. Teaching Composition</td>
<td></td>
</tr>
<tr>
<td>150. Teaching English as a Second Language (TESL)</td>
<td></td>
</tr>
<tr>
<td>151. Teaching in Pharmacy</td>
<td></td>
</tr>
<tr>
<td>152. Technology Management**</td>
<td></td>
</tr>
<tr>
<td>153. Total Quality Management**</td>
<td></td>
</tr>
<tr>
<td>154. Toxicology and Risk Assessment**</td>
<td></td>
</tr>
<tr>
<td>155. Translational Research in Adolescent Behavioral Health*</td>
<td></td>
</tr>
<tr>
<td>156. Transportation Systems Analysis**</td>
<td></td>
</tr>
<tr>
<td>157. Water, Health and Sustainability</td>
<td></td>
</tr>
<tr>
<td>158. Water Sustainability</td>
<td></td>
</tr>
<tr>
<td>159. Wireless Engineering**</td>
<td></td>
</tr>
<tr>
<td>160. Women’s Health</td>
<td></td>
</tr>
<tr>
<td>161. Women’s and Gender Studies</td>
<td></td>
</tr>
</tbody>
</table>

* Partially online  **Fully online
Section 27

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: https://www.systemacademics.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>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>No laboratory component in this course</td>
</tr>
<tr>
<td>English Composition</td>
<td>Lower (Freshman) Level at this institution</td>
<td>Freshman Composition</td>
<td>Freshman Composition Skills</td>
<td>Freshman Composition Skills I</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 (academy 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 cynthiab@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.
<table>
<thead>
<tr>
<th>SUB</th>
<th>NUM</th>
<th>TITLE</th>
<th>HRS</th>
<th>PREREQUISITES</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<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>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>SPA</td>
<td>7346</td>
<td>Cochlear Implants</td>
<td>3</td>
<td>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>7834</td>
<td>Audiology Doctoral Project Seminar</td>
<td>1</td>
<td>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>
</tr>
<tr>
<td>LIS</td>
<td>5418</td>
<td>Health Informatics for Medical Librarians</td>
<td>3</td>
<td>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>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>PHC</td>
<td>7067</td>
<td>Probability Models</td>
<td>3</td>
<td>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>NGR</td>
<td>6700L</td>
<td>APN Transitions Practicum</td>
<td>2-3</td>
<td></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>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>
</tr>
<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>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
<td></td>
<td></td>
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<td>-------------</td>
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</tr>
<tr>
<td>PET 6216</td>
<td>Sport Psychology</td>
<td>3</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>
<td></td>
<td></td>
</tr>
<tr>
<td>PET 6389</td>
<td>Fitness Assessment and Prescription</td>
<td>3</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>
<td></td>
<td></td>
</tr>
<tr>
<td>PET 6086</td>
<td>Lifespan Fitness</td>
<td>3</td>
<td>The course is designed to assist students in developing an understanding of how fitness habits and recommendations change over a lifetime.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PET 6388</td>
<td>Physical Activity, Health, and Disease</td>
<td>3</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 6367</td>
<td>Sports Nutrition and Exercise Metabolism</td>
<td>3</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>
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<tr>
<td>GMS 6671</td>
<td>A Brief History of Medical Sciences</td>
<td>2</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>
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<tr>
<td>AFA 6387</td>
<td>Seminar on Genocide and Human Rights</td>
<td>3</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>
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<tr>
<td>GMS 6908</td>
<td>Medical Sciences Independent Study</td>
<td>1-3</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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<tr>
<td>GMS 6840</td>
<td>Cultural and Diversity Issues in Clinical Research</td>
<td>2</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>
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<tr>
<td>GMS 6841</td>
<td>Fundamentals of Translational Research</td>
<td>1</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>
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<tr>
<td>GMS</td>
<td>Scientific Communication</td>
<td>2</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>
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<tr>
<td>MMC</td>
<td>Strategic Communication Media</td>
<td>3</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>
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<tr>
<td>MMC</td>
<td>Strategic Message Design</td>
<td>3</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>
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<tr>
<td>HSC</td>
<td>Professional Foundations of Health Education</td>
<td>1</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>
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<tr>
<td>PHC</td>
<td>Epidemiology Methods II</td>
<td>3</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>
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<tr>
<td>PHC</td>
<td>Infectious Disease Epidemiology</td>
<td>3</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>
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<tr>
<td>SYD</td>
<td>City and Community</td>
<td>3</td>
<td>Provides training in the field of urban and community sociology. Focuses on the field's early theoretical foundations, &quot;classic&quot; research, and contemporary debates. Concentrates on the U.S., although some cross-cultural comparisons will be offered.</td>
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<tr>
<td>LAS</td>
<td>Independent Study and Research in Latin American</td>
<td>1-9</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>
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<tr>
<td>LAS</td>
<td>Thesis in Latin America and Caribbean</td>
<td>1-12</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>
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<tr>
<td>NGR</td>
<td>Statistical Methods in Nursing Research III</td>
<td>3</td>
<td>Focus on advanced multivariate statistical methods in nursing research; emphasizing multiple regression and correlational analysis.</td>
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<tr>
<td>SYA</td>
<td>Ethnography</td>
<td>3</td>
<td>Examines the theoretical and practical issues in ethnographic research and various styles of ethnography. Provides hands-on training in</td>
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<tr>
<td>SYP</td>
<td>6016 Emotions in Everyday Life</td>
<td>3</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>
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<tr>
<td>WST</td>
<td>6936 Selected Topics in Women's Studies</td>
<td>3</td>
<td>Content varies according to scholarship focus of students and instructor. Repeatable—content and instructor will vary.</td>
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<tr>
<td>ENC</td>
<td>6333 Contemporary Rhetorics</td>
<td>3</td>
<td>This course examines the impact of postmodern theories on theory and practice of rhetoric—particularly the rhetoric of rhetoric and composition. The course examines ways post modern rhetoric lends itself to the developing media and complexity theory.</td>
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<tr>
<td>EEC</td>
<td>6205 E.C.: Curriculum and Authentic Assessment</td>
<td>3</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>
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<tr>
<td>EEC</td>
<td>6265 Early Childhood Programs and Advanced Curriculum</td>
<td>3</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>
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<tr>
<td>EEC</td>
<td>6626 EC: Play and Learning</td>
<td>3</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>
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<tr>
<td>EEC</td>
<td>6415 EC: Diversity in Home and School</td>
<td>3</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>
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<tr>
<td>EEC</td>
<td>6055 Advocacy and Leadership in Early Childhood Education</td>
<td>3</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>EEC</td>
<td>6517 Social Justice in Early Childhood Education</td>
<td>3</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>
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<tr>
<td>EEC</td>
<td>6525 Early Childhood Program Development and Administration</td>
<td>3</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.</td>
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<tr>
<td>EEC 6678</td>
<td>Research Seminar: Issues and Trends in Early Childhood Education</td>
<td>3</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>
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<tr>
<td>GMS 6844</td>
<td>Principles of Patient-Oriented Research</td>
<td>1</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>
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<tr>
<td>MHS 6418</td>
<td>School Counselor Accountability and Curriculum</td>
<td>3</td>
<td>MHS 6006.                                                                                           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>
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<tr>
<td>CAP 6638</td>
<td>Geometric/Statistical Pattern Recognition Techniques</td>
<td>3</td>
<td>Principles and applications of statistical pattern recognition methods, Bayes decision theory, parametric and nonparametric techniques, discriminant functions, unsupervised classification and clustering.</td>
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<tr>
<td>EIN 5201</td>
<td>Creativity in Technology</td>
<td>3</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>
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<tr>
<td>EIN 6520</td>
<td>Systems Modeling and Performance Analysis</td>
<td>3</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>
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<tr>
<td>ESI 6410</td>
<td>Optimization in Operations Research</td>
<td>3</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>
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<tr>
<td>ESI 6340</td>
<td>Probabilistic Systems Analysis</td>
<td>3</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>
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<tr>
<td>GMS 6707</td>
<td>Medical Neuroscience</td>
<td>3-7</td>
<td>GMS 6418.                                                                                         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>
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<tr>
<td>GMS 6411</td>
<td>Metabolic Cardiology</td>
<td>3</td>
<td>Examines the interrelationship between metabolic dis-regulation and cardiovascular disease focusing on the interrelationship between diabetes and increased risk for...</td>
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<tr>
<td>GMS 6419</td>
<td>Excretory, Endocrine and Reproductive Systems</td>
<td>3-7</td>
<td>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>
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<tr>
<td>GMS 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 6933</td>
<td>Case Studies Intellectual Property in Biotechnology</td>
<td>2</td>
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<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>
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<tr>
<td>GMS 6000</td>
<td>Medical Science Success Skills</td>
<td>1-3</td>
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<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>EEL 6753</td>
<td>Digital Signal Processing III</td>
<td>3</td>
<td>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-</td>
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<tr>
<td>ENL 5137</td>
<td>British Novel 1900 to the Present</td>
<td>3</td>
<td></td>
<td>This course provides advanced study of trends and influences in longer British fiction from about 1900 to the present. It traces the development of the novel form focusing on works and authors considered to have made major contributions to British fiction.</td>
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<tr>
<td>AML 5305</td>
<td>Studies in Individual American Authors</td>
<td>3</td>
<td></td>
<td>This course provides advanced study of two or three selected authors who are considered to have made major contributions to the development of American literature.</td>
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<tr>
<td>EDF 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>
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<tr>
<td>GEB 6865</td>
<td>Business Problems Analysis</td>
<td>3</td>
<td>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>
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<tr>
<td>MHS 6915</td>
<td>Directed Research in Behavioral</td>
<td>1-6</td>
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<td>Students work directly with a faculty mentor in cardiovascular events.</td>
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<td>Prerequisites</td>
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<tr>
<td>PSY 6218</td>
<td>Graduate Research Methods</td>
<td>3</td>
<td>PSY 3024, STA 2023.</td>
<td>Second course in sequence designed to provide students with a working knowledge of research methods and statistics in psychological science. Focus on interpretation of data through written reports of statistical analysis.</td>
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<tr>
<td>FIN 6595</td>
<td>The Efficiency of Financial Markets</td>
<td>3</td>
<td>FIN 6406</td>
<td>Students develop an understanding of the data and computer technology resources available for use in analyzing financial markets. Traditional financial models and theories are examined and evaluated via statistical and regression analysis.</td>
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<tr>
<td>SOP 6709</td>
<td>Topics in Social Psychology</td>
<td>3</td>
<td></td>
<td>This course examines theory and research in social psychology. We will cover both “classic” issues in modern social psychology as well as recent trends, emerging perspectives, and cutting edge research (with an emphasis on more recent research).</td>
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<tr>
<td>SPA 7331</td>
<td>Advanced Medical Audiology</td>
<td>3</td>
<td>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>
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<tr>
<td>SPA 7330</td>
<td>Advanced Vestibular Evaluation and Treatment</td>
<td>3</td>
<td>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>
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<tr>
<td>PHC 6726</td>
<td>Community-Based Participatory Research for Tropical Health</td>
<td>6</td>
<td>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>
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<tr>
<td>NGR 6952</td>
<td>Writing for Nursing Publication</td>
<td>3</td>
<td>NGR 6800.</td>
<td>Focus is on scientific writing and dissemination of scientific knowledge in advanced nursing practice.</td>
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<tr>
<td>ACG 6026</td>
<td>Accounting Concepts for Managers</td>
<td>3</td>
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<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>
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<tr>
<td>EDF 7930</td>
<td>Professional Seminar</td>
<td>1</td>
<td></td>
<td>Ph.D. course fulfilling Educational Psych. concentration requirement under the Curr. &amp; Instruct. 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>
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<tr>
<td>ENV 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>
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<tr>
<td>SPA 6508</td>
<td>Advanced Audiology Practicum</td>
<td>3-6</td>
<td>SPA 6505.</td>
<td>Students are placed at a clerkship/externship job.</td>
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<tr>
<td>SPA 7332</td>
<td>Advanced Electrophysiology</td>
<td>3</td>
<td>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>
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<tr>
<td>PHC 6053</td>
<td>Categorical Data Analysis</td>
<td>3</td>
<td>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>
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<tr>
<td>ECO 6005</td>
<td>Introduction to Economic Concepts for Managers</td>
<td>3</td>
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<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>
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<tr>
<td>GMS 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>
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<tr>
<td>GMS 6753</td>
<td>The Basics of Brain Fitness and Memory Management</td>
<td>3</td>
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<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>
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<tr>
<td>GMS 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>
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<tr>
<td>GMS 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>
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<tr>
<td>HIS 7289</td>
<td>Ph.D. Seminar in Comparative Studies</td>
<td>3</td>
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<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>
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<tr>
<td>HIS 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>
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<tr>
<td>HIS 7938</td>
<td>Ph.D. Capstone Seminar</td>
<td>3</td>
<td>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>
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<tr>
<td>HIS 7939</td>
<td>Selected Topics for Doctoral Students</td>
<td>3</td>
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<td>Research in selected topics within the fields selected by the instructor. Restricted to Ph.D.</td>
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<td>Prerequisites</td>
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<tr>
<td>HIS 7980</td>
<td>Ph.D. Dissertation</td>
<td>1-9</td>
<td>HIS 7937, HIS 7289.</td>
<td>Dissertation writing hours for advanced Ph.D. students in the final year of the program.</td>
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<tr>
<td>EMA 6510</td>
<td>Characterization of Materials</td>
<td>3</td>
<td></td>
<td>Designed to help students engineers and technicians who have little to moderate background in materials analysis to realize and or gain and deeper understanding of the many analytical characterization methods available.</td>
<td></td>
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<tr>
<td>EME 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, and hardware systems.</td>
<td></td>
</tr>
<tr>
<td>ISM 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>
<td></td>
</tr>
<tr>
<td>MUN 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>
<td></td>
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<tr>
<td>PHC 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>
<td></td>
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<tr>
<td>SPB 6946</td>
<td>Internship in Sport and Entertainment Management</td>
<td>3</td>
<td>SPB 6719, SPB 6046, SPB 6816, SPB 6706.</td>
<td>A supervised field experience, theInternship in Sport and Entertainment Management provides hands-on experience in sport, sport-related, and entertainment organizations.</td>
<td></td>
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<tr>
<td>SPB 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>
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<tr>
<td>SPB 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>
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<tr>
<td>SPB 6706</td>
<td>Sport Business Analytics</td>
<td>3</td>
<td>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>
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<tr>
<td>GEB 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 strategies, create commitment, communicate effectively, delegate, and lead by example. A diverse group of individuals will deliver thought-provoking presentations and lead discussions.</td>
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<tr>
<td>GEB 6215</td>
<td>Communication Skills for</td>
<td>2</td>
<td></td>
<td>One of six Advanced Tools courses required for</td>
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<td>Code</td>
<td>Course Title</td>
<td>Units</td>
<td>Prerequisites</td>
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<tr>
<td>REE</td>
<td>Communication Skills for Managers</td>
<td>2</td>
<td></td>
<td>the MBA, Communication Skills for Managers focuses on developing the oral and written communication and presentation skills essential to projecting a professional image and influencing others.</td>
<td></td>
</tr>
<tr>
<td>REE</td>
<td>Real Estate Finance</td>
<td>2</td>
<td>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>
<td></td>
</tr>
<tr>
<td>REE</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>
<td></td>
</tr>
<tr>
<td>REE</td>
<td>Real Estate Investment</td>
<td>2</td>
<td>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>
<td></td>
</tr>
<tr>
<td>REE</td>
<td>Real Estate Development</td>
<td>3</td>
<td>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>
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<tr>
<td>APK</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>
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<tr>
<td>PHC</td>
<td>Advanced Qualitative Methods in Community Health Research</td>
<td>3</td>
<td>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>
<td></td>
</tr>
<tr>
<td>PHC</td>
<td>Community-Based Health Promotion</td>
<td>3</td>
<td>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>
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<tr>
<td>ARC</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>
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<tr>
<td>ARC</td>
<td>Community Design Studio</td>
<td>6</td>
<td>(Varies depending on topic)</td>
<td>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>
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<td>Course Code</td>
<td>Course Title</td>
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<tr>
<td>GMS 6940</td>
<td>Supervised Teaching in Molecular Medicine</td>
<td>1-3</td>
<td>MAC 2311 or the equivalent.</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>
<td></td>
</tr>
<tr>
<td>GLY 6824</td>
<td>Ecohydrology</td>
<td>3</td>
<td>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>GMS 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>
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<tr>
<td>GMS 6541</td>
<td>Pharmacology for Health Professionals</td>
<td>4</td>
<td></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>
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<tr>
<td>GMS 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>
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<tr>
<td>NGR 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>
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<tr>
<td>NGR 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>
<td></td>
</tr>
<tr>
<td>NGR 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>
<td></td>
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<tr>
<td>NGR 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>
<td></td>
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<tr>
<td>SOW 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>
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<tr>
<td>SOW 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>
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<tr>
<td>SOW 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>
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<tr>
<td>SOW 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>
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<td>Course</td>
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<tr>
<td>SOW 7491</td>
<td>Theoretical Perspectives in Social Work Research</td>
<td>3</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>
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<tr>
<td>SOW 7417</td>
<td>Advanced Statistics in Social Work Research</td>
<td>3</td>
<td>SOW 6405 or equivalent</td>
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<tr>
<td>MUE 7786</td>
<td>Qualitative Methods of Music Education</td>
<td>3</td>
<td>This course is designed to acquaint students with foundations, methods, and applications of qualitative research in education and music education.</td>
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<tr>
<td>MUE 7855</td>
<td>International Perspectives in Music Education</td>
<td>2</td>
<td>A critical examination of music education in various nations from social, cultural, political, and philosophical perspectives.</td>
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<tr>
<td>MUE 7816</td>
<td>Music Cognition</td>
<td>3</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>
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<tr>
<td>SPA 6393</td>
<td>Audiology Practice Management</td>
<td>3</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>
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<tr>
<td>MUE 7746</td>
<td>Measurement and Evaluation in Music</td>
<td>3</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>
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<tr>
<td>CST 6934</td>
<td>Special Topics in Graduate School: Research Practicum</td>
<td>3</td>
<td>Variable titles offered on topics of special interest pertaining to research practices.</td>
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<tr>
<td>IDH 5956</td>
<td>Honors Project</td>
<td>3</td>
<td>Advanced Honors Project. Repeatable up to 12 hours.</td>
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<tr>
<td>IDH 5975</td>
<td>Honors Thesis</td>
<td>3</td>
<td>Advanced Honors Thesis. Repeatable up to 12 hours.</td>
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<tr>
<td>NGR 6771L</td>
<td>CNL Clinical Seminar</td>
<td>1</td>
<td>Exploration and application of the clinical concepts essential to the role of the Clinical Nurse Leader.</td>
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<tr>
<td>NGR 6718</td>
<td>Evaluation Strategies for Nursing Education</td>
<td>3</td>
<td>NGR 6710, NGR 6713</td>
<td></td>
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<tr>
<td>NGR 7766</td>
<td>Health Systems Leadership and Interprofessional Practice</td>
<td>3</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>
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<tr>
<td>NGR 7932</td>
<td>Special Topics</td>
<td>1-4</td>
<td>Seminars for the analysis and discussion of</td>
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<tr>
<td>BSC</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>
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<tr>
<td>PHC</td>
<td>Public Health Data, Information and Decision Making</td>
<td>3</td>
<td></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>
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<tr>
<td>SSE</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>
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<tr>
<td>CGN</td>
<td>Electrochemical Diagnostic Techniques</td>
<td>3</td>
<td>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>
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<tr>
<td>JOU</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>
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<tr>
<td>NGR</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>
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<tr>
<td>NGR</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>
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<tr>
<td>GMS</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>ADE</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>
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</tr>
<tr>
<td>ADE</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>
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<td>Code</td>
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<td>SOW</td>
<td>Evaluation of Social Work Practice/Program Evaluation</td>
<td>3</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>
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<tr>
<td>SOW</td>
<td>Advanced Clinical Practice with Complex Problems</td>
<td>3</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>
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<tr>
<td>SOW</td>
<td>Scientific Communication and Dissemination Practices</td>
<td>3</td>
<td>This course instructs doctoral students in the process of scientific dissemination and guides students through the various formats including proposal and dissertation writing, scholarly articles, poster presentations, writing style, and library use.</td>
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<tr>
<td>SOW</td>
<td>Proposal Writing II</td>
<td>3</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>
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<tr>
<td>SOW</td>
<td>Directed Studies in Social Work Research</td>
<td>3</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>
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<tr>
<td>RED</td>
<td>Research in Vocabulary and Word Study</td>
<td>3</td>
<td>Students will critically examine research in word acquisition, development, and instruction from preschool through the intermediate grades linguistic diversity.</td>
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<tr>
<td>NGR</td>
<td>Dissertation Proposal Writing</td>
<td>2</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>
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<tr>
<td>GMS</td>
<td>Clinical Intensives in Metabolic and Nutri. Medicine</td>
<td>3</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>
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<tr>
<td>ENT</td>
<td>Advanced Topics in Entrepreneurship</td>
<td>3</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>
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<tr>
<td>ENT</td>
<td>New Product Development</td>
<td>3</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>
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<td>CRN</td>
<td>Course Title</td>
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<td>Prerequisites</td>
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<tr>
<td>ENT</td>
<td>6126 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>
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<tr>
<td>ENT</td>
<td>6186 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>
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<tr>
<td>ENT</td>
<td>6415 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>
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<tr>
<td>SDS</td>
<td>6703 The Law and Student Affairs</td>
<td>3</td>
<td>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>
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<tr>
<td>MHS</td>
<td>7747 Measurement Issues in Behvrl Hlth Svcs Res/Eval</td>
<td>3</td>
<td></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>
<td></td>
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<tr>
<td>ISM</td>
<td>6056 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>
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<tr>
<td>ECH</td>
<td>5320 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>
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<tr>
<td>ANG</td>
<td>6730 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>
<td></td>
</tr>
<tr>
<td>BCH</td>
<td>6942 Bioinformatics Internship I</td>
<td>4-6</td>
<td>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>
<td></td>
</tr>
<tr>
<td>BCH</td>
<td>6943 Bioinformatics Internship II</td>
<td>2</td>
<td>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>
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<tr>
<td>CRW</td>
<td>6025 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.</td>
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<td>Course Code</td>
<td>Course Title</td>
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<tr>
<td>EEX 6476</td>
<td>Curriculum and Instruction for Students with Low Incidence Disabilities</td>
<td>3</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>
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<tr>
<td>ENR 6422</td>
<td>New Media Production</td>
<td>3</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>
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<tr>
<td>ENR 6116</td>
<td>Business Plan Development</td>
<td>3</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 &quot;client organization.&quot;</td>
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<tr>
<td>EEX 6065</td>
<td>Collaborative Transition and Career Planning for Students with Low Incidence Disabilities</td>
<td>3</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>
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<tr>
<td>EME 6971</td>
<td>Thesis: Masters/Ed. Specialist</td>
<td>2-9</td>
<td>The purpose of the thesis/project 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>
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<tr>
<td>POS 6909</td>
<td>Independent Study</td>
<td>1-3</td>
<td>Specialized independent study determined by the student's needs and interests. Needs instructor's consent.</td>
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<tr>
<td>POS 6919</td>
<td>Directed Research</td>
<td>1-19</td>
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<tr>
<td>GMS 6849</td>
<td>Approach Clinical and Behavioral Research Adolescent: Focus on HIV</td>
<td>3</td>
<td>General Biology (1 year), General Chemistry (1 year). 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>EDA 6945</td>
<td>Administration Practicum</td>
<td>3-8</td>
<td>EDA 6061                                                                                          Field experiences in school systems for identifying and analyzing educational problems and their solutions. Application of concepts developed in the student's program.</td>
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<tr>
<td>EDA 6971</td>
<td>Thesis: Masters/Educational Specialist</td>
<td>2-19</td>
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<tr>
<td>EDA 7222</td>
<td>Administration Of School Personnel Policies And Practices</td>
<td>3</td>
<td>EDA 6061                                                                                          Administration of school personnel policies and practices relating to professional staff, supporting staff, and students.</td>
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<tr>
<td>EDA 7233</td>
<td>Legal Dimensions Of School Administration</td>
<td>3</td>
<td>EDA 6232                                                                                          Historical perspective in law and education with in-depth reviews of case law showing the evolution of courts as educational policy makers.</td>
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<tr>
<td>EDA 7247</td>
<td>Advanced School Finance</td>
<td>3</td>
<td>EDA 6242                                                                                          Advanced treatment of school finance. Development, implementation, and evaluation</td>
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<tr>
<td>Course Code</td>
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<td>Credits</td>
<td>Prerequisites</td>
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<tr>
<td>EDA 7980</td>
<td>Dissertation</td>
<td>2-30</td>
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<tr>
<td>EDG 6285</td>
<td>School Curriculum Improvement</td>
<td>3</td>
<td></td>
<td>Open only to teachers in service. Complete faculty participation required.</td>
<td></td>
</tr>
<tr>
<td>EDG 6627</td>
<td>Foundations Of Curriculum And Instruction</td>
<td>3</td>
<td>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 to the post-secondary level.</td>
<td></td>
</tr>
<tr>
<td>EDE 6225</td>
<td>Problems in Curriculum and Instruction: Elementary</td>
<td>1-3</td>
<td>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>
<td></td>
</tr>
<tr>
<td>EDM 6256</td>
<td>Problems In Curriculum And Instruction: Middle School</td>
<td>1-3</td>
<td>EDG 4620, EDG 6627.</td>
<td>For teachers, supervisors, and administrators. Curricular and instructional problems of the middle school. Common problems or problems of special interest to the participants. Normally, for certification requirements only.</td>
<td></td>
</tr>
<tr>
<td>ESE 6256</td>
<td>Problems In Curriculum Instruction: Secondary</td>
<td>1-3</td>
<td>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>
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<tr>
<td>EDG 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>
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<tr>
<td>EDG 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>
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<tr>
<td>NGR 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>
<td></td>
</tr>
<tr>
<td>NGR 6501L</td>
<td>Psychiatric APN Practicum: Psychiatric Care in the Inpatient Setting</td>
<td>1-4</td>
<td>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>
<td></td>
</tr>
<tr>
<td>EDG 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>
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<tr>
<td>ADE 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>
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<tr>
<td>EXP 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...</td>
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<td>Code</td>
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<tr>
<td>INP</td>
<td>Topics in Industrial-Organizational Psychology</td>
<td>3</td>
<td>Courses on topics such as industrial psychology, evaluation of performance in industry, and human factors.</td>
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<tr>
<td>INP</td>
<td>Graduate Seminar in Industrial-Organizational Psychology</td>
<td>1-3</td>
<td>Seminars on topics, such as industrial psychology, evaluation of performance in industry, and human factors.</td>
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<tr>
<td>PSB</td>
<td>Physiological Psychology</td>
<td>3</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>
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<tr>
<td>PSY</td>
<td>Research Methods and Measurement</td>
<td>2-4</td>
<td>Courses in research strategies, design and analysis, and measurement theory in psychological experimentation. Inferential statistics, anova, correlation methods, and interpretation.</td>
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<tr>
<td>PSY</td>
<td>History and Systems of Psychology</td>
<td>2</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>
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<tr>
<td>ENG</td>
<td>Graduate Seminar in English</td>
<td>3</td>
<td>Intensive small-group discussion as well as shared and individual guided research in one of the student’s areas of concentration.</td>
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<tr>
<td>ENG</td>
<td>Thesis: Master’s</td>
<td>2-19</td>
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<tr>
<td>ENG</td>
<td>Directed Research</td>
<td>1-19</td>
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<tr>
<td>ENG</td>
<td>Doctoral Seminar</td>
<td>1</td>
<td>Individual guided research in a student’s area of doctoral specialty. Restricted to majors. Repeatable once for credit (total of 2 credits) counting as requirements toward the degree.</td>
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<tr>
<td>ENG</td>
<td>Dissertation: Doctoral</td>
<td>2-19</td>
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<tr>
<td>ENL</td>
<td>Studies in Old English</td>
<td>3</td>
<td>A study of Old English language, prose style, poetry.</td>
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<tr>
<td>MAN</td>
<td>Decision Making &amp; Problem Solving</td>
<td>3</td>
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<tr>
<td>ENL</td>
<td>Studies in Middle English</td>
<td>3</td>
<td>Selected focused studies in language and in various authors and writings, 1100-1500; Chaucer, the Pearl poet, Everyman, ballads, drama.</td>
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<tr>
<td>ENL</td>
<td>Studies in Sixteenth-Century British Literature</td>
<td>3</td>
<td>Selected focused studies in sixteenth-century British literature; Shakespeare, Sidney, Spenser, Marlowe, and others.</td>
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<tr>
<td>ENL</td>
<td>Studies in Seventeenth-Century British Literature</td>
<td>3</td>
<td>Selected focused studies in British literature, 1600-1660; Bacon, Donne, Jonson, Herbert, Milton, and others.</td>
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<tr>
<td>ENL</td>
<td>Studies in Restoration and Eighteenth-Century British Literature</td>
<td>3</td>
<td>Selected focused studies in Restoration and Eighteenth-Century British literature: Dryden, Defoe, Pope, Swift, Fielding, Sheridan, Johnson, Boswell, and others.</td>
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<tr>
<td>ENL</td>
<td>Studies of the English Romantic Period</td>
<td>3</td>
<td>A study of pre-Romantic and Romantic prose, fiction, nonfiction, and poetry.</td>
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<tr>
<td>ENL</td>
<td>Studies in Victorian Literature</td>
<td>3</td>
<td>A study of Victorian poetry, fiction, non-fictional prose, and drama.</td>
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<tr>
<td>ENL</td>
<td>Studies in Modern British</td>
<td>3</td>
<td>A study of Irish and English drama, the modern</td>
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<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
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<tr>
<td>RLG 6911</td>
<td>Directed Research</td>
<td>1-3</td>
<td>Individual guidance in concentrated reading in a carefully delimited area of religious studies research skills.</td>
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<tr>
<td>RLG 6938</td>
<td>Special Topics in Religious Studies</td>
<td>2-4</td>
<td>Open to non-majors. Variable titles offered on topics of special interest.</td>
<td></td>
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<tr>
<td>RLG 6940</td>
<td>Graduate Instruction Methods</td>
<td>1-4</td>
<td>Offered primarily for the supervision of Graduate Teaching Assistants.</td>
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<tr>
<td>RLG 6971</td>
<td>Thesis: Master’s</td>
<td>2-19</td>
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<tr>
<td>SOW 6105</td>
<td>Foundations in Human Behavior</td>
<td>3</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>GMS 6512</td>
<td>Ion Channel Pharmacology and Disease</td>
<td>3</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>
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<tr>
<td>PHC 6517</td>
<td>Infectious Disease Prevention Strategies</td>
<td>3</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</td>
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<tr>
<td>SOW 6235</td>
<td>Foundations of Social Welfare Policy</td>
<td>3</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>
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<tr>
<td>SOW 6236</td>
<td>Social Welfare Policy Development &amp; Analysis</td>
<td>3</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>
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<tr>
<td>SOW 6305</td>
<td>Foundations of Social Work Micro Practice</td>
<td>3</td>
<td>Describes full range of social work interventions, from micro to macro. Historical development of practice methods and survey of current techniques.</td>
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<tr>
<td>SOW 6342</td>
<td>Social Work Practice with Individuals</td>
<td>3</td>
<td>Application of clinical practice to work with individuals. Psychosocial model is emphasized. Professional laboratory develops skills in practice.</td>
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<tr>
<td>SOW 6348</td>
<td>Clinical Practice Perspectives on Race and Culture</td>
<td>3</td>
<td>Theories for clinical practice, with emphasis on the psychosocial model. Explores basic skills for clinical practice.</td>
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<tr>
<td>SOW 6362</td>
<td>Social Work Practice with Couples and Families</td>
<td>3</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>
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<tr>
<td>SOW 6368</td>
<td>Social Work Practice with Groups</td>
<td>3</td>
<td>Focus on psychosocial model of group treatment. Comparison with individual and family modality.</td>
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<td>Course Code</td>
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<tr>
<td>SOW 6375</td>
<td>Advanced Social Work Macro Policy</td>
<td>3</td>
<td>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>
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<tr>
<td>EMA 6001</td>
<td>Advance Materials</td>
<td>3</td>
<td></td>
<td>Principles of structure, structure modification and properties of materials with emphasis on structure-property relationships and modern theory of solids.</td>
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<tr>
<td>EEE 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/</td>
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<tr>
<td>STA 5446</td>
<td>Probability Theory I</td>
<td>3</td>
<td>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>
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<tr>
<td>BMS 6836</td>
<td>Evidence Based Clinical Reasoning</td>
<td>var.</td>
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<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>
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<tr>
<td>PHI 5135</td>
<td>Symbolic Logic</td>
<td>3</td>
<td>PHI 2101</td>
<td>Study of topics such as the following: Metatheory of propositional and predicate logic, related metatheoretic results, alternative logic.</td>
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<tr>
<td>PHI 5225</td>
<td>Philosophy of Language</td>
<td>3</td>
<td>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.</td>
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<tr>
<td>PHI 5913</td>
<td>Research</td>
<td>1-4</td>
<td></td>
<td>Individual research supervised by a faculty member.</td>
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<tr>
<td>PHC 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)broa</td>
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<tr>
<td>BSC 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 funde</td>
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<tr>
<td>CCJ 6706</td>
<td>Quantitative Analysis in Criminology I</td>
<td>4</td>
<td>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>
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<td>Course Code</td>
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<td>Prerequisites</td>
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<tr>
<td>ESE 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>
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<tr>
<td>ECP 6536</td>
<td>Economics of Health Care I</td>
<td>3</td>
<td>ECO 3101 or ECO 6114</td>
<td>Analysis of the supply and demand for health care, health insurance and the pharmaceutical industry.</td>
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</tr>
<tr>
<td>ECP 7207</td>
<td>Labor Economics II</td>
<td>3</td>
<td>ECP 6205</td>
<td>Advanced study of labor economics including analysis of the wage structure, labor unions, labor mobility, and unemployment.</td>
<td></td>
</tr>
<tr>
<td>ECP 7537</td>
<td>Economics of Health Care II</td>
<td>3</td>
<td>ECO 6536</td>
<td>Advanced analysis of health economics with emphasis on recent empirical studies of health care.</td>
<td></td>
</tr>
<tr>
<td>EDF 7439</td>
<td>Foundations of Item Response Theory</td>
<td>3</td>
<td>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>
<td></td>
</tr>
<tr>
<td>CNT 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>
<td></td>
</tr>
<tr>
<td>CAP 6455</td>
<td>Advanced Robotic Systems</td>
<td>3</td>
<td>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>
<td></td>
</tr>
<tr>
<td>CAP 6736</td>
<td>Geometric Modeling</td>
<td>3</td>
<td>Data Structures, Programming in a higher level language.</td>
<td>The course deals with the representation, design, analysis, processing and visualization of shape information used in a variety of fields of science and engineering.</td>
<td></td>
</tr>
<tr>
<td>CAP 5771</td>
<td>Data Mining</td>
<td>3</td>
<td>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>
<td></td>
</tr>
<tr>
<td>EIN 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>
<td></td>
</tr>
<tr>
<td>ESI 6324</td>
<td>Engineering the Supply Chain</td>
<td>3</td>
<td>ESI 4312 or equivalent.</td>
<td>The course will focus on the discussion of analytical optimization models and tools. To</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
<td>Description</td>
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</tr>
<tr>
<td>MHS 6887</td>
<td>Internship in Career and College Counseling</td>
<td>3-6</td>
<td>MHS 6800, MHS 6006, MHS 6200, MHS 6300, MHS 6340, 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>
<td></td>
</tr>
<tr>
<td>PHC 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>
<td></td>
</tr>
<tr>
<td>BCH 6889</td>
<td>Bioinformatics II</td>
<td>3</td>
<td>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>
<td></td>
</tr>
<tr>
<td>ECT 6766</td>
<td>Emerging Workplace Competencies</td>
<td>3</td>
<td></td>
<td>An interactive exploration of emerging workplace competencies through research, analysis, and work-based experiences for the purpose of professional development and program improvement.</td>
<td></td>
</tr>
<tr>
<td>GMS 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>
<td></td>
</tr>
<tr>
<td>GMS 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>
<td></td>
</tr>
<tr>
<td>GMS 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>
<td></td>
</tr>
<tr>
<td>NGR 7003</td>
<td>Advanced Health Assessment II</td>
<td>3</td>
<td>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 student’s clinical expertise.</td>
<td></td>
</tr>
<tr>
<td>NGR 7103</td>
<td>Evidence-Based Practice</td>
<td>3</td>
<td>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>
<td></td>
</tr>
<tr>
<td>Course Code</td>
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<tr>
<td>NGR 7176</td>
<td>Pharmacotherapeutics for Advanced Nursing Practice</td>
<td>3</td>
<td>A grade of B or higher must have been earned in master’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>
<td></td>
</tr>
<tr>
<td>NGR 7141</td>
<td>Pathophysiology for Advanced Practice II</td>
<td>3</td>
<td>A grade of B or higher must have been earned in master’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>
<td></td>
</tr>
<tr>
<td>PHC 6761</td>
<td>Global Health Assessment Strategies</td>
<td>3</td>
<td>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>
<td></td>
</tr>
<tr>
<td>PHC 7044</td>
<td>Neuroepidemiology</td>
<td>3</td>
<td>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>
<td></td>
</tr>
<tr>
<td>BMS 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>
<td></td>
</tr>
<tr>
<td>EDF 7469</td>
<td>Introduction to Computer-Based Testing</td>
<td>3</td>
<td>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>
<td></td>
</tr>
<tr>
<td>EVR 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>
<td></td>
</tr>
<tr>
<td>GEO 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>
<td></td>
</tr>
<tr>
<td>GMS 6101</td>
<td>Molecular and Cellular Immunology</td>
<td>3-4</td>
<td>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>
<td></td>
</tr>
<tr>
<td>MAE 6336</td>
<td>Topics in Teaching Calculus</td>
<td>3</td>
<td></td>
<td>This course examines issues related to teaching</td>
<td></td>
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<tr>
<td>Course Code</td>
<td>Course Name</td>
<td>Credits</td>
<td>Description</td>
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<tr>
<td>MAE 6137</td>
<td>Topics in Teaching Probability and Statistics</td>
<td>3</td>
<td>This course examines issues related to teaching probability and statistics in secondary schools.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAE 6362</td>
<td>Senior High Mathematics Methods</td>
<td>3</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>
<td></td>
<td></td>
</tr>
<tr>
<td>MAE 6370</td>
<td>Mathematics for High School Teachers</td>
<td>3</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>
<td></td>
<td></td>
</tr>
<tr>
<td>PHC 6560</td>
<td>The Public Health Laboratory System</td>
<td>3</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>
<td></td>
<td></td>
</tr>
<tr>
<td>SPA 5132</td>
<td>Audiology Instrumentation</td>
<td>3</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>
<td></td>
<td></td>
</tr>
<tr>
<td>GMS 6100</td>
<td>Medical Microbiology</td>
<td>3</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>
<td></td>
<td></td>
</tr>
<tr>
<td>ECH 5321</td>
<td>Chemical Process Engineering II</td>
<td>4</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>
<td></td>
<td></td>
</tr>
<tr>
<td>ECH 5322</td>
<td>Chemical Process Engineering III</td>
<td>4</td>
<td>Basic concepts of fluid phase equilibrium, chemical equilibrium, separation processes, and chemical reactors. Not available for chemical engineering students.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECH 5327</td>
<td>Chemical Process Control</td>
<td>4</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>
<td></td>
<td></td>
</tr>
<tr>
<td>EDA 7069</td>
<td>Ethics and Educational Leadership</td>
<td>3</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>
<td></td>
<td></td>
</tr>
<tr>
<td>EDG 7357</td>
<td>Mentoring Theory and Leadership Practice</td>
<td>3</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</td>
<td></td>
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<tr>
<td>Code</td>
<td>Section</td>
<td>Title</td>
<td>Credits</td>
<td>Prerequisites</td>
<td>Description</td>
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<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>EEX</td>
<td>6247</td>
<td>Implementing Programs for Students with Disabilities</td>
<td>6</td>
<td>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>ESI</td>
<td>6605</td>
<td>Engineering Data Mining</td>
<td>3</td>
<td>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>GLY</td>
<td>6573</td>
<td>Fluvial Hydrology and Geomorphology</td>
<td>3</td>
<td>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>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>
</tr>
<tr>
<td>JOU</td>
<td>6349</td>
<td>Advanced Multimedia Journalism</td>
<td>3</td>
<td>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>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>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 mechanisms and control of robot manipulators.</td>
</tr>
</tbody>
</table>
### Course Descriptions

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAE</td>
<td>Young Adult and World Literature for New Teachers</td>
<td>3</td>
<td>Topics include: Spatial descriptions and transformations; manipulator kinematics; manipulator dynamics; path planning and trajectory generation; position and for</td>
</tr>
<tr>
<td>ISM</td>
<td>International Aspects of Information Science</td>
<td>3</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>ISM</td>
<td>Electronic Commerce</td>
<td>3</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>EEL</td>
<td>Microsystems and MEMS Technology</td>
<td>3</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>SPW</td>
<td>Post Civil War Literature</td>
<td>3</td>
<td>The drama and novel since 1936.</td>
</tr>
<tr>
<td>SPW</td>
<td>Caribbean Literature</td>
<td>3</td>
<td>Emphasis on contemporary Cuban and Puerto Rican literature.</td>
</tr>
<tr>
<td>SPW</td>
<td>Directed Research</td>
<td>1-19</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>PHH</td>
<td>Seminar in the History of Philosophy</td>
<td>3</td>
<td>An analysis of recent and contemporary problems of knowledge. Seminar format.</td>
</tr>
<tr>
<td>PHI</td>
<td>Seminar in Epistemology</td>
<td>3</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>Seminar in the Philosophy of Natural Science</td>
<td>3</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>Seminar in the Philosophy of Social Science</td>
<td>3</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 p</td>
</tr>
<tr>
<td>PHI</td>
<td>Seminar in Ethics</td>
<td>3</td>
<td>Advanced study of the problems of moral philosophy.</td>
</tr>
<tr>
<td>PHI</td>
<td>Metaethics</td>
<td>3</td>
<td>A study of alternative theories of metaethics including emotivism, moral point of view, supererogate virtue theory.</td>
</tr>
</tbody>
</table>
| PHI  | Seminar in Aesthetics                             | 3       | An analysis of fundamental special problems of aesthetics; value, perception, communication,
<table>
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<tr>
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<th>Description</th>
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<tbody>
<tr>
<td>PHI 6908</td>
<td>Directed Research</td>
<td>1-19</td>
<td>Technique, context. Seminar format.</td>
</tr>
<tr>
<td>ENG 6019</td>
<td>Studies in Criticism and Theory II</td>
<td>3</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>BSC 5931</td>
<td>Selected Topics in Biology</td>
<td>1-4</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 6120</td>
<td>Social Theory and Social Thought</td>
<td>3</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>ARC 6367</td>
<td>Advanced Design D</td>
<td>6</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>
</tr>
<tr>
<td>RLG 6035</td>
<td>Theory and Methods in Religious Studies</td>
<td>3</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 litera</td>
</tr>
<tr>
<td>RLG 6126</td>
<td>Religion in America</td>
<td>3</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>HUM 6815</td>
<td>Research Seminar</td>
<td>3</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>RLG 6189</td>
<td>Comparative Religious Ethics</td>
<td>3</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>
</tr>
<tr>
<td>RLG 6285</td>
<td>Studies in Biblical Archaeology</td>
<td>3</td>
<td>A study of various problems in Biblical Archaeology including excavation techniques, principles of interpretation, problems in correlation of the text of the Bible and specific finds, chronology, reconstruction of culture from archaeological evidence, and</td>
</tr>
<tr>
<td>RLG 6327</td>
<td>Seminar: Ancient Religions and Literatures</td>
<td>3</td>
<td>A research seminar in some aspect of ancient religion and literature: Hebrew Bible, New Testament, Mithraism, Mystic Religions, Pseudepigrapha, and others taught in translation.</td>
</tr>
<tr>
<td>RLG 6906</td>
<td>Independent Study</td>
<td>1-3</td>
<td>Independent study in which the student must have a contract with the instructor.</td>
</tr>
<tr>
<td>MCB 5206</td>
<td>Public Health and Pathogenic Microbiology</td>
<td>3</td>
<td>A comprehensive survey of pathogenic microbes responsible for disease in man and other animals and the impact of these infectious agents on the public health. These pathogens will be studied with respect to their</td>
</tr>
<tr>
<td>Code</td>
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<td>Credits</td>
<td>Prerequisites</td>
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<tr>
<td>ENY</td>
<td>Aquatic Entomology</td>
<td>4</td>
<td>ENY 3004C and CHM 2210 and MAC 1105 or higher-level MAC course</td>
</tr>
<tr>
<td>PCB</td>
<td>Limnology</td>
<td>3</td>
<td>PCB 3043 and CHM 2210 and MAC 1105 or higher-level MAC course</td>
</tr>
<tr>
<td>FRW</td>
<td>18th Century Literature</td>
<td>3</td>
<td>FRW 4100.</td>
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<tr>
<td>ATR</td>
<td>Documentation in Athletic Training</td>
<td>1</td>
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<tr>
<td>INR</td>
<td>Issues in International Relations</td>
<td>3</td>
<td></td>
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<tr>
<td>INR</td>
<td>Seminar in International Relations</td>
<td>3</td>
<td></td>
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<tr>
<td>INR</td>
<td>Seminar in International Political Economy</td>
<td>3</td>
<td></td>
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<tr>
<td>INR</td>
<td>American Foreign Policy</td>
<td>3</td>
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<tr>
<td>POS</td>
<td>Research Design</td>
<td>3</td>
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<tr>
<td>POS</td>
<td>Seminar in American Government &amp; Politics</td>
<td>3</td>
<td></td>
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<tr>
<td>POS</td>
<td>Issues in State Government and Politics</td>
<td>3</td>
<td></td>
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<tr>
<td>POS</td>
<td>Political Parties and Interest Groups</td>
<td>3</td>
<td></td>
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<tr>
<td>EML</td>
<td>Thesis: Master’s</td>
<td>2-6</td>
<td></td>
</tr>
<tr>
<td>EML</td>
<td>Directed Research</td>
<td>1-6</td>
<td></td>
</tr>
<tr>
<td>EML</td>
<td>Dissertation: Doctoral</td>
<td>2-12</td>
<td></td>
</tr>
<tr>
<td>SPA</td>
<td>Ethical Practice Issues in Research</td>
<td>1-2</td>
<td></td>
</tr>
<tr>
<td>Title</td>
<td>Code</td>
<td>Credits</td>
<td>Description</td>
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</tr>
<tr>
<td>Communication Sciences and Disorders</td>
<td></td>
<td></td>
<td>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>CRW 6130 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>BME 5937 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. May be taken by non-engineering students with CI.</td>
</tr>
<tr>
<td>ECH 6105 Advanced Thermodynamics I</td>
<td>3</td>
<td></td>
<td>Selected topics in classical and irreversible thermodynamics.</td>
</tr>
<tr>
<td>ECH 6412 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 6515 Reacting Systems</td>
<td>3</td>
<td>ECH 4415C</td>
<td>Economic factors in the design of chemical reactors. Simulation of complex reacting systems.</td>
</tr>
<tr>
<td>ECH 6906 Directed Research</td>
<td>1-19</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 5740 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 6907 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 6930 Special Problems I</td>
<td>1-3</td>
<td></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>ECH 6931 Special Problems II</td>
<td>1-3</td>
<td></td>
<td>Independent study under the direction of an IT faculty member. Student must have contract with instructor.</td>
</tr>
<tr>
<td>EDF 7530 History of Higher Education in the United States</td>
<td>3</td>
<td>EDF 6517 or its equivalent</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>EME 6906 Independent Study in Instructional Technology</td>
<td>1-6</td>
<td></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>ENV 6564 Environmental Engineering Design</td>
<td>3</td>
<td>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>BMS 6992 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 6993 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>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
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<tr>
<td>BMS 6994</td>
<td>Scholarly Concentration IV</td>
<td>var</td>
<td>This Year 4 elective provides opportunities for scholarly endeavors in areas of special interest. Includes active participation in journal clubs, use of on-line portfolios including opportunities for reflection, &amp; generation of a scholarly legacy project.</td>
</tr>
<tr>
<td>SDS 6621</td>
<td>Financial Aid Administration</td>
<td>2</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>EDH 7405</td>
<td>Policy and Legal Dimensions in Higher Education</td>
<td>3</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</td>
</tr>
<tr>
<td>EDH 7633</td>
<td>Governing Colleges and Universities</td>
<td>3</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.</td>
</tr>
<tr>
<td>EDH 7636</td>
<td>Organizational Theory and Practices in Higher Education</td>
<td>3</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.</td>
</tr>
<tr>
<td>EDH 7910</td>
<td>Directed Research</td>
<td>1-19</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>EDH 7935</td>
<td>Higher Education Capstone Seminar</td>
<td>3</td>
<td>The course is designed to encourage students’ integration and synthesis of theories, concepts and themes in previous coursework; to critique research in the field; and to provide some in-depth study of selected areas in higher education. Advanced Graduate</td>
</tr>
<tr>
<td>TTE 5620</td>
<td>Air Transportation</td>
<td>3</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>CAP 5400</td>
<td>Digital Image Processing</td>
<td>3</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>EDA 7410</td>
<td>Qualitative Case Methods in Educational Leadership</td>
<td>3</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>EEC 7417</td>
<td>Family Literacy</td>
<td>3</td>
<td>Students will examine how literacy is acquired,</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
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<tr>
<td>GMS 6871</td>
<td>Health Sciences Ethics</td>
<td>2</td>
<td>1 yr. Biology; 1 yr. Chemistry.</td>
</tr>
<tr>
<td>RCS 6476</td>
<td>Human Sexuality Counseling</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>GMS 6069</td>
<td>Translational Biotechnology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>EIN 6216</td>
<td>Occupational Safety Engineering</td>
<td>3</td>
<td></td>
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<tr>
<td>LAE 7390</td>
<td>Problems in Advanced English Instruction and Scholarly Research</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>LIT 6096</td>
<td>Studies in Contemporary Literature</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>LIT 6105</td>
<td>Studies in Continental Literature</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>LIT 6934</td>
<td>Selected Topics in English Studies</td>
<td>1-6</td>
<td></td>
</tr>
<tr>
<td>GEA 6195</td>
<td>Seminar in Advanced Regional Geography</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>GEO 6119</td>
<td>Geographical Techniques and Methodology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>GEO 6209C</td>
<td>Physical Geography Seminar</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
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<tr>
<td>GEO</td>
<td>6428 Seminar in Advanced Human Geography</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>GEO</td>
<td>6908 Independent Study</td>
<td>1-19</td>
<td></td>
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<tr>
<td>GEO</td>
<td>6918 Directed Research</td>
<td>1-19</td>
<td></td>
</tr>
<tr>
<td>GEO</td>
<td>6944 Internship in Geography</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>GEO</td>
<td>6947 Directed Teaching</td>
<td>1-6</td>
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<tr>
<td>GEO</td>
<td>6971 Thesis: Master’s</td>
<td>2-19</td>
<td></td>
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<tr>
<td>GLY</td>
<td>6246 General Geochemistry</td>
<td>3</td>
<td>One year college Chemistry</td>
</tr>
<tr>
<td>GLY</td>
<td>6285C Analytical Techniques in Geology</td>
<td>3</td>
<td>One year college Chemistry, GLY 4310</td>
</tr>
<tr>
<td>GLY</td>
<td>6395C Topics in Igneous and Metamorphic Petrology</td>
<td>2-4</td>
<td>GLY 3311C or equivalent</td>
</tr>
<tr>
<td>GLY</td>
<td>6475C Principles of Applied Geophysics</td>
<td>4</td>
<td>One year of Physics</td>
</tr>
<tr>
<td>GLY</td>
<td>6575C Coastal Sedimentation</td>
<td>3</td>
<td>GLY 4555 or equiv.</td>
</tr>
<tr>
<td>GLY</td>
<td>6739 Selected Topics in Geology</td>
<td>1-4</td>
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</tr>
<tr>
<td>GLY</td>
<td>6827C Advanced Hydrogeology</td>
<td>4</td>
<td>GLY 4822, one year college calculus</td>
</tr>
<tr>
<td>GLY</td>
<td>6828 Ground-Water Geochemistry</td>
<td>3</td>
<td>One year of college Chemistry, GLY 4822, GLY 6246</td>
</tr>
<tr>
<td>GLY</td>
<td>6905 Independent Study</td>
<td>1-19</td>
<td></td>
</tr>
<tr>
<td>GLY</td>
<td>6910 Directed Research</td>
<td>1-19</td>
<td></td>
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<tr>
<td>ECT</td>
<td>7910 Directed Research in Vocational Education</td>
<td>1-19</td>
<td></td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
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<tr>
<td>HIS 6112</td>
<td>Analysis of Historical Knowledge</td>
<td>3</td>
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<tr>
<td>SCE 6115</td>
<td>Trends in Science Instruction</td>
<td>3</td>
<td>SCE 4310</td>
</tr>
<tr>
<td>SSE 6617</td>
<td>Trends in K-6 Social Science Education</td>
<td>3</td>
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</tr>
<tr>
<td>RED 6247</td>
<td>Supervision and Coaching in Literacy</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>RED 6365</td>
<td>Reading In Secondary And Higher Education</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>RED 6540</td>
<td>Assessment in Developing Literacies</td>
<td>3</td>
<td>LAE 6315, RED 6544, RED 6545, RED 6747.</td>
</tr>
<tr>
<td>RED 6544</td>
<td>Cognition, Comprehension, and Content Area Reading: Remediation of Reading</td>
<td>3</td>
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<tr>
<td>ARC 6976</td>
<td>Terminal Master's Project</td>
<td>5</td>
<td>ARC 6936</td>
</tr>
<tr>
<td>RED 6545</td>
<td>Issues in Vocabulary and Word Study</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>RED 6906</td>
<td>Independent Study: Reading Education</td>
<td>1-6</td>
<td></td>
</tr>
<tr>
<td>RED 6971</td>
<td>Thesis: Masters/Educational</td>
<td>2-19</td>
<td></td>
</tr>
<tr>
<td>Code</td>
<td>Title</td>
<td>Units</td>
<td>Prerequisites</td>
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<tr>
<td>RED</td>
<td>7048  Reading as a Symbolic Process</td>
<td>3</td>
<td>RED 6116 or RED 6365</td>
</tr>
<tr>
<td>RED</td>
<td>7745  Research in Reading Instruction</td>
<td>3</td>
<td>RED 6116 or RED 6365</td>
</tr>
<tr>
<td>RED</td>
<td>7938  Advanced Graduate Seminar</td>
<td>1-3</td>
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<tr>
<td>RED</td>
<td>7980  Dissertation: Doctoral</td>
<td>2-30</td>
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<tr>
<td>EDA</td>
<td>6061  Principles of Educational Administration</td>
<td>3</td>
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<tr>
<td>BMS</td>
<td>6206  Molecular Medicine</td>
<td>var.</td>
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<tr>
<td>RED</td>
<td>7910  Directed Research in Reading/Language Arts</td>
<td>1-19</td>
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<tr>
<td>EEE</td>
<td>6358  Semiconductor Device Theory II</td>
<td>3</td>
<td>EEL 6353</td>
</tr>
<tr>
<td>EEE</td>
<td>6355  Compound Semiconductor Technology</td>
<td>3</td>
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<tr>
<td>EEL</td>
<td>6463  Advanced Antenna Theory</td>
<td>3</td>
<td>EEL 5462.</td>
</tr>
<tr>
<td>FOL</td>
<td>5906  Directed Study</td>
<td>1-3</td>
<td>FOL 4101 or equivalent.</td>
</tr>
<tr>
<td>EDA</td>
<td>7193  Organizational Leadership and Systems Theory</td>
<td>3</td>
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<tr>
<td>SPA</td>
<td>5133C Speech Science Instrumentation</td>
<td>3</td>
<td>SPA 3011 or equivalent.</td>
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<tr>
<td>SPA</td>
<td>5506  Speech-Language Pathology and Audiology Practicum</td>
<td>1-8</td>
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<tr>
<td>GER</td>
<td>5845  History of the German Language</td>
<td>3</td>
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<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
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<tr>
<td>EVR 6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
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<tr>
<td>LIN 6722</td>
<td>Writing Processes in Second Languages Acquisition</td>
<td>3</td>
<td>LIN 6081, TSL 5371 TSL 5371</td>
</tr>
<tr>
<td>PHC 6353</td>
<td>Environmental and Occupational Health Risk Assessment</td>
<td>3</td>
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<tr>
<td>PHC 6435</td>
<td>Comparative Health Insurance Systems</td>
<td>3</td>
<td>ECO 2023</td>
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<tr>
<td>SPA 6341</td>
<td>Principles of Amplification II</td>
<td>3</td>
<td>SPA 6340</td>
</tr>
<tr>
<td>SPA 6392</td>
<td>Profession of Audiology</td>
<td>2</td>
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<tr>
<td>ART 6895</td>
<td>Graduate Seminar I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ART 6896</td>
<td>Graduate Seminar II</td>
<td>3</td>
<td>Graduate Seminar I</td>
</tr>
<tr>
<td>ART 6897</td>
<td>Critical Writing Seminar</td>
<td>3</td>
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<tr>
<td>ART 6816</td>
<td>MFA Professional Practices</td>
<td>3</td>
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<tr>
<td>ISM 6145</td>
<td>Seminar on Software Testing</td>
<td>3</td>
<td>ISM 6124</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
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<tr>
<td>GMS 6091</td>
<td>Responsible Conduct in Research</td>
<td>1</td>
<td></td>
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<tr>
<td>HUM 6465</td>
<td>Studies in American Arts and Letters II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>EEL 6486</td>
<td>Electromagnetic Field Theory and Applications</td>
<td>3</td>
<td></td>
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<tr>
<td>EEL 6487C</td>
<td>Advanced Electromagnetic Field Theory</td>
<td>3</td>
<td>EEL 6486C.</td>
</tr>
<tr>
<td>PCB 5307L</td>
<td>Limnology Laboratory</td>
<td>1</td>
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<tr>
<td>COM 6306</td>
<td>Action Research</td>
<td>3</td>
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<tr>
<td>COM 6724</td>
<td>Communication Training in Organizations</td>
<td>3</td>
<td></td>
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<tr>
<td>ORI 6018</td>
<td>Performance Art</td>
<td>3</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
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<tr>
<td>ORI 6107</td>
<td>Texts in Performance</td>
<td>3</td>
<td>Explores contemporary literary texts through dramatic analysis, live performance, adaptation and staging strategies.</td>
</tr>
<tr>
<td>ORI 6250</td>
<td>Performance and Technology</td>
<td>3</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 6456</td>
<td>Performance Theory</td>
<td>3</td>
<td>A survey of modern and contemporary approaches to performance as constitutive of identity, verbal art, communication, and culture.</td>
</tr>
<tr>
<td>ORI 6506</td>
<td>Performance Criticism</td>
<td>3</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>COM 6248</td>
<td>Historical Perspectives on Communication</td>
<td>3</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>SYA 6205</td>
<td>Social Construction of Reality</td>
<td>3</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>
</tr>
<tr>
<td>SPC 6214</td>
<td>Ethnography of Communication</td>
<td>3</td>
<td>Explores ethnography as an approach to conducting research and a means of theorizing about human communication.</td>
</tr>
<tr>
<td>SPC 6726</td>
<td>Communication in Close Relationships</td>
<td>3</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>EDE 6946</td>
<td>Practicum Field Experience</td>
<td>3</td>
<td>RED 6514, FLE 5345, and 9 additional credits in program courses. 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>SYA 6126</td>
<td>Contemporary Sociological Theory</td>
<td>3</td>
<td>Undergraduate course in sociological theory Emphasizes logical and conceptual dimensions of theory and theory construction.</td>
</tr>
<tr>
<td>SYA 6305</td>
<td>Methods of Research</td>
<td>3</td>
<td>Undergraduate course in sociological research methods Logic and practice of research; problems of observation and data collection, data processing, and evaluation.</td>
</tr>
<tr>
<td>SYA 6315</td>
<td>Qualitative Research Methods</td>
<td>3</td>
<td>Undergraduate course in sociological research methods 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 6405</td>
<td>Sociological Statistics</td>
<td>3</td>
<td>Undergraduate statistics course Logic and application of parametric and nonparametric statistical analysis for sociological data.</td>
</tr>
<tr>
<td>SYA 6909</td>
<td>Independent Study</td>
<td>1-19</td>
<td>Independent study in which student must have</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
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</tr>
<tr>
<td>SYA 6912</td>
<td>Directed Research</td>
<td>1-19</td>
<td>a contract with an instructor.</td>
</tr>
<tr>
<td>SYA 6933</td>
<td>Special Topics-Sociology</td>
<td>3</td>
<td>Content varies according to interests of students and instructor.</td>
</tr>
<tr>
<td>SYA 6971</td>
<td>Thesis: Master’s</td>
<td>2-19</td>
<td></td>
</tr>
<tr>
<td>WST 6001</td>
<td>Feminist Research and Methodology</td>
<td>3</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>WST 5308</td>
<td>Feminist Spirituality</td>
<td>3</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 go</td>
</tr>
<tr>
<td>CST 6935</td>
<td>Special Topics in Graduate School: Professional Development</td>
<td>1-3</td>
<td>Variable titles offered on topics of special interest pertaining to professional development.</td>
</tr>
<tr>
<td>OCC 6216</td>
<td>Marine Organic Chemistry</td>
<td>3</td>
<td>OCC 6050</td>
</tr>
<tr>
<td></td>
<td></td>
<td></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 6908</td>
<td>Independent Study</td>
<td>1-10</td>
<td>Independent study in which students must have a contract with an instructor.</td>
</tr>
<tr>
<td>OCE 6971</td>
<td>Thesis: Master’s</td>
<td>2-19</td>
<td></td>
</tr>
<tr>
<td>OCE 6972</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
</tr>
<tr>
<td>OCE 7910</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
</tr>
<tr>
<td>OCE 7980</td>
<td>Dissertation: Doctoral</td>
<td>2-19</td>
<td></td>
</tr>
<tr>
<td>OCG 6051</td>
<td>Geological Oceanography</td>
<td>3</td>
<td>Marine geology including plate tectonics; coastal, shelf and pelagic sedimentation; geochemical cycling; and sedimentary history of the ocean basins. Lec</td>
</tr>
<tr>
<td>EEL 6426</td>
<td>RF and Microwave Circuits I</td>
<td>3</td>
<td>EEL 4471 and ELR 4316L</td>
</tr>
<tr>
<td></td>
<td></td>
<td></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>ARC 6398</td>
<td>Introduction to Community and Urban Design</td>
<td>3</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>CGN 6915</td>
<td>Directed Research</td>
<td>1-19</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>GMS 6609C</td>
<td>Advanced Human Gross</td>
<td>3-6</td>
<td>This mainly laboratory course supplemented</td>
</tr>
</tbody>
</table>
### Anatomy
with supporting lectures will focus on a regional dissection approach to understanding how each organ system functions to serve their role in normal homeostasis of the living body.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GMS 6610</td>
<td>Advanced Neuroanatomy</td>
<td>3-6</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 6611</td>
<td>Introduction to Anatomical Research</td>
<td>1-3</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>MUS 6525</td>
<td>Computer Applications in Music Education</td>
<td>3</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>MUE 7835</td>
<td>Philosophical and Historical Issues in Music Education</td>
<td>3</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>OCG 6656C</td>
<td>Marine Micropaleontology</td>
<td>3</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>GMS 6612</td>
<td>Supervised Teaching in Human Anatomy</td>
<td>1-3</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 classroom and laboratory.</td>
</tr>
<tr>
<td>GMS 7910</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
</tr>
<tr>
<td>GMS 7930</td>
<td>Selected Topics</td>
<td>1-3</td>
<td></td>
</tr>
<tr>
<td>GMS 7939</td>
<td>Graduate Seminar</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>CWR 6820</td>
<td>Coastal Waves And Structures</td>
<td>3</td>
<td>Fundamentals of wave motion and the mutual interaction of waves and structures. A design project is included.</td>
</tr>
<tr>
<td>ENV 5345</td>
<td>Solid Waste Control</td>
<td>3</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>ART 6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td></td>
</tr>
<tr>
<td>MUC 6251</td>
<td>Composition</td>
<td>4</td>
<td>Private instruction in original composition. Required of composition majors.</td>
</tr>
<tr>
<td>MUC 6930</td>
<td>Seminar In Jazz Compositional Styles</td>
<td>2</td>
<td>A seminar study of the major compositional figures in jazz. Oriented toward the continuing...</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
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</tr>
<tr>
<td>ART 6792C</td>
<td>Sculpture</td>
<td>4</td>
<td>Advanced problems in the various techniques of sculpture. Emphasis on individual creative expression. Repeatable.</td>
</tr>
<tr>
<td>MUG 6307</td>
<td>Advanced Wind Conducting I</td>
<td>2</td>
<td>Combination of lecture, seminar, laboratory and individual instruction experiences designed to provide development of advanced conducting skills.</td>
</tr>
<tr>
<td>MUL 6375</td>
<td>Twentieth Century Music Literature</td>
<td>3</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>NGR 6433</td>
<td>Nurse Anesthesia Clinical Residency III</td>
<td>4</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>MUL 6410</td>
<td>Keyboard Repertory I</td>
<td>2</td>
<td>A study of style, history, and performance practice in keyboard repertory including masterworks of all periods.</td>
</tr>
<tr>
<td>MUL 6411</td>
<td>Keyboard Repertory II</td>
<td>2</td>
<td>A study of style, history, and performance practice in keyboard repertory including masterworks of all periods.</td>
</tr>
<tr>
<td>MUL 6505</td>
<td>Symphonic Literature</td>
<td>3</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>ANG 6463</td>
<td>Social Epidemiology Applied Anthropology</td>
<td>3</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>PAD 6335</td>
<td>Strategic Planning and Social Innovation for Public and Nonprofit Organizations</td>
<td>3</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 6338</td>
<td>Urban Land Use and Policy Administration</td>
<td>3</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; bull</td>
</tr>
<tr>
<td>PAD 6339</td>
<td>Housing and Public Policy</td>
<td>3</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>ANG 7709</td>
<td>Applied Anthropology and Human Problems</td>
<td>3</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 7940</td>
<td>Doctoral Internship in Applied Anthropology</td>
<td>1-15</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</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Name</td>
<td>Credits</td>
<td>Notes</td>
</tr>
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</tr>
<tr>
<td>ANG 7980</td>
<td>Dissertation: Doctoral</td>
<td>2-15</td>
<td>Signed by the student, the faculty advisor, and the agency supervisor prior to registration.</td>
</tr>
<tr>
<td>BSC 6905</td>
<td>Independent Study</td>
<td>1-19</td>
<td>Independent study in which student must have a contract with an instructor.</td>
</tr>
<tr>
<td>BSC 6910</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
</tr>
<tr>
<td>BSC 6930</td>
<td>Lectures in Contemporary Biology</td>
<td>1</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 6932</td>
<td>Selected Topics in Biology</td>
<td>1-4</td>
<td></td>
</tr>
<tr>
<td>BSC 6935</td>
<td>Graduate Seminar in Biology</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>BSC 6945</td>
<td>Graduate Instruction Methods</td>
<td>1-3</td>
<td>Special course to be used primarily for the training of teaching assistants.</td>
</tr>
<tr>
<td>BSC 7980</td>
<td>Dissertation: Doctoral</td>
<td>2-19</td>
<td></td>
</tr>
<tr>
<td>PCB 6525</td>
<td>Molecular Genetics</td>
<td>3</td>
<td>PCB 3063. Detailed examination of DNA, RNA and protein synthesis; the effects of mutations on proteins and cellular control.</td>
</tr>
<tr>
<td>PCB 6107</td>
<td>Advanced Cell Biology</td>
<td>4</td>
<td>Detailed examination of the structure, function and molecular biology of eukaryotic cells.</td>
</tr>
<tr>
<td>MAA 5306</td>
<td>Introduction to Real Analysis</td>
<td>3</td>
<td>MAA 4211. A course in Real Analysis. Topics include differentiation, Riemann-Stieltjes integrals, uniform convergence, Fourier series, and special functions.</td>
</tr>
<tr>
<td>MAA 6406</td>
<td>Complex Analysis I</td>
<td>3</td>
<td>MAA 5405 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 6407</td>
<td>Complex Analysis II</td>
<td>3</td>
<td>MAA 6406 Topics in: conformal mappings, normal families, Picard's theorem, univalent functions, extremal properties, elliptic functions, approximation theory, Riemann surfaces.</td>
</tr>
<tr>
<td>MAA 6507</td>
<td>Functional Analysis II</td>
<td>3</td>
<td>MAA 6506 Hilbert spaces, spectral theory, and other topics.</td>
</tr>
<tr>
<td>MAA 6616</td>
<td>Real Analysis II</td>
<td>3</td>
<td>MAA 5307 A continuation of the study of real analysis. Topics include Banach spaces, measure and integration, Riesz Representation Theorem, and the Radon-Nikodym Theorem.</td>
</tr>
<tr>
<td>PCB 6920</td>
<td>Advances in Cell and Molecular Biology</td>
<td>1</td>
<td>PCB 6107 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>
<tr>
<td>CCJ 6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td></td>
</tr>
<tr>
<td>AML 6017</td>
<td>Studies in American Literature before 1860</td>
<td>3</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 6018</td>
<td>Studies in American Literature 1860 to 1920</td>
<td>3</td>
<td>Selected focused studies in American literature: Dickinson, Whitman, Twain, Howells, James, Jewett, Chopin, Crane, Dreiser, and others.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
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</tr>
<tr>
<td>AML 6027</td>
<td>Studies in Modern American Literature</td>
<td>3</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>ENC 6319</td>
<td>Scholarly Writing for Publication in English Studies</td>
<td>3</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>ENC 6336</td>
<td>Studies in the History of Rhetoric</td>
<td>3</td>
<td>Examines the evolving relationship between rhetoric and composition from antiquity to the present.</td>
</tr>
<tr>
<td>ENC 6700</td>
<td>Studies in Composition Theory</td>
<td>3</td>
<td>Major theories and models of composing. Selected theorists include Rohman, Emig, Sommers, Flowers, and Hayes.</td>
</tr>
<tr>
<td>ENC 6720</td>
<td>Studies in Composition Research</td>
<td>3</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 com</td>
</tr>
<tr>
<td>ENC 6740</td>
<td>Theory and Development of Writing Programs</td>
<td>3</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>MAT 6939</td>
<td>Graduate Seminar</td>
<td>1-4</td>
<td>Direction of this seminar is by a faculty member. Students are required to present research papers from the literature.</td>
</tr>
<tr>
<td>MAT 6971</td>
<td>Thesis: Master’s</td>
<td>2-19</td>
<td></td>
</tr>
<tr>
<td>MAT 7912</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
</tr>
<tr>
<td>MAT 7980</td>
<td>Dissertation: Doctoral</td>
<td>2-19</td>
<td></td>
</tr>
<tr>
<td>MHF 5306</td>
<td>Mathematical Logic and Foundations I</td>
<td>3</td>
<td>MAS 4301 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 6307</td>
<td>Mathematical Logic And Foundations II</td>
<td>3</td>
<td>MHF 5306 Continuation of MHF 5306.</td>
</tr>
<tr>
<td>MTG 6256</td>
<td>Differential Geometry</td>
<td>3</td>
<td>MAA 4211, MAS 3105. Exterior calculus, differentiable manifolds, integration of differential forms, surfaces in 3-space, covariant derivative, curvature, matrix groups.</td>
</tr>
<tr>
<td>STA 5166</td>
<td>Statistical Methods I</td>
<td>3</td>
<td>STA 4321 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 5326</td>
<td>Mathematical Statistics I</td>
<td>3</td>
<td>STA 5446. Sample distribution theory, point &amp; interval estimation, optimality theory, statistical decision theory, and hypothesis testing.</td>
</tr>
<tr>
<td>STA 5526</td>
<td>Non-Parametric Statistics</td>
<td>3</td>
<td>STA 5326 Theory and methods of non-parametric</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
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<tr>
<td>STA 6167</td>
<td>Statistical Methods II</td>
<td>3</td>
<td>STA 5166.</td>
</tr>
<tr>
<td>STA 6206</td>
<td>Stochastic Processes</td>
<td>4</td>
<td>STA 5446.</td>
</tr>
<tr>
<td>STA 6208</td>
<td>Linear Statistical Models</td>
<td>3</td>
<td>STA 5167 or STA 5326</td>
</tr>
<tr>
<td>STA 6447</td>
<td>Probability Theory II</td>
<td>3</td>
<td>STA 5446 and MAA 5306</td>
</tr>
<tr>
<td>STA 6746</td>
<td>Multivariate Analysis</td>
<td>3</td>
<td>STA 5326</td>
</tr>
<tr>
<td>MUN 6429</td>
<td>Woodwind Quintet</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>MUN 6435</td>
<td>Brass Choir</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>MUN 6436</td>
<td>Brass Quintet</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>MUN 6445</td>
<td>Percussion Ensemble</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Units</td>
<td>Description</td>
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</tr>
<tr>
<td>MUN 6446</td>
<td>Marimba Ensemble</td>
<td>1</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 6477</td>
<td>Collegium Musicum</td>
<td>1</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 6716</td>
<td>Jazz Chamber Ensemble</td>
<td>1</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>MUS 5905</td>
<td>Directed Study</td>
<td>1-4</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>MVJ 5254</td>
<td>Applied Jazz Bass Secondary</td>
<td>2</td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVJ 5259</td>
<td>Applied Jazz Percussion Secondary</td>
<td>2</td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVJ 5951</td>
<td>Applied Jazz Performance</td>
<td>2</td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVJ 6952</td>
<td>Applied Jazz Performance</td>
<td>4</td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVJ 6460</td>
<td>Applied Jazz Piano Major</td>
<td>4</td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>ECP 6205</td>
<td>Labor Economics I</td>
<td>3</td>
<td>ECO 3101, ECO 6114, or ECO 6115 Labor demand and supply, unemployment, discrimination in labor markets, labor force statistics.</td>
</tr>
<tr>
<td>ISM 6266</td>
<td>Software Architecture</td>
<td>3</td>
<td>ISM 6124 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 concept</td>
</tr>
<tr>
<td>MAE 6328</td>
<td>Algebra for Middle Grades Teachers</td>
<td>3</td>
<td>MAE 6127, MAE 6328, MAE 6329, and MAE 6325. 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>
<tr>
<td>MAE 6329</td>
<td>Geometry and Measurement for Middle Grades Teachers</td>
<td>3</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 6325</td>
<td>Number Theory for Middle Grades Teachers</td>
<td>3</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 6899</td>
<td>Internship Seminar in Mathematics Education</td>
<td>1-3</td>
<td>This seminar accompanies the graduate internship in mathematics education and</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
</tr>
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</tr>
<tr>
<td>MAE 6945</td>
<td>Practicum in Mathematics Education</td>
<td>3</td>
<td>Provides teacher candidates an opportunity to interact with peers and university faculty regarding classroom experiences.</td>
</tr>
<tr>
<td>MAE 7138</td>
<td>Assessment in Mathematics Education</td>
<td>3</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 7146</td>
<td>Curriculum History/Research Mathematics Education</td>
<td>3</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 7655</td>
<td>Technology Issues in Mathematics Education</td>
<td>3</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 7794</td>
<td>Preparing Teachers of Mathematics, K-12</td>
<td>3</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 7796</td>
<td>Research Issues in Mathematics Education</td>
<td>3</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>
<tr>
<td>MAE 7945</td>
<td>Practicum in Mathematics Education</td>
<td>3</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>SOW 6558</td>
<td>Field Instruction Sequence IIIA: Part-Time</td>
<td>2</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>SOP 6068</td>
<td>Personality and Social Psychology</td>
<td>3</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</td>
</tr>
<tr>
<td>GMS 6183</td>
<td>Clinical Research Methods</td>
<td>3</td>
<td>The course will provide a foundation for healthcare providers to pursue investigator-initiated clinical research. It is not restricted to</td>
</tr>
<tr>
<td>Course</td>
<td>Code</td>
<td>Title</td>
<td>Credit</td>
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</tr>
<tr>
<td>EDG</td>
<td>6971</td>
<td>Thesis: Masters/Education Specialist</td>
<td>2-19</td>
</tr>
<tr>
<td>EDH</td>
<td>6406</td>
<td>Ethics and Higher Education</td>
<td>3</td>
</tr>
<tr>
<td>MHS</td>
<td>6508</td>
<td>Wraparound Interventions and the System of Care</td>
<td>3</td>
</tr>
<tr>
<td>MHS</td>
<td>6901</td>
<td>Independent Studies in Mental Health Studies</td>
<td>1-4</td>
</tr>
<tr>
<td>PET</td>
<td>6256</td>
<td>Sport in Society: Contemporary Issues</td>
<td>3</td>
</tr>
<tr>
<td>PET</td>
<td>6443</td>
<td>Instructional Design and Content: Games</td>
<td>3</td>
</tr>
<tr>
<td>PET</td>
<td>6444</td>
<td>Instructional Design and Content: Dance and Gymnastics</td>
<td>3</td>
</tr>
<tr>
<td>PET</td>
<td>6516</td>
<td>Learner Assessment in Physical Education</td>
<td>3</td>
</tr>
<tr>
<td>PET</td>
<td>6706</td>
<td>Analysis of Research in Physical Education</td>
<td>3</td>
</tr>
<tr>
<td>PET</td>
<td>6716</td>
<td>Analysis of Teaching in Physical Education</td>
<td>3</td>
</tr>
<tr>
<td>PHC</td>
<td>6936</td>
<td>Public Health Capstone</td>
<td>3</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
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</tr>
<tr>
<td>RED 6749</td>
<td>History and Foundations in Reading and STEM Disciplines</td>
<td>3</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>SCE 5325</td>
<td>Methods of Middle Grades Science Education</td>
<td>3</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 6938</td>
<td>Topics in Science Education: Field Practicum</td>
<td>3</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>PHC 6305</td>
<td>Environmental Analytical Laboratory</td>
<td>3</td>
<td>Techniques used for quantitative sampling and analysis of air, water, and soil contaminants.</td>
</tr>
<tr>
<td>PCB 6931</td>
<td>Advances in Cancer Biology Research</td>
<td>2</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 6910</td>
<td>Cancer Biology Lab Rotations</td>
<td>1-3</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>CES 6103</td>
<td>Experimental Stress Analysis</td>
<td>3</td>
<td>EGN 3331, EGN 3373 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>IDS 5177</td>
<td>The Atelier, Its Management and History</td>
<td>3</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>ESE 5344</td>
<td>Classroom Management for a Diverse School and Society</td>
<td>3</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 cr</td>
</tr>
<tr>
<td>SYO 7435</td>
<td>Sociology of Disability in Urban Society</td>
<td>3</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>PAD 6134</td>
<td>Project Management</td>
<td>3</td>
<td>Course is designed to introduce students to the concepts, theories, principles, and practices in communities.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
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<tr>
<td>NGR 6821</td>
<td>Applied Analysis for Outcomes Research Using Large Healthcare Databases</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHC 6544</td>
<td>Children’s Mental Health Services</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MUG 6205</td>
<td>Advanced Choral Conducting</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>HUM 6494</td>
<td>Studies in Medieval Arts and Letters</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHC 6545</td>
<td>Evaluation in Mental Health</td>
<td>3</td>
<td>Biostatistics I or Equivalent</td>
</tr>
<tr>
<td>MHF 5402</td>
<td>The Early History of Mathematics</td>
<td>3</td>
<td>MAC 2312</td>
</tr>
<tr>
<td>ART 6811</td>
<td>Paris Art Studio</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MUE 7939</td>
<td>Center for Music Education Research Seminar</td>
<td>1-2</td>
<td></td>
</tr>
<tr>
<td>PHC 6705</td>
<td>Formative Research Methods in Social Marketing</td>
<td>3</td>
<td>PHC 6411.</td>
</tr>
<tr>
<td>PHC 6543</td>
<td>Foundations in Behavioral Health Systems</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHC 6547</td>
<td>Case Management in Community Mental Health</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Title</td>
<td>Credits</td>
<td>Description</td>
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</tr>
<tr>
<td>MUE 7937</td>
<td>Special Topics in Music Education</td>
<td>2-3</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>SPC 5930</td>
<td>Topics in Discourse</td>
<td>3</td>
<td>Variable topics course.</td>
</tr>
<tr>
<td>SPC 6238</td>
<td>Survey of Rhetorical Theory</td>
<td>3</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 6236</td>
<td>Contemporary Rhetorical Theory</td>
<td>3</td>
<td>Basic texts in 20th century rhetorical theory. Readings may vary.</td>
</tr>
<tr>
<td>SPC 6391</td>
<td>Interpersonal Communication</td>
<td>3</td>
<td>Study of theory and research related to interpersonal communication.</td>
</tr>
<tr>
<td>SPC 6645</td>
<td>Rhetoric in Society</td>
<td>3</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 6682</td>
<td>Rhetorical Criticism</td>
<td>3</td>
<td>The study of theoretical perspectives in rhetorical criticism. The application of criticism to selected rhetorical situations.</td>
</tr>
<tr>
<td>LAE 6389</td>
<td>Practice in Teaching Literature</td>
<td>1-3</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 th</td>
</tr>
<tr>
<td>ENC 6745</td>
<td>Teaching Practicum</td>
<td>3</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>LAE 7376</td>
<td>Problems in Advanced English Instruction of Composition</td>
<td>3</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>
<tr>
<td>SPW 5465</td>
<td>19th Century Literature</td>
<td>3</td>
<td>An appreciation of the romantic and realist periods in Spanish literature.</td>
</tr>
<tr>
<td>SPW 5605</td>
<td>Cervantes</td>
<td>3</td>
<td>Cervantes’ masterpiece Don Quijote de la Mancha.</td>
</tr>
<tr>
<td>SPW 5725</td>
<td>Generation of 1898</td>
<td>3</td>
<td>The major figures of the period and their main followers.</td>
</tr>
<tr>
<td>LIN 5700</td>
<td>Applied Linguistics</td>
<td>3</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>TSL 5371</td>
<td>Methods of Teaching English As A Second Language</td>
<td>3</td>
<td>Analysis of the methods of teaching English pronunciation and structure to speakers of other languages.</td>
</tr>
<tr>
<td>TSL 5372</td>
<td>ESOL Curriculum and Instruction</td>
<td>3</td>
<td>Analysis of the methods of teaching English pronunciation and structure to speakers of other languages.</td>
</tr>
<tr>
<td>Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description-git</td>
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</tr>
<tr>
<td>ANG</td>
<td>Applied Anthropology and International Health</td>
<td>3</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>Doctoral Proseminar in Applied Anthropology</td>
<td>3</td>
<td>Emphasizing the process of doing &quot;four-field&quot; anthropology (biological, archeological, linguistic, and cultural), conceptualizing research questions, identifying, gathering and analyzing data. How application and theory are integrated and how this integ</td>
</tr>
<tr>
<td>ANG</td>
<td>Foundations of Applied Anthropology I</td>
<td>3</td>
<td>MA Foundations of Applied Anthropology I provides graduate students with an introduction to the philosophical basis of contemporary anthropology.</td>
</tr>
<tr>
<td>GEB</td>
<td>Ethics, Law and Sustainable Business Practices</td>
<td>3</td>
<td>Examines ethical and legal responsibilities of business for triple bottom line performance of prosperity, social justice, and concern for the natural environment.</td>
</tr>
<tr>
<td>ARH</td>
<td>Collection and Exhibition Management</td>
<td>3</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 work</td>
</tr>
<tr>
<td>IDS</td>
<td>Problems in Museum Studies</td>
<td>3</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 manageri</td>
</tr>
<tr>
<td>MUT</td>
<td>Schenkerian Analysis</td>
<td>3</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</td>
</tr>
<tr>
<td>ECO</td>
<td>Dissertation</td>
<td>2-19</td>
<td>Dissertation Research</td>
</tr>
<tr>
<td>ECO</td>
<td>International Economic Issues</td>
<td>3</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>ECP</td>
<td>Environmental Economics and Policy</td>
<td>3</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>EVR</td>
<td>Wildlife Ecology</td>
<td>3</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>NGR</td>
<td>Alternative and Complementary Therapies</td>
<td>2</td>
<td>Critical assessment of behavioral, cognitive, and plant-based interventions being used in</td>
</tr>
<tr>
<td>Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
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</tr>
<tr>
<td>ARC</td>
<td>Master's Project Planning</td>
<td>2</td>
<td>Two of ARC 5364, ARC 5365, ARC 5366</td>
</tr>
<tr>
<td>ANG</td>
<td>Directed Reading</td>
<td>1-4</td>
<td></td>
</tr>
<tr>
<td>ANG</td>
<td>Individual Research</td>
<td>2-4</td>
<td></td>
</tr>
<tr>
<td>MMC</td>
<td>Final Project</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>VIC</td>
<td>Visual Communication Theory</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>BUL</td>
<td>Regulatory &amp; Reporting Environments</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HMG</td>
<td>Organizational Effectiveness in Hospitality</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HMG</td>
<td>Graduate Seminar in Hospitality Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ANG</td>
<td>Seminar In Anthropology</td>
<td>2-4</td>
<td></td>
</tr>
<tr>
<td>ANG</td>
<td>Seminar In Archaeology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ANG</td>
<td>Archaeology Theory and Current Issues</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ANG</td>
<td>Public Archaeology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ANG</td>
<td>Regional Problems in Methods of Public Archaeology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Code</td>
<td>Title</td>
<td>Credits</td>
<td>Description</td>
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</tr>
<tr>
<td>ANG 6465</td>
<td>Regional Problems in Medical Anthropology</td>
<td>3</td>
<td>Contemporary problems in Medical Anthropology in the context of a specific region. Open to non-majors.</td>
</tr>
<tr>
<td>ANG 6511</td>
<td>Seminar in Physical Anthropology</td>
<td>3</td>
<td>A critical advanced survey of Physical Anthropology emphasizing contributions to Applied Anthropology.</td>
</tr>
<tr>
<td>ANG 6701</td>
<td>Contemporary Anthropology</td>
<td>3</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 6766</td>
<td>Research Methods in Applied Anthropology</td>
<td>3</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 6905</td>
<td>Independent Study</td>
<td>1-19</td>
<td>Independent study in which students must have a contract with an instructor.</td>
</tr>
<tr>
<td>ANG 6915</td>
<td>Directed Research Internship</td>
<td>1-19</td>
<td></td>
</tr>
<tr>
<td>ANG 6971</td>
<td>Thesis: Master’s</td>
<td>2-19</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>
</tr>
</tbody>
</table>
| ANG 7703 | History and Theory of Applied Anthropology     | 3       | 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 no

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANG 6905</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
</tr>
<tr>
<td>ANG 7905</td>
<td>Directed Individual Study</td>
<td>1-15</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 7910</td>
<td>Directed Research</td>
<td>1-15</td>
<td>An advanced directed research program in a selected topic of Applied Anthropology under the supervision of an anthropology faculty member.</td>
</tr>
</tbody>
</table>
| ARC 5175 | Computer Technology                            | 3       | 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 e

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
<th>Description</th>
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</thead>
</table>
| ARC 5216 | The Building Arts                              | 3       | 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, an

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
<th>Description</th>
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</thead>
</table>
| ARC 5256 | Design Theory                                  | 3       | 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


<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC 5361</td>
<td>Core Design I</td>
<td>9</td>
<td></td>
<td>First of two semester Design Fundamentals/Design Graphics sequence focusing</td>
</tr>
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<td>on design abstractions and analysis of the factors influencing conceptual</td>
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<td>design. Emphasis is placed on ordering principles, pattern recognition and</td>
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<td></td>
<td></td>
<td>utilization, and figure-ground.</td>
</tr>
<tr>
<td>ARC 5362</td>
<td>Core Design II</td>
<td>9</td>
<td>ARC 5361</td>
<td>Second of a two semester Design Fundamentals/Design Graphics sequence</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>focusing on synthesis of design concepts and application of ordering</td>
</tr>
<tr>
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<td></td>
<td></td>
<td>principles in architectural design. Emphasis is placed on developing an</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>understanding and awareness of architectural</td>
</tr>
<tr>
<td>MAD 5305</td>
<td>Graph Theory</td>
<td>3</td>
<td>MAS 3105</td>
<td>Brief introduction to classical graph theory (4-color theorem, etc.),</td>
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<td></td>
<td>directed graphs, connected digraphs, condensations, incidence matrices,</td>
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<tr>
<td></td>
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<td></td>
<td>Polya's Theorem, networks.</td>
</tr>
<tr>
<td>MAD 6206</td>
<td>Combinatorics I</td>
<td>3</td>
<td>MAS 3105 and MAS 4301</td>
<td>Elementary counting principles, distributions, sets, multisets, partitions</td>
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<td>of sets and integers, generating functions and recurrences, graphical</td>
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<td>methods, probabilistic methods.</td>
</tr>
<tr>
<td>MAD 6207</td>
<td>Combinatorics II</td>
<td>3</td>
<td>MAS 5311 and MAD 6206</td>
<td>Combinatorics of finite sets: posets, hypergraphs and external problems,</td>
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<td>matroids, block designs, Mobius inversion for partially ordered sets, Polya'</td>
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<td>s enumeration theory.</td>
</tr>
<tr>
<td>MAD 6510</td>
<td>Analysis of Algorithms</td>
<td>4</td>
<td>MAS 4301</td>
<td>Mathematical theory of algorithms for information processing, including</td>
</tr>
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<td>time and space requirements of algorithms, construction of optimal</td>
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<td></td>
<td>algorithms.</td>
</tr>
<tr>
<td>MAD 6616</td>
<td>Algebraic Automata Theory</td>
<td>3</td>
<td>MAS 4301</td>
<td>Deterministic and non-deterministic finite automata, Mealy and Moore</td>
</tr>
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<td>machines, push-down automata, Turing machines, regular languages, context</td>
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<td></td>
<td></td>
<td>free languages, halting problem, and universal Turing machines.</td>
</tr>
<tr>
<td>MAD 6617</td>
<td>Algebraic Coding Theory</td>
<td>3</td>
<td>MAS 5311</td>
<td>Linear block codes over an arbitrary finite field: Hamming, Golay, BCH,</td>
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<td>quadratic residue, Reed-Muller, and MDS codes, the MacWilliams identity,</td>
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<td></td>
<td>bounds on minimum distance, and relationship to design theory.</td>
</tr>
<tr>
<td>MAP 5316</td>
<td>Ordinary Differential Equations I</td>
<td>3</td>
<td>MAP 2302 and MAA 4211</td>
<td>Existence and uniqueness theory, properties of solutions, linear systems,</td>
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<td></td>
<td></td>
<td>stability theory. Sturm-Liouville theory.</td>
</tr>
<tr>
<td>MAP 5345</td>
<td>Applied Partial Differential</td>
<td>3</td>
<td>MAP 5407</td>
<td>Separation of variables, the heat equation, wave equation, Laplace's</td>
</tr>
<tr>
<td></td>
<td>Equations</td>
<td></td>
<td></td>
<td>equation, classification, Green's functions with emphasis on applications.</td>
</tr>
<tr>
<td>MAP 6205</td>
<td>Control Theory and Optimization</td>
<td>3</td>
<td>MAA 5307 and MAP 5316</td>
<td>Projection theorems and minimum norm problems, convex analysis, duality</td>
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<td>principle, constrained optimization, finite dimensional linear systems,</td>
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<td></td>
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<td>controllability, optimal control and pontryagin maximum principle</td>
</tr>
<tr>
<td>MAP 6356</td>
<td>Partial Differential Equations</td>
<td>3</td>
<td>MAP 5345 and MAA 5307</td>
<td>Advanced topics from: elliptic boundary value problems, semigroup theory,</td>
</tr>
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<td></td>
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<td></td>
<td></td>
<td>Sobolev spaces,</td>
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<td>Course Code</td>
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<td>Credits</td>
<td>Prerequisites</td>
<td>Description</td>
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<tr>
<td>MAS 5145</td>
<td>Advanced Linear Algebra</td>
<td>3</td>
<td>MAS 3105 and MAS 4301</td>
<td>Finite-dimensional vector spaces over arbitrary fields, dual spaces, canonical forms for linear transformations, inner product spaces, orthogonal, unitary, and self-adjoint operators and quadratic forms.</td>
</tr>
<tr>
<td>LIS 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 6008C</td>
<td>Advanced Information Retrieval</td>
<td>3</td>
<td>LIS 5020 or LIS 6260, and 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 6610</td>
<td>Information Sources and Services in the Humanities</td>
<td>3</td>
<td>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 6620</td>
<td>Information Sources and Services in the Social Sciences</td>
<td>3</td>
<td>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>LIS 6630</td>
<td>Information Sources and Services in Science and Technology</td>
<td>3</td>
<td>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 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 6724</td>
<td>Cataloging and Classification</td>
<td>3</td>
<td>LIS 6711 with a minimum grade of B- or LIS 6735 with a minimum grade of B-</td>
<td>Introduction to principles and practices of cataloging and classification according to current national standards, covering descriptive cataloging, subject analysis, and classification.</td>
</tr>
<tr>
<td>LIS 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 6712</td>
<td>Organization of Knowledge II</td>
<td>3</td>
<td>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 in</td>
</tr>
<tr>
<td>LIS 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 6946</td>
<td>Supervised Field Work</td>
<td>3</td>
<td></td>
<td>Study of life in the oceans, its rates and</td>
</tr>
<tr>
<td>OCB 6050</td>
<td>Biological Oceanography</td>
<td>3</td>
<td></td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
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<tr>
<td>OCB 6567</td>
<td>Phytoplankton Ecology</td>
<td>3</td>
<td>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>OCC 6050</td>
<td>Chemical Oceanography</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>OCC 6057L</td>
<td>Methods in Chemical Oceanography</td>
<td>1</td>
<td>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 6057</td>
<td>Marine Pollution</td>
<td>3</td>
<td>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>LAE 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>GLY 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>
</tr>
<tr>
<td>GMS 6201</td>
<td>Basic Medical Biochemistry</td>
<td>3</td>
<td>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 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>
<tr>
<td>GMS 6605</td>
<td>Basic Medical Anatomy</td>
<td>3</td>
<td>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>
<tr>
<td>GMS 6706</td>
<td>Basic Medical Neuroscience</td>
<td>3</td>
<td>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>
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<tr>
<td>Course Code</td>
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<tr>
<td>GMS 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 6906</td>
<td>Grantmanship II</td>
<td>1</td>
<td>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>HUM 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 9 credits.</td>
</tr>
<tr>
<td>PHC 6010</td>
<td>Epidemiology Methods I</td>
<td>3</td>
<td>PHC 6756, with a minimum grade of B-</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>
</tr>
<tr>
<td>PHC 6190</td>
<td>Public Health Database Management</td>
<td>3</td>
<td>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>HIM 6141</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>MAT 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>AMS 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>MHF 5405</td>
<td>History of Modern Mathematics</td>
<td>3</td>
<td>MAC 2313</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>MAR 6216</td>
<td>Logistics and Physical Distribution Management</td>
<td>3</td>
<td>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.</td>
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</table>
| MAR 6336    | Promotional Management               | 3     | MAR 6815      | Management of the promotional function as part of the total marketing program. Includes a
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<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Description</th>
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<tbody>
<tr>
<td>MAR 6406</td>
<td>Sales Management</td>
<td>3</td>
<td>MAR 6815</td>
<td>Study of relevant buyer behavior concepts, resources and budgets, media, creative aspects, and effectiveness measurements as they relate to the management tasks of d</td>
</tr>
<tr>
<td>MAR 6646</td>
<td>Research for Marketing Managers</td>
<td>3</td>
<td>MAR 6815, QMB 6305, ISM 6021.</td>
<td>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, r</td>
</tr>
<tr>
<td>MAR 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 managemen</td>
</tr>
<tr>
<td>ISM 6218</td>
<td>Advanced Database Management</td>
<td>3</td>
<td>ISM 6217 or ISM 4212 or equivalent.</td>
<td>This course covers core business database technologies. Topics include database design, transaction processing, parallelism, and distributed databases. Emerging business intelligence technologies are covered. A database system is used for projects.</td>
</tr>
<tr>
<td>ARC 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 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 6176</td>
<td>Advanced Computer Technology</td>
<td>3</td>
<td>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 repre</td>
</tr>
<tr>
<td>ARC 6287</td>
<td>Professional Practice I</td>
<td>3</td>
<td>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</td>
</tr>
<tr>
<td>CHM 5621</td>
<td>Principles of Inorganic Chemistry</td>
<td>3</td>
<td>CHM 4411, CHM 4610</td>
<td>Chemical forces, reactivity, periodicity, and literature in organic chemistry; basic core course.</td>
</tr>
<tr>
<td>CHM 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 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</td>
</tr>
<tr>
<td>Code</td>
<td>Course Title</td>
<td>Units</td>
<td>Pre-Reqs.</td>
<td>Description</td>
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<tr>
<td>MHS</td>
<td>Human Sexuality Issues for Counselors</td>
<td>4</td>
<td>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>
</tr>
<tr>
<td>MHS</td>
<td>Group Counseling Theories and Practices</td>
<td>4</td>
<td>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>Consultation for the Counseling Profession</td>
<td>3</td>
<td>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>Legal and Ethical Issues in the Counseling Profession</td>
<td>3</td>
<td>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>
<td>MHS</td>
<td>Practicum in Counseling Adolescents and Adults</td>
<td>4</td>
<td>MHS 6400.</td>
<td>Supervised counseling for integration and application of knowledge and skills gained in didactic study.</td>
</tr>
<tr>
<td>ARH</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>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>PET</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>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>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>PHC</td>
<td>Infectious Disease Control in Developing Countries</td>
<td>3</td>
<td>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>OCC</td>
<td>Applications of Gas Chromatography and Mass Spectrometry in Marine Science</td>
<td>3</td>
<td>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</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>General Requirements</td>
<td>Description</td>
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</tr>
<tr>
<td>EDF 7934</td>
<td>Seminar in Social Foundations of Education</td>
<td>4</td>
<td>EDF 6517, EDF 6544, or EDF 6606</td>
<td>Significant research on socio-cultural issues in Education.</td>
</tr>
<tr>
<td>SPS 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 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 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, asse</td>
</tr>
<tr>
<td>SPS 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 psychoeducational assessment, asse</td>
</tr>
<tr>
<td>SPS 6700C</td>
<td>Psychoeducational Interventions With Children and Adolescents I</td>
<td>4</td>
<td></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 w</td>
</tr>
<tr>
<td>SPS 6701C</td>
<td>Psychoeducational Interventions With Children and Adolescents II</td>
<td>4</td>
<td></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 w</td>
</tr>
<tr>
<td>SPS 6702C</td>
<td>Psychoeducational Interventions With Children and Adolescents III</td>
<td>4</td>
<td></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 w</td>
</tr>
<tr>
<td>SPS 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 6940</td>
<td>Practicum in Psychoeducational Interventions</td>
<td>1-4</td>
<td></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 6941</td>
<td>Practicum in Psychoeducational Interventions</td>
<td>1-4</td>
<td></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 6971</td>
<td>Thesis: Masters/Educational</td>
<td>2-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
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</tr>
<tr>
<td>SPS 7090</td>
<td>Supervision Processes in School Psychology</td>
<td>4</td>
<td>Theory, skills, and practice of supervision in school psychology.</td>
<td></td>
</tr>
<tr>
<td>SPC 6903</td>
<td>Directed Readings</td>
<td>1-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPC 6913</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPC 6934</td>
<td>Selected Topics in Communication</td>
<td>1-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPC 6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPC 7900</td>
<td>Doctoral Research Tutorial</td>
<td>1-3</td>
<td>Advanced directed research.</td>
<td></td>
</tr>
<tr>
<td>SPC 7930</td>
<td>Seminar in Rhetorical Studies</td>
<td>3</td>
<td>Variable topics course.</td>
<td></td>
</tr>
<tr>
<td>SPC 7980</td>
<td>Dissertation: Doctoral</td>
<td>2-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BCH 6935</td>
<td>Grant Writing &amp; Scientific Communication</td>
<td>2</td>
<td>GMS 6001 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>
<td></td>
</tr>
<tr>
<td>BME 6911</td>
<td>Research Methods in Biomechanics</td>
<td>1-3</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>
<td></td>
</tr>
<tr>
<td>MHS 6906</td>
<td>Independent Study in Behavior Analysis Applications in Community Settings</td>
<td>1-6</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>
<td></td>
</tr>
<tr>
<td>MHS 6971</td>
<td>Thesis in Applied Behavior Analysis</td>
<td>2-6</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>
<td></td>
</tr>
<tr>
<td>MHS 6938</td>
<td>Applied Behavior Analysis in Community Settings</td>
<td>1-4</td>
<td>Addresses selected topics in behavior analysis applications in complex community environments through lecture, class discussion, and supervised special projects.</td>
<td></td>
</tr>
<tr>
<td>MHS 6940</td>
<td>Practicum in Behavior Analysis in Community Settings</td>
<td>2-4</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>
<td></td>
</tr>
<tr>
<td>PCB 5256</td>
<td>Developmental Mechanisms</td>
<td>3</td>
<td>ZOO 4695 Topics in modern developmental biology to be covered in lecture and through readings so as to gain a detailed understanding of cellular and molecular mechanisms of differentiation and pattern formation in various eukaryotic species for majors/non-majors</td>
<td></td>
</tr>
<tr>
<td>GLY 6971</td>
<td>Thesis: Master’s</td>
<td>2-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GLY 7912</td>
<td>Directed Research</td>
<td>1-30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GLY 7980</td>
<td>Dissertation: Doctoral</td>
<td>2-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDF 7946</td>
<td>Supervised Experience in College Teaching</td>
<td>1</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.</td>
<td></td>
</tr>
<tr>
<td>ENT 6016</td>
<td>New Venture Formation</td>
<td>3</td>
<td>ACG 6025, MAR 6815 An introductory entrepreneurship course. Students learn to develop venture ideas,</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
<td>Description</td>
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</tr>
<tr>
<td>CAP 5625</td>
<td>Introduction to Artificial Intelligence</td>
<td>3</td>
<td>COP 4530.</td>
<td>Evaluate venture opportunities and understand financial, marketing, and managerial needs of a venture.</td>
</tr>
<tr>
<td>GEB 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>GEY 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>GMS 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>MCB 5815</td>
<td>Medical Mycology</td>
<td>3</td>
<td>MCB 3020</td>
<td>A modern biological survey of the medically important fungi (yeasts and molds) important to microbiologists and environmental scientists.</td>
</tr>
<tr>
<td>MCB 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 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 6971</td>
<td>Thesis: Master's</td>
<td>2-19</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 6236</td>
<td>Advanced Immunology</td>
<td>4</td>
<td></td>
<td>Research methods. Includes familiarity with major journals and bibliographies, with a practicum.</td>
</tr>
<tr>
<td>FOW 6805</td>
<td>Bibliography</td>
<td>1</td>
<td></td>
<td>Study of an author, movement, or theme.</td>
</tr>
<tr>
<td>LNW 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 5934</td>
<td>Selected Topics</td>
<td>4</td>
<td></td>
<td>Study of an author, movement, or theme.</td>
</tr>
<tr>
<td>LIN 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 6675</td>
<td>The Grammatical Structure of American English</td>
<td>3</td>
<td>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>ZOO 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>
<tr>
<td>COM 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>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
<td>Description</td>
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</tr>
<tr>
<td>EEC 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>CEG 5115</td>
<td>Foundation Engineering</td>
<td>3</td>
<td>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 5205</td>
<td>Laboratory Testing for Geotechnical Engineers</td>
<td>3</td>
<td>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>MUN 6455</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>MAN 6518</td>
<td>Sustainable Production Systems</td>
<td>3</td>
<td></td>
<td>Examines production processes dedicated to sustainable organizational performance through elimination of waste and reduction in resources consumed.</td>
</tr>
<tr>
<td>PHP 6415</td>
<td>Kant</td>
<td>3</td>
<td></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 o</td>
</tr>
<tr>
<td>ARC 6936</td>
<td>Research Methods in Architecture</td>
<td>2</td>
<td>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>MHS 6450</td>
<td>Counseling Substance Abuse in School and Community</td>
<td>4</td>
<td>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>PHC 7703</td>
<td>Advanced Research Methods in Epidemiology</td>
<td>3</td>
<td>PHC 6011</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>CES 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>CEG 6065</td>
<td>Soil Dynamics</td>
<td>3</td>
<td>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 6015</td>
<td>Advanced Geotechnical Topics</td>
<td>3</td>
<td>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>NGR 6223L</td>
<td>Practicum II in Advanced Oncology Nursing</td>
<td>3</td>
<td>NGR 6140, NGR 6172, NGR 6002C, NGR 6121, NGR 6737, NGR 6800, NGR 6800</td>
<td>Clinical experiences in advanced oncology nursing focused on the application of theoretical and conceptual knowledge relevant</td>
</tr>
<tr>
<td>Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
<td>Description</td>
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</tr>
<tr>
<td>PCB</td>
<td>PC 6230 Cancer Biology I - Basics of Molecular Oncology</td>
<td>3</td>
<td>ECO 6080, NGR 6220, NGR 6221, NGR 6222L and NGR 6240 (proposed)</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>ANG</td>
<td>AN 5486 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>ECO</td>
<td>EC 6120 Economic Policy Analysis</td>
<td>3</td>
<td>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>EC 6405 Mathematical Economics I</td>
<td>3</td>
<td>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>EC 7426 Econometrics III</td>
<td>3</td>
<td>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>ECO</td>
<td>EC 7427 Econometrics IV</td>
<td>3</td>
<td>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>SCE</td>
<td>SC 6456 Teaching Secondary School Physical and Earth Science</td>
<td>3</td>
<td>At least 12 hours in science.</td>
<td>Effective use and production of instructional materials in the physical and earth sciences. Interrelation of philosophy, materials, and classroom practices.</td>
</tr>
<tr>
<td>EIN</td>
<td>EN 5452 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>HMG</td>
<td>HM 6446 Hospitality Information Systems</td>
<td>3</td>
<td></td>
<td>The course focuses on managing information systems as a strategic asset to mold competitive strategies and change organizational management processes.</td>
</tr>
<tr>
<td>PUP</td>
<td>PU 5607 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>EIN</td>
<td>EN 6935 Special Industrial Topics II</td>
<td>1-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EIN</td>
<td>EN 6936 Special Industrial Topics III</td>
<td>1-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EIN</td>
<td>EN 6971 Thesis: Master’s</td>
<td>2-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ESI</td>
<td>SI 5219 Statistical Methods For</td>
<td>3</td>
<td></td>
<td>Study of statistical methods applied to</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
<td>Course Description</td>
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<tr>
<td>ESI 5306</td>
<td>Operations Research For Engineering Management</td>
<td>3</td>
<td>ESI 5219 or equiv.</td>
<td>Linear programming, non-linear programming, queuing, inventory, network analysis.</td>
</tr>
<tr>
<td>EIN 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>
<tr>
<td>ESI 5522</td>
<td>Computer Simulation</td>
<td>3</td>
<td>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 6213</td>
<td>Stochastic Decision Models I</td>
<td>3</td>
<td>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 6247</td>
<td>Statistical Design Models</td>
<td>3</td>
<td>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 6491</td>
<td>Linear Programming and Network Optimization</td>
<td>3</td>
<td>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 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 6911</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ESI 7911</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ESI 7980</td>
<td>Dissertation: Doctoral</td>
<td>2-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EML 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 6154</td>
<td>Advanced Conduction Analysis</td>
<td>3</td>
<td>EML 4124, EML 3041</td>
<td>Multi-dimensional heat transfer. Emphasis on solution techniques, exact and numerical.</td>
</tr>
<tr>
<td>PHC 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 issues and trends. With this primary aim, the objectives are organized around the knowledge of health assessment and interventions with adolescents and the skills needed for effecti</td>
</tr>
<tr>
<td>NGR 6002C</td>
<td>Advanced Health Assessment Across the Lifespan</td>
<td>4</td>
<td>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 6080</td>
<td>Family and Population-Based Health Promotion</td>
<td>3</td>
<td>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>ARC 6971</td>
<td>Master's Thesis</td>
<td>5</td>
<td>ARC 5364, ARC 5365, ARC</td>
<td>This represents the most significant project</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
<td>Description</td>
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</tr>
<tr>
<td>ARC 5363</td>
<td>Core Design III</td>
<td>6</td>
<td>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.</td>
</tr>
<tr>
<td>ARC 5364</td>
<td>Advanced Design A</td>
<td>6</td>
<td>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.</td>
</tr>
<tr>
<td>ARC 5365</td>
<td>Advanced Design B</td>
<td>6</td>
<td>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 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</td>
</tr>
<tr>
<td>ARC 5366</td>
<td>Advanced Design C</td>
<td>6</td>
<td>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</td>
</tr>
<tr>
<td>ARC 5467</td>
<td>Materials and Methods of</td>
<td>3</td>
<td>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 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 5588</td>
<td>Structures II</td>
<td>3</td>
<td>ARC 5587</td>
<td>Introduction to the concepts and theories of structural analysis and design of reinforced concrete systems and elements, including practical application in building construction. Prestressing, post-tensioning, hybrid assemblies. Fundamentals of wind and s</td>
</tr>
<tr>
<td>PCB 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>
</tbody>
</table>

5366, ARC 6481, and ARC 6936 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 Cата.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>prerequisites</th>
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<tbody>
<tr>
<td>PCB 6447</td>
<td>Community Ecology</td>
<td>3</td>
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<tr>
<td>PCB 6456C</td>
<td>Biometry</td>
<td>4</td>
<td>MAC 2241 and MAC 2242</td>
</tr>
<tr>
<td>PCB 6458</td>
<td>Biometry II</td>
<td>3</td>
<td>PCB 6456C.</td>
</tr>
<tr>
<td>PCB 6933</td>
<td>Seminar In Ecology</td>
<td>1-3</td>
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<tr>
<td>BSC 6971</td>
<td>Thesis: Master’s</td>
<td>2-19</td>
<td>Thesis: Master’s</td>
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<tr>
<td>BMS 6633</td>
<td>Cardiovascular &amp; Pulmonary Systems</td>
<td>var.</td>
<td></td>
</tr>
<tr>
<td>EEL 6427</td>
<td>RF and Microwave Circuits II</td>
<td>3</td>
<td>EEL 6426.</td>
</tr>
<tr>
<td>ARH 6798</td>
<td>Seminar In Art History</td>
<td>4</td>
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<tr>
<td>ART 5790C</td>
<td>Ceramics</td>
<td>4</td>
<td>ART 2750C</td>
</tr>
<tr>
<td>ART 5390C</td>
<td>Drawing</td>
<td>4</td>
<td>ART 4320C</td>
</tr>
<tr>
<td>ART 6791C</td>
<td>Ceramics</td>
<td>4</td>
<td></td>
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<tr>
<td>ART 6391C</td>
<td>Drawing</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>PHC 6186</td>
<td>Public Health Emergencies in Large Populations (PHLEP)</td>
<td>3</td>
<td></td>
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<tr>
<td>GEO 6255</td>
<td>Weather, Climate, and Society</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HMG 6477</td>
<td>Financial Management for the Hospitality Industry</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHC 6185</td>
<td>Emergency/Disaster Preparedness and Planning</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Course Description</td>
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</tr>
<tr>
<td>EDF 7940</td>
<td>Practicum In Educational Planning, Evaluation, And Development</td>
<td>1-8</td>
<td>Supervised practicum in which the student assumes major responsibility for significant planning, evaluation, research, or development activity.</td>
</tr>
<tr>
<td>EDF 7980</td>
<td>Dissertation</td>
<td>2-30</td>
<td>Will provide in-depth study in specific areas related to neurological, physiological, and mechanical principles of human development.</td>
</tr>
<tr>
<td>MUE 7980</td>
<td>Dissertation</td>
<td>2-19</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 6396C</td>
<td>Specialized Study in Bio-Kinetics of Human Movement</td>
<td>1-4</td>
<td>Diverse facets of hospitality/tourism information systems and technology will be discussed. The role of Chief Information Officer (CIO), concept of open system, planning &amp; managing e-commerce, global distribution systems, resources appl. software, etc.</td>
</tr>
<tr>
<td>HMG 6507</td>
<td>Hospitality &amp; Tourism Information Systems &amp; Technology</td>
<td>3</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 6430</td>
<td>Cardiovascular Systems for Engineers</td>
<td>3</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>GMS 6941</td>
<td>Bioethics and Medical Humanities Internship</td>
<td>3</td>
<td>Supervised Field experience in related activities/organizations relating to bioethics and/or medical humanities.</td>
</tr>
<tr>
<td>MHS 6072</td>
<td>Epidemiology and Prevention in Children’s Mental Health</td>
<td>3</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>
</tr>
<tr>
<td>MHS 6073</td>
<td>Child and Adolescent Psychopathology and Resilience</td>
<td>3</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 6095</td>
<td>Family-Centered Interdisciplinary Practice: SOC</td>
<td>3</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 6097</td>
<td>Financing of Children’s Mental Health Services</td>
<td>3</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 6096</td>
<td>Program Development and Implementation in Children’s Mental Health</td>
<td>3</td>
<td>Course introduces students to the science of implementation and key frameworks, theories, strategies; includes critical elements, influences, stages applied to carry out</td>
</tr>
<tr>
<td>Course Code</td>
<td>Title</td>
<td>Units</td>
<td>Description</td>
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</tr>
<tr>
<td>MHS 6098</td>
<td>Leadership within Systems of Care</td>
<td>3</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>MUE 6097</td>
<td>Music, Medicine, and Myths</td>
<td>2</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>EEX 6051</td>
<td>Creating Positive Learning Environments for Students with Disabilities</td>
<td>6</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 fo</td>
</tr>
<tr>
<td>CCJ 6932</td>
<td>Issues in Criminal Justice Administration</td>
<td>3</td>
<td>This course will focus on some of the most significant issues facing today's criminal justice administrator.</td>
</tr>
<tr>
<td>ACG 6875</td>
<td>Financial Reporting and Professional Issues</td>
<td>3</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 6905</td>
<td>Independent Study</td>
<td>1-19</td>
<td>Independent Study. Student must have a contract with an instructor.</td>
</tr>
<tr>
<td>ACG 6915</td>
<td>Directed Research</td>
<td>1-19</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 6932</td>
<td>Integrative Accounting Seminar</td>
<td>3</td>
<td>The course content will depend on student demand and instructor's interest.</td>
</tr>
<tr>
<td>ACG 6936</td>
<td>Selected Topics in Accounting</td>
<td>1-4</td>
<td>The course content will depend on student demand and instructor's interest.</td>
</tr>
<tr>
<td>ACG 7156</td>
<td>Seminar in Financial Accounting</td>
<td>3</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 7356</td>
<td>Seminar in Management Accounting</td>
<td>3</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 7415</td>
<td>Seminar In Accounting Information Systems</td>
<td>3</td>
<td>Review and critical analysis of major topics and research methods in accounting information systems.</td>
</tr>
<tr>
<td>ACG 7646</td>
<td>Seminar in Auditing</td>
<td>3</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 7936</td>
<td>Seminar On Special Topics In Accounting</td>
<td>1-4</td>
<td>Coverage of particular topics of interest to doctoral faculty and students during any given</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
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<tr>
<td>ACG 7980</td>
<td>Dissertation in Accounting</td>
<td>2-21</td>
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<tr>
<td>TAX 6005</td>
<td>Advanced Partnership Taxation</td>
<td>3</td>
<td>TAX 4001.</td>
</tr>
<tr>
<td>TAX 6445</td>
<td>Estate Planning</td>
<td>3</td>
<td>TAX 4001.</td>
</tr>
<tr>
<td>ECP 6702</td>
<td>Managerial Economics</td>
<td>2</td>
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<tr>
<td>ECO 6115</td>
<td>Microeconomics I</td>
<td>3</td>
<td>ECO 3101 or ECO 6114, ECO 4401</td>
</tr>
<tr>
<td>ECO 6708</td>
<td>Global Economic Environment of Business</td>
<td>2</td>
<td></td>
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<tr>
<td>ECO 6205</td>
<td>Macroeconomic Theory and Policy</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ECO 6206</td>
<td>Macroeconomics I</td>
<td>3</td>
<td>ECO 6405</td>
</tr>
<tr>
<td>ECO 6305</td>
<td>History of Economic Thought</td>
<td>3</td>
<td>ECO 3101 or ECO 6114</td>
</tr>
<tr>
<td>ECO 6424</td>
<td>Econometrics I</td>
<td>3</td>
<td>ECO 3203 or ECO 6204, QMB 3200, QMB 6305</td>
</tr>
<tr>
<td>ECO 6425</td>
<td>Econometrics II</td>
<td>3</td>
<td>ECO 6424</td>
</tr>
<tr>
<td>ECO 6505</td>
<td>Public Finance</td>
<td>3</td>
<td>ECO 3101 or ECO 6114</td>
</tr>
<tr>
<td>ECO 6525</td>
<td>Public Sector Economics</td>
<td>3</td>
<td>ECO 3101 or ECO 6114</td>
</tr>
<tr>
<td>ECO 6706</td>
<td>International Trade: Theory and Policy</td>
<td>3</td>
<td>ECO 3101 or ECO 6114</td>
</tr>
<tr>
<td>ECO 6716</td>
<td>International Monetary Economics</td>
<td>3</td>
<td>ECO 3203 or ECO 6204</td>
</tr>
<tr>
<td>EEX 6706</td>
<td>Education of the Preschool Handicapped Child</td>
<td>3</td>
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</tr>
<tr>
<td>EEX 6732</td>
<td>Consultation and Collaboration</td>
<td>3</td>
<td>Introductory course in</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
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<tr>
<td>EEX 6906</td>
<td>Independent Study: Special Education</td>
<td>1-6</td>
<td>Independent study in which students must have a contract with an instructor.</td>
</tr>
<tr>
<td>EEX 6939</td>
<td>Advanced Seminar: Paradigms, Practices, and Policies in Special Education</td>
<td>3</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 6943</td>
<td>Practicum in Exceptional Student Education</td>
<td>1-4</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 6971</td>
<td>Thesis: Masters/Educational Specialist</td>
<td>2-19</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 7301</td>
<td>Selected Topics in Special Education</td>
<td>1-8</td>
<td>EEX 7341</td>
</tr>
<tr>
<td>EEX 7341</td>
<td>Research Studies and Their Implications in the Education of Exceptional Children</td>
<td>3</td>
<td>EDF 6431, EDF 6481, or equiv.,</td>
</tr>
<tr>
<td>LAE 7794</td>
<td>Survey of Research on Writing Development and Instruction</td>
<td>3</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 7795</td>
<td>Research and Theory in the teaching of Writing</td>
<td>3</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>SSE 5946</td>
<td>Practicum in Social Science Education</td>
<td>3</td>
<td>SSE 5331.</td>
</tr>
<tr>
<td>URP 6100</td>
<td>Planning Theory and History</td>
<td>3</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>
<tr>
<td>BSC 7936</td>
<td>Doctoral Seminar</td>
<td>1</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>
</tbody>
</table>
### SYA 7939 Selected Topics for Ph.D. Students 3
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.

### MAS 5215 Number Theory 3 MAS 3105 and MAS 4301
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.

### MAS 6312 Algebra II 3 MAS 5311
A continuation of the study of graduate algebra. Topics include principal ideal domains, basic field theory, finite fields, and Galois theory.

### NGR 6500 Theoretical Foundations for Advanced Psychiatric Nursing 3 NGR 6121.
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.

### PSY 6907 Independent Study 1-19
Independent study in which student must have a contract with an instructor.

### PSY 6917 Directed Research 1-19
Supervised training in community and university settings in the application of Psychology.

### PSY 6947 Graduate Instruction Methods 1-3
Special course to be used primarily for the training of teaching assistants.

### PSY 6971 Thesis: Master’s 2-19
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 ch

### PSY 7918 Directed Research 1-19

### PSY 7931 Seminar in Ethics and Professional Problems 2
Ethical issues and professional problems in the practice of psychology.

### PSY 7980 Dissertation: Doctoral 2-19
Selected issues and topics in Public Administration and Public Policy.

### PAD 5035 Issues in Public Administration and Public Policy 3
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.

### PAD 5807 Urban and Local Government Administration 3
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, s

### MHS 6201 Applied Behavior Analysis in Complex Community Environments 3
How organizations and managers perform within a particular environment, potential impact of innovation, and how service is accomplished in a variety of socio-economic
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAD 5044</td>
<td>Environment of Public Administration</td>
<td>3</td>
<td>Examination of the legal, political, and ethical environment in which public managers work.</td>
</tr>
<tr>
<td>PAD 6060</td>
<td>Public Administration Theory</td>
<td>3</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 6105</td>
<td>Organization Theory and Leadership</td>
<td>3</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>
</tr>
<tr>
<td>PAD 6207</td>
<td>Public Financial Administration</td>
<td>3</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 6222</td>
<td>Issues in Florida—Budgeting and Finance</td>
<td>3</td>
<td>Selected issues in public financial management and budgeting related to state agencies or local governments in Florida.</td>
</tr>
<tr>
<td>PAD 6227</td>
<td>Public Budgeting</td>
<td>3</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 6307</td>
<td>Policy Design and Implementation</td>
<td>3</td>
<td>The formulation, adoption, implementation, and evaluation of public policy. Analysis of public problems and program development; the causes and determinants of public policy and successful implementation; criteria for the assessment of program’s impact.</td>
</tr>
<tr>
<td>ANG 6436</td>
<td>Issues in Heritage Tourism</td>
<td>3</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>ARC 6288</td>
<td>Professional Practice II</td>
<td>3</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, inform</td>
</tr>
<tr>
<td>ARC 6397</td>
<td>Introduction to Urban Design Theory, Methods &amp; Processes</td>
<td>3</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 cite</td>
</tr>
<tr>
<td>ANG 6447</td>
<td>Selected Topics in Urban Anthropology</td>
<td>3</td>
<td>Current topical issues in Urban Anthropology. Open to non-majors.</td>
</tr>
<tr>
<td>ANG 6448</td>
<td>Regional Problems in Urban Anthropology</td>
<td>3</td>
<td>Contemporary problems in Urban Anthropology in the context of a specific region. Open to non-majors.</td>
</tr>
<tr>
<td>ANG 6469</td>
<td>Selected Topics in Medical Anthropology</td>
<td>3</td>
<td>Current topical issues in Medical Anthropology. Open to non-majors.</td>
</tr>
<tr>
<td>ANG 6490</td>
<td>Seminar in Cultural Anthropology</td>
<td>3</td>
<td>A critical advanced survey of Cultural Anthropology emphasizing contributions to Applied Anthropology, required of all MA students.</td>
</tr>
<tr>
<td>Code</td>
<td>Course Title</td>
<td>Units</td>
<td>Prerequisites</td>
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</tr>
<tr>
<td>ANG</td>
<td>Selected Topics in Applied Anthropology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ARC</td>
<td>Advanced Topics in Materials and Methods</td>
<td>3</td>
<td>ARC 5175, ARC 5587, and ARC 5588</td>
</tr>
<tr>
<td>ARC</td>
<td>Design Development</td>
<td>3</td>
<td>ARC 5689 and ARC 5364.</td>
</tr>
<tr>
<td>ARC</td>
<td>Advanced Topics In Environmental Technology</td>
<td>3</td>
<td>ARC 5175, ARC 5689</td>
</tr>
<tr>
<td>RCS</td>
<td>Seminar in Rehabilitation Counseling</td>
<td>1-4</td>
<td></td>
</tr>
<tr>
<td>SOW</td>
<td>Field Research II</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>SOW</td>
<td>Field Instruction I</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>PCB</td>
<td>Physiological Ecology</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>SOW</td>
<td>Field Instruction II</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>SOW</td>
<td>Field Instruction III</td>
<td>2-4</td>
<td></td>
</tr>
<tr>
<td>SOW</td>
<td>Independent Study</td>
<td>1-3</td>
<td></td>
</tr>
<tr>
<td>MAD</td>
<td>LISP: Programming With Algebraic Applications</td>
<td>3</td>
<td>MHF 5306 or MAD 6510 or MAS 5311</td>
</tr>
<tr>
<td>MAP</td>
<td>Ordinary Differential Equations II</td>
<td>3</td>
<td>MAP 5316 and MAA 5307</td>
</tr>
<tr>
<td>MAP</td>
<td>Methods of Applied Mathematics</td>
<td>3</td>
<td>MAP 2302</td>
</tr>
<tr>
<td>Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
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<tr>
<td>EPD</td>
<td>5051 Advanced Theories in Motor and Physical Disabilities</td>
<td>3</td>
<td>EEX 4012</td>
</tr>
<tr>
<td>EPD</td>
<td>5321 Educational Strategies for Physically and Multi-handicapped Students</td>
<td>3</td>
<td>EPD 5051.</td>
</tr>
<tr>
<td>EGN</td>
<td>5421 Engineering Applications for Vector Analysis</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>EGN</td>
<td>5423 Neural Networks and Mathematics for Communication</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ECH</td>
<td>6285 Advanced Transport Phenomena</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ECH</td>
<td>5324 Automatic Process Control II</td>
<td>3</td>
<td>ECH 4323C</td>
</tr>
<tr>
<td>ARC</td>
<td>5689 Environmental Technology</td>
<td>3</td>
<td>ARC 5467 and ARC 5470</td>
</tr>
<tr>
<td>ARC</td>
<td>5731 Architectural History I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ARC</td>
<td>5732 Architectural History II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ARC</td>
<td>5789 Modern Architecture History</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ARC</td>
<td>5793 History Abroad</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CRW</td>
<td>6331 Poetry Writing</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
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<tr>
<td>EEL 6593</td>
<td>Mobile and Personal Communication</td>
<td>3</td>
<td>EEL 6534.</td>
</tr>
<tr>
<td>EEL 6615</td>
<td>Systems and Control Theory II</td>
<td>3</td>
<td>EEL 6614</td>
</tr>
<tr>
<td>SSE 7980</td>
<td>Dissertation in Social Science Education</td>
<td>2-24</td>
<td>Rpt.</td>
</tr>
<tr>
<td>AFA 6945</td>
<td>Internship</td>
<td>1-3</td>
<td></td>
</tr>
<tr>
<td>SYO 6255</td>
<td>Seminar in Sociology of Education</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>TSL 5440</td>
<td>Language Testing</td>
<td>3</td>
<td>TSL 5371.</td>
</tr>
<tr>
<td>TSL 5525</td>
<td>Cross-Cultural Issues in ESL</td>
<td>3</td>
<td>LIN 5700.</td>
</tr>
<tr>
<td>TSL 6945</td>
<td>Internship</td>
<td>1-6</td>
<td>TSL 5371 and TSL 5372.</td>
</tr>
<tr>
<td>SPN 5525</td>
<td>Modern Spanish American Civilization</td>
<td>3</td>
<td>SPN 3520 or equivalent</td>
</tr>
<tr>
<td>SPN 6845</td>
<td>History of the Spanish Language</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SPW 5135</td>
<td>Colonial Spanish American Literature</td>
<td>3</td>
<td>SPW 4131.</td>
</tr>
<tr>
<td>SPW 5387</td>
<td>Spanish American Prose</td>
<td>3</td>
<td>SPW 4131.</td>
</tr>
<tr>
<td>SPW 5339</td>
<td>Golden Age Drama</td>
<td>3</td>
<td>SPW 4100.</td>
</tr>
<tr>
<td>SPW 5405</td>
<td>Medieval Literature</td>
<td>3</td>
<td>SPW 4100 or equiv.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Title</td>
<td>Credits</td>
<td>Notes</td>
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</tr>
<tr>
<td>SPW 5934</td>
<td>Selected Topics</td>
<td>3</td>
<td>Study of an author, movement, or theme.</td>
</tr>
<tr>
<td>SPW 6427</td>
<td>Golden Age Novel</td>
<td>3</td>
<td>Realistic prose-fiction of the Renaissance and Golden Age.</td>
</tr>
<tr>
<td>MAR 6816</td>
<td>Marketing Strategy</td>
<td>3</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 anal</td>
</tr>
<tr>
<td>MAR 6907</td>
<td>Independent Study</td>
<td>1-19</td>
<td>Must have a contract with an instructor.</td>
</tr>
<tr>
<td>MAR 6916</td>
<td>Directed Research</td>
<td>1-19</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 6936</td>
<td>Selected Topics in Marketing</td>
<td>1-4</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 7555</td>
<td>Consumer Behavior Theory</td>
<td>3</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>
<tr>
<td>MAR 7635</td>
<td>Advanced Marketing Research: Design and Technique</td>
<td>3</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, q</td>
</tr>
<tr>
<td>MAR 7667</td>
<td>Marketing Models and Strategy Applications</td>
<td>3</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 7787</td>
<td>Marketing Theory and Thought</td>
<td>3</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 7910</td>
<td>Independent Study in Marketing</td>
<td>1-12</td>
<td>Independent study in which students must have a contract with an instructor.</td>
</tr>
<tr>
<td>LAE 5932</td>
<td>Selected Topics in the Teaching of English</td>
<td>3</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 g</td>
</tr>
<tr>
<td>EEL 6908</td>
<td>Independent Study</td>
<td>1-19</td>
<td>Selected Topics in Electrical Engineering.</td>
</tr>
<tr>
<td>EEL 6935</td>
<td>Selected Electrical Topics</td>
<td>1-3</td>
<td>Selected Topics in Electrical Engineering.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
</tr>
<tr>
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</tr>
<tr>
<td>EEL 6971</td>
<td>Thesis: Master’s</td>
<td>2-19</td>
<td></td>
</tr>
<tr>
<td>EEL 7931</td>
<td>ST in Communication</td>
<td>3</td>
<td>EEL 6535</td>
</tr>
<tr>
<td>EEL 7980</td>
<td>Dissertation: Doctoral</td>
<td>2-19</td>
<td></td>
</tr>
<tr>
<td>EEL 7910</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
</tr>
<tr>
<td>EIN 5182</td>
<td>Principles of Engineering Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>EIN 6106</td>
<td>Technology and Law</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>EIN 6108</td>
<td>EM-Human Relations</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>EIN 6121</td>
<td>Technology and Markets</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>EIN 6247</td>
<td>Engineering Information Processing</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>THE 5931</td>
<td>Selected Topics In Theatre</td>
<td>1-8</td>
<td></td>
</tr>
<tr>
<td>CHM 6907</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
</tr>
<tr>
<td>CHM 6935</td>
<td>Graduate Seminars in Chemistry</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>CHM 6936</td>
<td>Chemistry Colloquium</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>CHM 6938</td>
<td>Selected Topics in Chemistry</td>
<td>1-3</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
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</tr>
<tr>
<td>CHM 6946</td>
<td>Graduate Instruction Methods</td>
<td>1-4</td>
<td>Special course for the training of teaching assistants.</td>
</tr>
<tr>
<td>CHM 6971</td>
<td>Thesis: Master’s</td>
<td>2-19</td>
<td>Topical issues in communication.</td>
</tr>
<tr>
<td>CHM 6973</td>
<td>Directed Research</td>
<td>1-19</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>CHM 7820</td>
<td>Directed Research</td>
<td>1-19</td>
<td>A study of communication theory and behavior within organizational settings: role of communication, communication climates, communication networks, leadership.</td>
</tr>
<tr>
<td>CHM 7980</td>
<td>Dissertation: Doctoral</td>
<td>2-19</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 5930</td>
<td>Topics in Communication Studies</td>
<td>3</td>
<td>An examination of communication theory through selected reading in the works of major theorists past and present.</td>
</tr>
<tr>
<td>COM 6001</td>
<td>Theories and Histories of Communication</td>
<td>3</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 6121</td>
<td>Organizational Communication</td>
<td>3</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 6605</td>
<td>Media Studies</td>
<td>3</td>
<td>Variable topics course.</td>
</tr>
<tr>
<td>COM 7325</td>
<td>Seminar in Communication Research Methods</td>
<td>3</td>
<td>Advanced study of the acoustics, production, and perception of normal and disordered speech.</td>
</tr>
<tr>
<td>COM 7933</td>
<td>Seminar in Communication Studies</td>
<td>3</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 audiological measurement paradigms.</td>
</tr>
<tr>
<td>ORI 5930</td>
<td>Topics in Performance Genres</td>
<td>3</td>
<td>Assess and manage persons with hearing loss. Effects of hearing impairment, assessment issues, and appropriate intervention strategies.</td>
</tr>
<tr>
<td>ORI 7930</td>
<td>Seminar in Performance Studies</td>
<td>3</td>
<td>Variable topics course.</td>
</tr>
<tr>
<td>SPA 7150</td>
<td>Advanced Speech Science</td>
<td>3</td>
<td>SPA 3011 or equivalent; SPA 5150L.</td>
</tr>
<tr>
<td>SPA 5303</td>
<td>Auditory Anatomy and Physiology</td>
<td>3</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>SPA 5328</td>
<td>Rehabilitative Audiology for Adults</td>
<td>3</td>
<td>Variable topics course.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
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<tr>
<td>SPA 6404</td>
<td>Language Learning Disabilities</td>
<td>3</td>
<td>Prosthetic intervention, perceptual intervention, communication strategies intervention, and counseling issues.</td>
</tr>
<tr>
<td>SPA 5403</td>
<td>Language-Learning in the School-Age Years</td>
<td>3</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 5552</td>
<td>Diagnostic Principles and Practices</td>
<td>3</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>
<tr>
<td>SPA 6232</td>
<td>Neuromotor Communication Disorders</td>
<td>3</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 6245</td>
<td>Craniofacial Communication Disorders</td>
<td>3</td>
<td>A study of the medical, physical, occupational, speech, language, and hearing problems of the neuro-motorically impaired client. Therapy techniques are reviewed and evaluated.</td>
</tr>
<tr>
<td>SPA 6305</td>
<td>Pediatric Audiology</td>
<td>3</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 6314</td>
<td>Electrophysiology</td>
<td>3</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 6316</td>
<td>Vestibular Evaluation and Treatment</td>
<td>3</td>
<td>Special course to be used primarily for the training of graduate teaching assistants.</td>
</tr>
<tr>
<td>FLE 6829</td>
<td>Graduate Instruction Methods</td>
<td>1-4</td>
<td>Special course to be used primarily for the training of graduate teaching assistants.</td>
</tr>
<tr>
<td>FRE 6910</td>
<td>Directed Research</td>
<td>1-19</td>
<td>Emphasis on Malherbe, Descartes, Pascal, La Fontaine, and Boileau.</td>
</tr>
<tr>
<td>FRE 6971</td>
<td>Thesis: Master’s</td>
<td>2-19</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 5222</td>
<td>Classical Prose and Poetry</td>
<td>3</td>
<td>A detailed study of realism and naturalism with emphasis on Flaubert, Zola, les Goncourt, Maupassant, and Daudet.</td>
</tr>
<tr>
<td>FRW 5535</td>
<td>Romanticism and Early Realism</td>
<td>3</td>
<td>An introduction to the Old French language and literature. Readings from representative texts.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
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</tr>
<tr>
<td>GER 6060</td>
<td>German for Reading</td>
<td>3</td>
<td>Designed to provide a reading ability in German that will support research in other disciplines.</td>
</tr>
<tr>
<td>GER 6908</td>
<td>Independent Study</td>
<td>1-19</td>
<td>Independent study in which student must have a contract with an instructor.</td>
</tr>
<tr>
<td>ITW 6910</td>
<td>Directed Research</td>
<td>1-19</td>
<td>Selected topics in Italian literature.</td>
</tr>
<tr>
<td>LIN 6081</td>
<td>Introduction to Graduate Study in Linguistics</td>
<td>3</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; a</td>
</tr>
<tr>
<td>MMC 6421</td>
<td>Research Methods in Mass Communications</td>
<td>3</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 d</td>
</tr>
<tr>
<td>MMC 6607</td>
<td>Public Opinion and the Mass Media</td>
<td>3</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 responsibi</td>
</tr>
<tr>
<td>MMC 6612</td>
<td>Seminar: Law and the Mass Media</td>
<td>3</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 age</td>
</tr>
<tr>
<td>MMC 6900</td>
<td>Directed Reading in Mass Communications</td>
<td>1-3</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 6910</td>
<td>Individual Research in Mass Communications</td>
<td>1-3</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 6920</td>
<td>Introductory Mass Communications Seminar</td>
<td>3</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</td>
</tr>
<tr>
<td>MMC 6936</td>
<td>Selected Topics in Mass Communications</td>
<td>3</td>
<td>Courses designed to meet current, specific topics of interest to students and instructors.</td>
</tr>
<tr>
<td>MMC 6945</td>
<td>Professional Practicum</td>
<td>1-3</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 6950</td>
<td>Applied Research Project</td>
<td>1-6</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 6971</td>
<td>Thesis: Master's</td>
<td>2-3</td>
<td>A problem-solving approach emphasizing the environmental context of strategic</td>
</tr>
<tr>
<td>PUR 6603</td>
<td>Strategic Communication Campaigns</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Title</td>
<td>Credits</td>
<td>Description</td>
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</tr>
<tr>
<td>ENG 6009</td>
<td>Introduction to Graduate Study</td>
<td>3</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. Nonmajors with prerequisites allowed. Not repeatable for credit.</td>
</tr>
<tr>
<td>ENG 6916</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
</tr>
<tr>
<td>SCE 6347</td>
<td>Methods for Interpretive &amp; Transformative Standards Based Education</td>
<td>3</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>SOW 6405</td>
<td>Foundations of Social Work Research and Statistics</td>
<td>3</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>SOW 6426</td>
<td>Field Research I</td>
<td>1</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>EGI 5307</td>
<td>Theory and Development of Creativity</td>
<td>3</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>
</tr>
<tr>
<td>LAE 6861</td>
<td>American and British Literature with Technology</td>
<td>3</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</td>
</tr>
<tr>
<td>LAE 6325</td>
<td>Methods of Teaching Middle School Language Arts</td>
<td>4</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>SPA 6473</td>
<td>Multicultural Differences in Language</td>
<td>3</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>PAD 6208</td>
<td>Financial Oversight for Nonprofit Organizations</td>
<td>3</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-te</td>
</tr>
<tr>
<td>SPA 5204</td>
<td>Advanced Clinical Phonology</td>
<td>3</td>
<td>The principles of generative phonology will be applied to the assessment and treatment of phonological disorders. Emphasis is placed on</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
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<tr>
<td>SYG 6936</td>
<td>Seminar in Teaching Sociology</td>
<td>3</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>SYP 6008</td>
<td>Social Problems, Identity, and Community</td>
<td>3</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 6515</td>
<td>Sociology of Deviance</td>
<td>3</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>EME 7910</td>
<td>Directed Research in Instructional Technology</td>
<td>1-19</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>WST 5934</td>
<td>Selected Topics</td>
<td>1-4</td>
<td>Study of current research methods and scholarship on women from a multidisciplinary perspective.</td>
</tr>
<tr>
<td>MHS 6006</td>
<td>Trends and Principles of the Counseling Profession</td>
<td>4</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 6070</td>
<td>Study of Mental Disorders for Counselors</td>
<td>4</td>
<td>MHS 6006</td>
</tr>
<tr>
<td>BMS 6639</td>
<td>Excretory and Reproductive Systems</td>
<td>var.</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>MHS 6200</td>
<td>Assessment and Appraisal Procedures</td>
<td>4</td>
<td>MHS 6006</td>
</tr>
<tr>
<td>MHS 6340</td>
<td>Career Development</td>
<td>4</td>
<td>MHS 6006</td>
</tr>
<tr>
<td>MHS 6400</td>
<td>Counseling Theories and Practices</td>
<td>4</td>
<td>EDF 6354 and MHS 6006.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
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<tr>
<td>MHS 6420</td>
<td>Multicultural Counseling with Diverse Populations</td>
<td>3</td>
<td>MHS 6400.</td>
</tr>
<tr>
<td>MHS 6421</td>
<td>Counseling Children</td>
<td>4</td>
<td>EDF 6354 and MHS 6006.</td>
</tr>
<tr>
<td>MHS 6431</td>
<td>Family Therapy &amp; Techniques</td>
<td>4</td>
<td>MHS 6430.</td>
</tr>
<tr>
<td>PET 6645</td>
<td>Physical Education for Individuals with Disabilities</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>PET 6906</td>
<td>Independent Study: Professional Physical Education</td>
<td>1-6</td>
<td></td>
</tr>
<tr>
<td>PET 6910L</td>
<td>Research Project in Physical Education</td>
<td>1-4</td>
<td></td>
</tr>
<tr>
<td>HMG 6555</td>
<td>Electronic Marketing for Hospitality &amp; Tourism</td>
<td>3</td>
<td>HMG 6596</td>
</tr>
<tr>
<td>PHC 6183</td>
<td>Overview of United States and International Emergency/Disaster Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHC 6537</td>
<td>Case Studies in MCH Programs, Policies and Research</td>
<td>3</td>
<td>PHC 6530, PH Core Courses</td>
</tr>
<tr>
<td>PHC 6708</td>
<td>Evaluation Methods in Community Health</td>
<td>3</td>
<td>PHC 6505</td>
</tr>
<tr>
<td>PHC 7704</td>
<td>Applied Research Methods in Community and Family Health</td>
<td>3</td>
<td>PHC 6050, PHC 6700, PHC 6708</td>
</tr>
<tr>
<td>HSC 6556</td>
<td>Pathobiology of Human Disease I</td>
<td>3</td>
<td></td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Corequisite(s)</td>
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<tr>
<td>PHC 6303</td>
<td>Community Air Pollution</td>
<td>3</td>
<td>CHM 3610C</td>
</tr>
<tr>
<td>PHC 6310</td>
<td>Environmental Occupational Toxicology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HUM 6870</td>
<td>Teaching Practicum in Humanities</td>
<td>1-3</td>
<td></td>
</tr>
<tr>
<td>SPA 6324</td>
<td>Aural Rehabilitation: Children</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SPA 6675</td>
<td>Reading for the Hearing Impaired</td>
<td>2</td>
<td>RED 4310</td>
</tr>
<tr>
<td>SPA 6340</td>
<td>Principles of Amplification I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SPA 6354</td>
<td>Hearing Conservation</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SPA 6401</td>
<td>Pediatric Language Disorders</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SPA 6410</td>
<td>Aphasia and Related Disorders</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SPA 7415</td>
<td>Neurolinguistic Theories of Language</td>
<td>3</td>
<td>SPA 6410, SPA 6232</td>
</tr>
<tr>
<td>SPA 6505</td>
<td>Practicum</td>
<td>1-10</td>
<td></td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
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<tr>
<td>SPA 6553</td>
<td>Advanced Differential Diagnosis and Treatment Planning</td>
<td>3</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 6805.</td>
</tr>
<tr>
<td>SPA 6805</td>
<td>Research Procedures in Communication Sciences and Disorders</td>
<td>3</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 6906</td>
<td>Independent Study</td>
<td>1-19</td>
<td>Independent study in which students must have a contract with an instructor.</td>
</tr>
<tr>
<td>SPA 6910</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
</tr>
<tr>
<td>SPA 6930</td>
<td>Selected Topics</td>
<td>3</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 6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td></td>
</tr>
<tr>
<td>SPA 7931</td>
<td>Seminar in Communication Sciences and Disorders</td>
<td>3</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>CJL 6421</td>
<td>Law, Crime and Justice</td>
<td>4</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>CJC 6020</td>
<td>Theory, Practice, and Research in Corrections</td>
<td>3</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>EIN 6215</td>
<td>Engineering System Safety</td>
<td>3</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>CCJ 6406</td>
<td>Theory, Practice, and Research in Law Enforcement</td>
<td>3</td>
<td>This issue-oriented course explores the relationships among theory, practice, and research as these are reflected in the problems and challenges that confront law enforcement.</td>
</tr>
<tr>
<td>CCJ 6118</td>
<td>Introduction to Criminology Theory</td>
<td>4</td>
<td>An introduction to, and comparison of, major historical and contemporary theories that seek to explain criminal behavior or the existence of crime in society.</td>
</tr>
<tr>
<td>CCJ 6705</td>
<td>Research Methods in Criminology</td>
<td>3-4</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 6910</td>
<td>Directed Research</td>
<td>1-19</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 6937</td>
<td>Pro Seminar in Criminology</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
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</tr>
<tr>
<td>CCJ 6935</td>
<td>Topics in Criminology and Criminal Justice</td>
<td>3</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>HIS 6908</td>
<td>Independent Study</td>
<td>1-19</td>
<td>Independent study in which students must have a contract with an instructor.</td>
</tr>
<tr>
<td>HIS 6914</td>
<td>Directed Research</td>
<td>1-19</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 6925</td>
<td>Colloquium in History</td>
<td>3</td>
<td>Research in selected topics within the fields selected by the instructor.</td>
</tr>
<tr>
<td>HIS 6939</td>
<td>Seminar in History</td>
<td>3</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 provid</td>
</tr>
<tr>
<td>HIS 6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td>Open to non-majors. Interdisciplinary analysis of American life during a specific cultural era.</td>
</tr>
<tr>
<td>AMS 6002</td>
<td>American Lives</td>
<td>3</td>
<td>Open to non-majors. Interdisciplinary analysis of American life during a specific cultural era.</td>
</tr>
<tr>
<td>AMS 6254</td>
<td>Cultural Era</td>
<td>3</td>
<td>Open to non-majors. Interdisciplinary analysis of American life during a specific cultural era.</td>
</tr>
<tr>
<td>AMS 6805</td>
<td>Enduring Questions in American Culture</td>
<td>3</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 6901</td>
<td>Directed Readings in American Studies</td>
<td>1-3</td>
<td>Open to non-majors. A supervised program of intensive reading.</td>
</tr>
<tr>
<td>AMS 6915</td>
<td>Directed Research</td>
<td>1-12</td>
<td>Directed research course.</td>
</tr>
<tr>
<td>AMS 6934</td>
<td>Selected Topics</td>
<td>1-3</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 6938</td>
<td>Research Seminar</td>
<td>3</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 6940</td>
<td>Internship in American Studies</td>
<td>1-3</td>
<td>A structured, out-of-class learning experience providing first hand, practical training in American Studies-related professional careers.</td>
</tr>
<tr>
<td>HUM 6453</td>
<td>Studies in American Arts and Letters I</td>
<td>3</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>HUM 6456</td>
<td>Studies in Latin American Arts and Letters</td>
<td>3</td>
<td>Analysis of selected Latin American works of art in their cultural context.</td>
</tr>
<tr>
<td>HUM 6475</td>
<td>Studies in Contemporary Arts and Letters</td>
<td>3</td>
<td>Concentration on major artists and recent trends.</td>
</tr>
<tr>
<td>HUM 6493</td>
<td>Studies in Classical Arts and Letters</td>
<td>3</td>
<td>Examples from the arts and letters of ancient Greece and their relationships to Aegean myths, religions, and philosophies. Classical</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credit Hours</td>
<td>Description</td>
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<tr>
<td>HUM 6495</td>
<td>Studies in Renaissance Arts and Letters</td>
<td>3</td>
<td>Greek influences on later cultures.</td>
</tr>
<tr>
<td>HUM 6497</td>
<td>Studies in Nineteenth Century Arts and Letters</td>
<td>3</td>
<td>Studies in painting, sculpture, music, literature, and architecture in relation to philosophical determinism and political absolutism.</td>
</tr>
<tr>
<td>HUM 6909</td>
<td>Independent Study</td>
<td>1-19</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>HUM 6915</td>
<td>Directed Research</td>
<td>1-19</td>
<td>Independent study in which student must have a contract with an instructor.</td>
</tr>
<tr>
<td>HUM 6939</td>
<td>Selected Topics in Humanities</td>
<td>1-3</td>
<td>Each topic is a course of study in a subject not covered by a regular course.</td>
</tr>
<tr>
<td>AFA 6805</td>
<td>African Historiography</td>
<td>3</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>HUM 6971</td>
<td>Thesis: Masters</td>
<td>2-19</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>ISS 6900</td>
<td>Directed Reading</td>
<td>1-3</td>
<td>A supervised program of intensive reading of interdisciplinary materials of specific interest.</td>
</tr>
<tr>
<td>ISS 6910</td>
<td>Directed Research</td>
<td>1-19</td>
<td>A supervised program of intensive reading of interdisciplinary materials of specific interest.</td>
</tr>
<tr>
<td>LIS 6402</td>
<td>Advanced Library Administration</td>
<td>3</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 class</td>
</tr>
<tr>
<td>LIS 6409</td>
<td>Introduction to Library Administration</td>
<td>3</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 6432</td>
<td>Seminar in Academic Libraries</td>
<td>3</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 6445</td>
<td>Seminar in Public Libraries</td>
<td>3</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>
</tr>
<tr>
<td>LIS 6455</td>
<td>Organization and Administration of the School Media Center</td>
<td>3</td>
<td>Media quarters, facilities, collections, equipment, and services. Principles of organization and administration of media programs in elementary and secondary</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
</tr>
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<tr>
<td>LIS 6463</td>
<td>Library Networks and Systems</td>
<td>3</td>
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<tr>
<td>LIS 6472</td>
<td>Seminar in Special Libraries</td>
<td>3</td>
<td>LIS 6409</td>
</tr>
<tr>
<td>LIS 6473</td>
<td>Law Librarianship</td>
<td>3</td>
<td>LIS 6260, LIS 6409, LIS 6603, LIS 6735</td>
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<tr>
<td>LIS 6475</td>
<td>Health Sciences Librarianship</td>
<td>3</td>
<td>LIS 6260, LIS 6409, LIS 6603, LIS 6735</td>
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<tr>
<td>LIS 6511</td>
<td>Collection Development and Maintenance</td>
<td>3</td>
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<tr>
<td>LIS 6542</td>
<td>The Curriculum and Instructional Technology</td>
<td>3</td>
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<tr>
<td>LIS 6565</td>
<td>Books and Related Materials for Young Adults</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>OCG 6080</td>
<td>Plate Tectonics</td>
<td>3</td>
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<tr>
<td>OCG 6664</td>
<td>Paleoceanography</td>
<td>3</td>
<td>OCB 6050, OCC 6050, OCG 6051, and OCP 6050</td>
</tr>
<tr>
<td>OCG 6668</td>
<td>Evolution and Ecology of Reefs</td>
<td>3</td>
<td>OCB 6050 and OCG 6051</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credit Hours</td>
<td>Prerequisites</td>
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<tr>
<td>OCP 6050</td>
<td>Physical Oceanography</td>
<td>3</td>
<td>Diff/int. calculus, General Physics</td>
</tr>
<tr>
<td>JOU 6107</td>
<td>News Coverage of Public Life</td>
<td>3</td>
<td></td>
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<tr>
<td>JOU 6122</td>
<td>Reporting: Methods and Perspectives</td>
<td>3</td>
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<tr>
<td>JOU 6191</td>
<td>Seminar: Contemporary Issues in Journalism</td>
<td>3</td>
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<tr>
<td>MMC 6306</td>
<td>International Communications Seminar</td>
<td>3</td>
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<td>MMC 6400</td>
<td>Mass Communication Theory</td>
<td>3</td>
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<tr>
<td>MAS 5311</td>
<td>Algebra I</td>
<td>3</td>
<td>MAS 3105 and MAS 4301</td>
</tr>
<tr>
<td>MAT 6908</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
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<tr>
<td>MAT 6911</td>
<td>Directed Research</td>
<td>1-19</td>
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<tr>
<td>MAT 6932</td>
<td>Selected Topics</td>
<td>1-4</td>
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<tr>
<td>LIN 6720</td>
<td>Second Language Acquisition</td>
<td>3</td>
<td>LIN 6715 or EQ.</td>
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<tr>
<td>LIN 6748</td>
<td>Contrastive Analysis</td>
<td>3</td>
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<tr>
<td>LIN 6908</td>
<td>Independent Study</td>
<td>1-19</td>
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<tr>
<td>Course No.</td>
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<td>Credits</td>
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<td>TSL 5325</td>
<td>ESOL Strategies for Content Area Teachers</td>
<td>3</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>PHI 6934</td>
<td>Selected Topics</td>
<td>1-3</td>
<td>Selected topics according to the needs of the student. Approval slip from instructor required.</td>
</tr>
<tr>
<td>PHI 6945</td>
<td>Graduate Instruction Methods</td>
<td>1-3</td>
<td>Special course to be used primarily for the training of teaching assistants.</td>
</tr>
<tr>
<td>PHI 6971</td>
<td>Thesis: Master’s</td>
<td>2-19</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 6105</td>
<td>Seminar in Social Philosophy</td>
<td>3</td>
<td>An examination of the main political philosophies. Seminar format.</td>
</tr>
<tr>
<td>PHM 6305</td>
<td>Seminar in Political Philosophy</td>
<td>3</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>PHM 6506</td>
<td>Seminar in the Philosophy of History</td>
<td>3</td>
<td>A systematic study of Plato’s dialogues.</td>
</tr>
<tr>
<td>PHP 6005</td>
<td>Plato</td>
<td>3</td>
<td>A systematic study of Aristotle’s philosophy.</td>
</tr>
<tr>
<td>PHY 6346</td>
<td>Electromagnetic Theory I</td>
<td>3</td>
<td>Electrostatics, magnetostatics, potential and boundary value problems. Maxwell’s equations. First semester of sequence PHY 6346, PHY 6347.</td>
</tr>
<tr>
<td>PHY 6446</td>
<td>Lasers and Applications</td>
<td>3</td>
<td>Optical modes, optical resonator theory, gain saturation, theory of laser oscillators, specific laser systems, Q-switching and mode-locking, optical waveguides.</td>
</tr>
<tr>
<td>PHY 6645</td>
<td>Quantum Mechanics I</td>
<td>3</td>
<td>Hilbert space, continuous spectrum, matrix and wave mechanics, quantum dynamics, symmetries, angular momentum, perturbation methods</td>
</tr>
<tr>
<td>PHY 6646</td>
<td>Applied Quantum Mechanics</td>
<td>3</td>
<td>Approximation and perturbation methods, hydrogen fine structure, scattering, identical particles, second quantization, Dirac equation.</td>
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<tr>
<td>PHY 6909</td>
<td>Independent Study</td>
<td>1-19</td>
<td>Independent study in which student must have a contract with an instructor.</td>
</tr>
<tr>
<td>PHY 6911</td>
<td>Directed Research</td>
<td>1-19</td>
<td>An individual investigation of a research topic under the supervision of an instructor.</td>
</tr>
<tr>
<td>PHY 6935</td>
<td>Graduate Seminar</td>
<td>1</td>
<td>Each topic is a course in directed study under the supervision of a faculty member.</td>
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<tr>
<td>PHY 6938</td>
<td>Selected Topics in Physics</td>
<td>1-10</td>
<td>A detailed study of Plato’s dialogues.</td>
</tr>
<tr>
<td>PHY 6971</td>
<td>Thesis: Master’s</td>
<td>2-12</td>
<td>A systematic study of Aristotle’s philosophy.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
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<tr>
<td>PHZ 5115</td>
<td>Methods of Theoretical Physics I</td>
<td>3</td>
<td>MAP 2302 or PHZ 3113</td>
</tr>
<tr>
<td>PHZ 5116</td>
<td>Methods of Theoretical Physics II</td>
<td>3</td>
<td>PHZ 5115</td>
</tr>
<tr>
<td>PHZ 5405</td>
<td>Solid State Physics I</td>
<td>3</td>
<td>PHY 4605 or PHY 6645</td>
</tr>
<tr>
<td>CPO 5934</td>
<td>Selected Topics in Comparative Politics</td>
<td>3</td>
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<tr>
<td>CPO 6091</td>
<td>Seminar in Comparative Politics</td>
<td>3</td>
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<tr>
<td>POS 6933</td>
<td>Selected Topics in Political Science</td>
<td>3</td>
<td></td>
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<tr>
<td>POS 6942</td>
<td>Field Work in Political Science</td>
<td>1-3</td>
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<tr>
<td>POS 6971</td>
<td>Thesis: Master’s</td>
<td>2-19</td>
<td></td>
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<tr>
<td>POT 6007</td>
<td>Seminar in Political Theory</td>
<td>3</td>
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<tr>
<td>PUP 6007</td>
<td>Seminar in Public Policy</td>
<td>3</td>
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<tr>
<td>SOW 6124</td>
<td>Psychopathology</td>
<td>3</td>
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<tr>
<td>CLP 6166</td>
<td>Psychopathology</td>
<td>3</td>
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<tr>
<td>CLP 6438</td>
<td>Psychological Assessment: Theory and Research</td>
<td>1-4</td>
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<tr>
<td>CLP 6937</td>
<td>Topics in Clinical Psychology</td>
<td>1-3</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
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<tr>
<td>CLP 7188</td>
<td>Clinical Psychology Interventions</td>
<td>1-4</td>
<td>Study of the theoretical, empirical, and applied foundations of the major systems of therapeutic intervention.</td>
</tr>
<tr>
<td>CLP 7379</td>
<td>Graduate Seminar in Clinical-Community Psychology</td>
<td>1-3</td>
<td>Seminars on topics, such as psychopathology, community psychology, clinical issues, personality, and developmental psychology.</td>
</tr>
<tr>
<td>DEP 6058</td>
<td>Developmental Psychology</td>
<td>3</td>
<td>Basic survey of research and theory in human developmental processes.</td>
</tr>
<tr>
<td>EXP 6608</td>
<td>Cognitive Psychology</td>
<td>3</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>PAD 6417</td>
<td>Human Resources Management</td>
<td>3</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 6427</td>
<td>Public Sector Labor Relations</td>
<td>3</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>
</tr>
<tr>
<td>PAD 6703</td>
<td>Quantitative Analysis in Public Administration</td>
<td>3</td>
<td>Techniques, models, to analyze managerial/policy problems. Descriptive, inferential, associational statistics; evaluate/make recommendations/alternative policy/decisions.</td>
</tr>
<tr>
<td>PAD 6907</td>
<td>Independent Study</td>
<td>1-3</td>
<td>A flexible format for conceptual or theoretical studies in public administration.</td>
</tr>
<tr>
<td>PAD 6909</td>
<td>Problem Report</td>
<td>3</td>
<td>Analysis of a significant administrative or policy problem facing a public agency or manager.</td>
</tr>
<tr>
<td>MHS 6341</td>
<td>Career Program Design and Evaluation</td>
<td>3</td>
<td>Study of the various components of designing, implementing, managing and evaluating effective career programs.</td>
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<tr>
<td>MHS 6006</td>
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<tr>
<td>PAD 6915</td>
<td>Directed Research</td>
<td>1-3</td>
<td>A flexible format for structured field research in Public Administration.</td>
</tr>
<tr>
<td>PAD 6934</td>
<td>Selected Topics in Public Administration</td>
<td>1-3</td>
<td>A flexible format to offer specialized courses not available within the regular curriculum.</td>
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<tr>
<td>PAD 6946</td>
<td>Internship in Public Administration</td>
<td>2-6</td>
<td>Structured learning and work experience in a public agency or non-profit organization.</td>
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<tr>
<td>POS 5159</td>
<td>Urban Policy Analysis</td>
<td>3</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>
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<tr>
<td>URP 6056</td>
<td>City and Regional Planning</td>
<td>3</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>RCS 5080</td>
<td>Medical Aspects of Disability</td>
<td>3</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</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
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<tr>
<td>MHS 5020</td>
<td>Foundations of Mental Health Counseling</td>
<td>3</td>
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<tr>
<td>MHS 5480</td>
<td>Human Growth and Development</td>
<td>3</td>
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<tr>
<td>RCS 5780</td>
<td>Legal, Ethical, Professional Standards and Issues in Counseling</td>
<td>3</td>
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<tr>
<td>RCS 5905</td>
<td>Directed Studies</td>
<td>1-4</td>
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<tr>
<td>RCS 6220</td>
<td>Individual Evaluation and Assessment</td>
<td>3</td>
<td>RCS 5080, RCS 5780, RCS 6440.</td>
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<tr>
<td>RCS 6301</td>
<td>Career and Lifestyle Assessment</td>
<td>3</td>
<td>RCS 5080, RCS 5035, MHS 5020, RCS 6440.</td>
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<tr>
<td>RCS 6407</td>
<td>Counseling Theories and Practice</td>
<td>3</td>
<td>MHS 5020, RCS 5035, RCS 5080, RCS 6440.</td>
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<tr>
<td>RCS 6408</td>
<td>Diagnosis and Treatment of Psychopathology</td>
<td>3</td>
<td>MHS 5020, RCS 6440, RCS 5080, RCS 5035.</td>
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<tr>
<td>RCS 6803</td>
<td>Practicum in Counseling</td>
<td>3</td>
<td>RCS 5080, MHS 5020, RCS 6440, RCS 5035.</td>
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<tr>
<td>RCS 6459</td>
<td>Professional Skills for Addictions Counselors</td>
<td>3</td>
<td>RCS 5450.</td>
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<tr>
<td>RCS 6440</td>
<td>Social and Cultural Foundations of Counseling</td>
<td>3</td>
<td>RCS 5780.</td>
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<tr>
<td>RCS 6510</td>
<td>Group Theories and Practice</td>
<td>3</td>
<td>RCS 5035, RCS 5080, MHS 5020, RCS 6440.</td>
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<tr>
<td>RCS 6740</td>
<td>Research and Program</td>
<td>3</td>
<td>RCS 5780.</td>
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<td>Course Code</td>
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<tr>
<td>RCS 6825</td>
<td>Internship</td>
<td>3-6</td>
<td>RCS 6803, RCS 6407</td>
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<tr>
<td>RCS 6906</td>
<td>Independent Study</td>
<td>1-19</td>
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<tr>
<td>ZOO 5463C</td>
<td>Herpetology</td>
<td>4</td>
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<tr>
<td>BCH 5045</td>
<td>Biochemistry Core Course</td>
<td>3</td>
<td>Either CHM 2211, CHM 2211L, and CHM 3400 or CHM 4410</td>
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<tr>
<td>CHM 5225</td>
<td>Intermediate Chemistry I</td>
<td>3</td>
<td>CHM 2211, CHM 2211L, or equivalent</td>
</tr>
<tr>
<td>CHM 5226</td>
<td>Intermediate Chemistry II</td>
<td>3</td>
<td>CHM 5225</td>
</tr>
<tr>
<td>CHM 5452</td>
<td>Polymer Chemistry</td>
<td>3</td>
<td>Either CHM 2211, CHM 2211L, and CHM 3400 or CHM 4410</td>
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<tr>
<td>GIS 6306</td>
<td>Environmental Applications of Geographic Information Systems</td>
<td>3</td>
<td>GIS 6100, with a minimum grade of B</td>
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<tr>
<td>GRW 5905</td>
<td>Directed Reading</td>
<td>1-4</td>
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<tr>
<td>GRW 5934</td>
<td>Selected Topics</td>
<td>1-4</td>
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<tr>
<td>BSC 6436</td>
<td>Introduction to Biotechnology</td>
<td>3</td>
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<tr>
<td>LIS 5937</td>
<td>Selected Topics in Library Studies</td>
<td>1-4</td>
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<tr>
<td>LIS 5020</td>
<td>Foundations of Library and Information Science</td>
<td>3</td>
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<tr>
<td>MUN 6715</td>
<td>Jazz Ensemble</td>
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</table>

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ZOO 5555C Marine Animal Ecology

4

Investigation of energy flow, biogeochemical cycles, and community structure in marine environments. Lec.-lab.

---

CHM 5225 Intermediate Chemistry I

3

CHM 2211, CHM 2211L, or equivalent

This course will extend organic chemistry beyond the undergraduate level and will emphasize concepts of stereochemistry and reaction mechanisms.

---

CHM 5226 Intermediate Chemistry II

3

CHM 5225

An introduction to synthetic organic chemistry for graduate students and advanced undergraduates. Semester II.

---

CHM 5452 Polymer Chemistry

3

Either CHM 2211, CHM 2211L, and CHM 3400 or CHM 4410

Fundamentals of polymer synthesis, structure, properties, and characterization.

---

GIS 6306 Environmental Applications of Geographic Information Systems

3

GIS 6100, with a minimum grade of B

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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUN 6345</td>
<td>Chamber Singers</td>
<td>1</td>
<td>Open to all university graduate students with the necessary proficiency in</td>
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<td></td>
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<td>their performing media; study and performance of music for small combinations</td>
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<tr>
<td></td>
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<td>of voices, string, woodwind, brass or percussion instruments.</td>
</tr>
<tr>
<td>MVJ 6463</td>
<td>Applied Jazz Guitar</td>
<td>4</td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVJ 6464</td>
<td>Applied Jazz Bass</td>
<td>4</td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVJ 6469</td>
<td>Applied Jazz Percussion</td>
<td>4</td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MUC 6626</td>
<td>Jazz Composition</td>
<td>4</td>
<td>Private instruction in original composition.</td>
</tr>
<tr>
<td>MUC 5625</td>
<td>Jazz Composition</td>
<td>2</td>
<td>Private instruction in original composition.</td>
</tr>
<tr>
<td>NGR 7124</td>
<td>Advances in Nursing Science</td>
<td>3</td>
<td>Focus on history and philosophy of science: history and development of</td>
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<tr>
<td></td>
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<td></td>
<td>nursing's scientific knowledge base and theoretical progress. Emphasis</td>
</tr>
<tr>
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<td></td>
<td>methods of theory building and theory testing through research. Explore</td>
</tr>
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<td></td>
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<td></td>
<td>progress in middle range theories and are</td>
</tr>
<tr>
<td>NGR 7816</td>
<td>Research Designs and Methods in Nursing</td>
<td>3</td>
<td>Focus on designs used in nursing research to test or develop theoretical</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>models, or concepts, including clinical or outcome variables, or hypotheses.</td>
</tr>
<tr>
<td>NGR 7815</td>
<td>Qualitative Research Methods in Nursing</td>
<td>3</td>
<td>An overview of qualitative research methods in nursing, identification of</td>
</tr>
<tr>
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<td></td>
<td>problems appropriate for qualitative research methods, and application of</td>
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<td></td>
<td></td>
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<td>appropriate qualitative research methods to a researchable problem.</td>
</tr>
<tr>
<td>NGR 7841</td>
<td>Statistical Methods in Nursing Research I</td>
<td>3</td>
<td>Standard parametric and nonparametric statistical methods in nursing</td>
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<td></td>
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<td>research; role of assumptions and theory in selecting the appropriate</td>
</tr>
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<td></td>
<td>statistic for testing hypotheses/research questions. Emphasis on analysis</td>
</tr>
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<td></td>
<td>of variance and simple linear regression.</td>
</tr>
<tr>
<td>NGR 7842</td>
<td>Statistical Methods in Nursing Research II</td>
<td>3</td>
<td>Focus on advanced multivariate methods in nursing research: regression</td>
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<td></td>
<td></td>
<td></td>
<td>(linear, multiple, logistic) and multiple analysis of variance (MANOVA)</td>
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<td></td>
<td></td>
<td>and covariance software applications are integrated into the course.</td>
</tr>
<tr>
<td>NGR 7811</td>
<td>Concepts in Nursing Practice</td>
<td>3</td>
<td>Emphasis on analysis of phenomena (concepts) that impact on nursing practice.</td>
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<td></td>
<td>Phenomena are selected and analyzed from theoretical and research</td>
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<tr>
<td>EMA 5326</td>
<td>Corrosion Control</td>
<td>3</td>
<td>Provide understanding of corrosion fundamentals. Introduce design for</td>
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<td></td>
<td>corrosion detection, protection, and control. Acquire research project</td>
</tr>
<tr>
<td>PAD 6041</td>
<td>Ethics and Public Service</td>
<td>3</td>
<td>The purpose of this course is to provide students with an understanding of</td>
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<td></td>
<td></td>
<td></td>
<td>the ethical dimensions of public service, with particular</td>
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brass or percussion instruments.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisites/Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHC 6413</td>
<td>Family and Community Violence in Public Health</td>
<td>3</td>
<td>The objective of this course will be to identify and to focus on the most serious policy and research issues which are specific to the field of family violence. The course will cover theory, research, and applied programs in community settings.</td>
</tr>
<tr>
<td>TTE 5205</td>
<td>Traffic Systems Engineering</td>
<td>3</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>FLE 5291</td>
<td>Technology in the Foreign Language Classroom</td>
<td>3</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>TTE 6507</td>
<td>Travel Demand Modeling</td>
<td>3</td>
<td>Statistical modeling of travel demand forecasting; emphasis on trip generation and trip chaining.</td>
</tr>
<tr>
<td>TTE 6505</td>
<td>Discrete Choice Models of Travel Behavior</td>
<td>3</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 6930</td>
<td>Graduate Transportation Seminar</td>
<td>1</td>
<td>Seminars, presentations, and discussions of contemporary transportation issues.</td>
</tr>
<tr>
<td>TTE 6655</td>
<td>Transportation and Land Use</td>
<td>3</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>TTE 6651</td>
<td>Public Transportation</td>
<td>3</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 6835</td>
<td>Pavement Design</td>
<td>3</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>BSC 6939</td>
<td>Selected Topics in Cancer Biology</td>
<td>1-4</td>
<td>Provides in-depth study of a single aspect of cancer biology. Topics offered vary by semester.</td>
</tr>
<tr>
<td>GEO 6058</td>
<td>Geographic Literature and History</td>
<td>3</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>GLY 5786</td>
<td>Geological Field Excursion</td>
<td>2</td>
<td>Lectures and 2-3 week field excursion to study regional geology, structure and lithogenesis of geologically complex terrain. Mapping and</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Corequisites</td>
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<tr>
<td>BMS 6640</td>
<td>Core Principles of Med Science/Musculoskeletal Sys</td>
<td>var.</td>
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</tr>
<tr>
<td>FLE 7367</td>
<td>Sociocultural Theory in Second Language Acquisition</td>
<td>3</td>
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</tr>
<tr>
<td>GLY 5865</td>
<td>Statistical Models in Geology</td>
<td>3</td>
<td>STA 2023 or equivalent</td>
</tr>
<tr>
<td>GLY 5932</td>
<td>Selected Topics in Geology</td>
<td>1-4</td>
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</tr>
<tr>
<td>GMS 6103</td>
<td>Foundations in Medical Microbiology and Immunology</td>
<td>4</td>
<td>GMS6001 or equivalent.</td>
</tr>
<tr>
<td>HIM 6320</td>
<td>Managerial Communication</td>
<td>3</td>
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<tr>
<td>HUM 6586</td>
<td>Film Theory</td>
<td>3</td>
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<tr>
<td>LAE 6749</td>
<td>Composition and the Arts in Literacy Education</td>
<td>3</td>
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<tr>
<td>LAE 7868</td>
<td>Symbolic Processes of Multimedia Literacies</td>
<td>3</td>
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<tr>
<td>ART 5448C</td>
<td>Intaglio</td>
<td>4</td>
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<tr>
<td>BMS 6641</td>
<td>Communications: Neuroscience &amp; Endocrinology</td>
<td>var.</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
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<tr>
<td>BMS 6825</td>
<td>Doctoring I</td>
<td>var</td>
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<tr>
<td>BME 6634</td>
<td>Biotransport Phenomena</td>
<td>3</td>
<td></td>
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<tr>
<td>BME 6235</td>
<td>Tissue Biomechanics</td>
<td>3</td>
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<tr>
<td>FRE 5425</td>
<td>Advanced Written Expression</td>
<td>3</td>
<td>FRE 4421, or equivalent.</td>
</tr>
<tr>
<td>FRE 5566</td>
<td>Contemporary France</td>
<td>3</td>
<td>FRE 3500 or equivalent</td>
</tr>
<tr>
<td>FRW 5286</td>
<td>The 20th Century Novel</td>
<td>3</td>
<td>FRW 4100.</td>
</tr>
<tr>
<td>FRW 5314</td>
<td>Classical Drama</td>
<td>3</td>
<td>FRW 4101.</td>
</tr>
<tr>
<td>FRW 5415</td>
<td>Literature of the Middle Ages</td>
<td>3</td>
<td>FRW 4100 or FRW 4101.</td>
</tr>
<tr>
<td>FRW 5425</td>
<td>Literature of the Renaissance</td>
<td>3</td>
<td>FRW 4100 or FRW 4101.</td>
</tr>
<tr>
<td>GEW 5934</td>
<td>Selected Topics</td>
<td>1-3</td>
<td></td>
</tr>
<tr>
<td>SPN 5567</td>
<td>Modern Spanish Civilization</td>
<td>3</td>
<td>SPN 3500 or equivalent</td>
</tr>
<tr>
<td>LIS 5315</td>
<td>Instructional Graphics</td>
<td>3</td>
<td></td>
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<tr>
<td>LIS 5333</td>
<td>TV in Schools and Libraries</td>
<td>3</td>
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</tr>
<tr>
<td>MAA 5307</td>
<td>Real Analysis I</td>
<td>3</td>
<td>MAA 5306.</td>
</tr>
<tr>
<td>Course Code</td>
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<tr>
<td>MAA 5405</td>
<td>Applied Complex Analysis</td>
<td>3</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>MTG 6317</td>
<td>Topology II</td>
<td>3</td>
<td>MTG 5316.</td>
</tr>
<tr>
<td>BUL 5332</td>
<td>Law and the Accountant</td>
<td>3</td>
<td>BUL 3320</td>
</tr>
<tr>
<td>GMS 6461</td>
<td>Systems Physiology and Pharmacology</td>
<td>5</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>WST 6562</td>
<td>Body Politics</td>
<td>3</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>TTE 6270</td>
<td>Intelligent Transportation Systems</td>
<td>3</td>
<td>TTE 5205.</td>
</tr>
<tr>
<td>TTE 6315</td>
<td>Transportation Safety</td>
<td>3</td>
<td>TTE 5205.</td>
</tr>
<tr>
<td>PHC 6148</td>
<td>Strategic Planning and Health Care Marketing</td>
<td>3</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>MHS 7740</td>
<td>Survey Course in Planning, Evaluation and Accountability</td>
<td>3</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>SPS 6947</td>
<td>Internship</td>
<td>1-9</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>SPC 6728</td>
<td>Communicating Grief, Loss, and Illness</td>
<td>3</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>Course Code</td>
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<tr>
<td>SPC 6432</td>
<td>Family Communication</td>
<td>3</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>SYP 6357</td>
<td>Comparative Social Movements</td>
<td>3</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 6425</td>
<td>Sociology of Consumer Culture</td>
<td>3</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>THE 6175</td>
<td>New British Theatre and Drama</td>
<td>3</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>NGR 6691</td>
<td>Counseling for the Terminally III</td>
<td>3</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>NGR 6224L</td>
<td>Practicum III in Advanced Oncology Nursing Practice</td>
<td>1-9</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>GEY 6617</td>
<td>Gerontological Counseling Theories and Practice</td>
<td>3</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.</td>
</tr>
<tr>
<td>FLE 5366</td>
<td>ESOL Education in Content Areas</td>
<td>3</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>GEY 6618</td>
<td>Gerontological Group and Family Counseling</td>
<td>3</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, an</td>
</tr>
<tr>
<td>GEY 6626</td>
<td>Health, Ethnicity, and Aging</td>
<td>3</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>LAE 6906</td>
<td>Independent Study in English Education</td>
<td>1-6</td>
<td>This course permits a student to explore a topic of interest in depth under the direction</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
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<tr>
<td>THE 5909</td>
<td>Directed Studies</td>
<td>1-6</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>LAE 6375</td>
<td>Contemporary Composition Studies</td>
<td>3</td>
<td>Examines the important research and theory in contemporary position pedagogy.</td>
</tr>
<tr>
<td>PHY 6940</td>
<td>Supervised Teaching</td>
<td>3</td>
<td>Laboratory teaching under the direction of a Physics Department faculty member.</td>
</tr>
<tr>
<td>ENC 6421</td>
<td>Studies in Rhetoric and Technology</td>
<td>3</td>
<td>Examines the intersection of Rhetoric and technology, with emphasis on contemporary critical issues in composition studies.</td>
</tr>
<tr>
<td>CRW 6352</td>
<td>The Craft of Poetry</td>
<td>3</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>GEY 6901</td>
<td>Directed Reading</td>
<td>1-4</td>
<td>A reading program of selected topics under the supervision of a faculty member.</td>
</tr>
<tr>
<td>GEY 6910</td>
<td>Directed Research</td>
<td>1-4</td>
<td></td>
</tr>
<tr>
<td>NGR 6400</td>
<td>Chemistry, Biochemistry and Physics for Nurse Anesthesia</td>
<td>3</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>COT 6405</td>
<td>Introduction to the Theory of Algorithms</td>
<td>3</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 relationshi</td>
</tr>
<tr>
<td>NGR 6232C</td>
<td>Selected Concepts in the Acutely Ill Adult</td>
<td>7</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>ANG 6497</td>
<td>Qualitative Research Methods in Anthropology</td>
<td>3</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>NGR 6060</td>
<td>Medical Laboratory Interpretation for the Advanced Practice Nurse</td>
<td>1</td>
<td>Interpretation of common medical laboratory results for the Advanced Practice Nurse with focus on the differential diagnosis.</td>
</tr>
<tr>
<td>GEY 5620</td>
<td>Sociological Aspects Of Aging</td>
<td>3</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 5630</td>
<td>Economics and Aging</td>
<td>3</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>HMG 6586</td>
<td>Research Methods &amp; Statistics</td>
<td>3</td>
<td>The objective of this course is to learn</td>
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<tr>
<td>Code</td>
<td>Title</td>
<td>Credits</td>
<td>Description</td>
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<tr>
<td>HMG</td>
<td>Marketing Leadership for Hospitality &amp; Tourism</td>
<td>3</td>
<td>Advanced marketing strategies and tactics known to be effective in the hospitality and tourism industry for developing sustainable competitive advantage such as strategic pricing, revenue management, customer loyalty programs, proven communication mixes.</td>
</tr>
<tr>
<td>HMG</td>
<td>Masters Professional Project</td>
<td>3-6</td>
<td>All MS in Hospitality Courses. This course is an independent study under the direction of a faculty supervisor. The project is designed to demonstrate analytical skills that students have acquired during their graduate education.</td>
</tr>
<tr>
<td>NGR</td>
<td>Breast Workshop for the Advanced Practice Nurse</td>
<td>1</td>
<td>Breast assessment techniques and interpretation for Advanced Practice Nurse.</td>
</tr>
<tr>
<td>NGR</td>
<td>Casting and Splinting for the Advanced Practice Nurse</td>
<td>1</td>
<td>Basics of casting and splinting for the Advanced Practice Nurse.</td>
</tr>
<tr>
<td>NGR</td>
<td>Minor Surgical Procedures for the Advanced Practice Nurse</td>
<td>1</td>
<td>Basics of minor surgical procedures for the Advanced Practice Nurse.</td>
</tr>
<tr>
<td>NGR</td>
<td>Neurological Techniques for the Advanced Practice Nurse</td>
<td>1</td>
<td>Basic neurological techniques for the Advanced Practice Nurse.</td>
</tr>
<tr>
<td>PHI</td>
<td>Selected Topics</td>
<td>1-3</td>
<td>Selected topics according to the needs of the student.</td>
</tr>
<tr>
<td>GEY</td>
<td>Perspectives on Death and Dying</td>
<td>3</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>
</tr>
<tr>
<td>GEY</td>
<td>Family Caregiving in Aging and Chronic Illness</td>
<td>3</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>Principles of Health Care Risk Management and Patient Safety</td>
<td>3</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>Gerontological Case Management</td>
<td>3</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>PHY</td>
<td>Selected Topics in Physics</td>
<td>1-4</td>
<td>Each topic is a course in directed study under the supervision of a faculty member.</td>
</tr>
<tr>
<td>GEY</td>
<td>Social Policy and Planning for Gerontologists</td>
<td>3</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>
</tr>
<tr>
<td>GEY</td>
<td>Geriatric Interdisciplinary Team Training</td>
<td>3</td>
<td>This course addresses the importance of interdisciplinary teams in today’s health care.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Units</td>
<td>Prerequisites</td>
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<tr>
<td>PAD 5605</td>
<td>Administrative Law and Regulation</td>
<td>3</td>
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<tr>
<td>PAD 5700</td>
<td>Research Methods in Public Administration</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>WST 5940</td>
<td>Internship in Women's Studies</td>
<td>3-6</td>
<td></td>
</tr>
<tr>
<td>ACG 5675</td>
<td>Internal and Operational Auditing</td>
<td>3</td>
<td>ACG 3113 and ACG 3401</td>
</tr>
<tr>
<td>ACG 6025</td>
<td>Financial Accounting for Managers</td>
<td>2</td>
<td></td>
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<tr>
<td>ACG 6075</td>
<td>Management Accounting and Control</td>
<td>2</td>
<td>ACG 6025</td>
</tr>
<tr>
<td>ACG 6346</td>
<td>Contemporary Issues in Managerial Accounting</td>
<td>3</td>
<td>ACG 3341 or equivalent</td>
</tr>
<tr>
<td>ESE 6906</td>
<td>Independent Study: Secondary Education</td>
<td>1-6</td>
<td></td>
</tr>
<tr>
<td>EBD 6216</td>
<td>Educational Strategies for Students With Behavior Disorders</td>
<td>3</td>
<td></td>
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<tr>
<td>EBD 6215</td>
<td>Advanced Theories and Practices in Emotional Handicaps</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>EBD 6246</td>
<td>Educating Students with Autism</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>EBD 6943</td>
<td>Supervised Practicum in Special Education</td>
<td>1-12</td>
<td></td>
</tr>
<tr>
<td>Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
</tr>
<tr>
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</tr>
<tr>
<td>EEX</td>
<td>Behavior Disorders</td>
<td></td>
<td>With children who have behavior disorders. For students seeking certification only.</td>
</tr>
<tr>
<td>EEX</td>
<td>Seminar in Preschool Handicapped</td>
<td>2</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>Working With Families: A Pluralistic Perspective</td>
<td>3</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, diver</td>
</tr>
<tr>
<td>EEX</td>
<td>Trends and Issues in Special Education</td>
<td>3</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>Advanced Psychoeducational Assessment of Exceptional Students</td>
<td>3</td>
<td>Theory and methodology associated with norm-referenced, criterion-referenced, curriculum-based, ecological, and psychoneurological assessment procedures for exceptional students.</td>
</tr>
<tr>
<td>EEX</td>
<td>Transitional Programming for the Adolescent and Young Adult Exceptional Student</td>
<td>3</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>Instructional Approaches for Exceptional Populations</td>
<td>3</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</td>
</tr>
<tr>
<td>EEX</td>
<td>Administration of Exceptional Student Programs</td>
<td>3</td>
<td>Procedures that local, state, and national administrators may use to implement services for exceptional students.</td>
</tr>
<tr>
<td>EEX</td>
<td>Management and Motivation of Exceptional and At-Risk Students</td>
<td>3</td>
<td>Introductory course in special education. 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>PHC</td>
<td>Global Health Program Development and Administration</td>
<td>3</td>
<td>PHC 6761. 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.</td>
</tr>
<tr>
<td>ECO</td>
<td>Independent Study</td>
<td>1-19</td>
<td>Independent study. Student must have a contract with an instructor.</td>
</tr>
<tr>
<td>ECO</td>
<td>Directed Research</td>
<td>1-19</td>
<td>The course content will depend on student demand and instructor’s interest.</td>
</tr>
<tr>
<td>ECO</td>
<td>Selected Topics in Economics</td>
<td>1-4</td>
<td>Topics in advanced microeconomic theory, including general equilibrium, welfare.</td>
</tr>
<tr>
<td>ECO</td>
<td>Microeconomics II</td>
<td>3</td>
<td>ECO 6115. Topics in advanced microeconomic theory, including general equilibrium, welfare.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisite(s)</td>
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</tr>
<tr>
<td>ECP 6405</td>
<td>Industrial Organization I</td>
<td>3</td>
<td>ECO 6115</td>
</tr>
<tr>
<td>ECP 6456</td>
<td>Law and Economics</td>
<td>3</td>
<td>ECO 3101 or ECO 6114</td>
</tr>
<tr>
<td>GMS 6001</td>
<td>Foundation in Biomedical Sciences</td>
<td>4-8</td>
<td></td>
</tr>
<tr>
<td>ECP 6614</td>
<td>Urban Economics</td>
<td>3</td>
<td>ECO 3101 or ECO 6114</td>
</tr>
<tr>
<td>ECP 6624</td>
<td>Regional Economics</td>
<td>3</td>
<td>ECO 3101 or ECO 6114</td>
</tr>
<tr>
<td>FIN 6246</td>
<td>Advanced Money and Capital Markets</td>
<td>3</td>
<td>ECO 6204</td>
</tr>
<tr>
<td>FIN 6326</td>
<td>Bank Management</td>
<td>3</td>
<td>FIN 6406</td>
</tr>
<tr>
<td>FIN 6418</td>
<td>Working Capital Management</td>
<td>3</td>
<td>FIN 6406</td>
</tr>
<tr>
<td>FIN 6425</td>
<td>Financial Policy</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>FIN 6605</td>
<td>International Financial Management Financial</td>
<td>3</td>
<td>FIN 6406 or equiv</td>
</tr>
<tr>
<td>FIN 6804</td>
<td>Theory of Finance</td>
<td>3</td>
<td>FIN 6406</td>
</tr>
<tr>
<td>FIN 6515</td>
<td>Investments</td>
<td>3</td>
<td>FIN 6406</td>
</tr>
<tr>
<td>ADE 6360</td>
<td>Methods of Teaching Adult Education</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

893
<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>ADE</td>
<td>6370 Human Resource Development</td>
<td>3</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 The Adult Learner</td>
<td>3</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 you</td>
</tr>
<tr>
<td>ADE</td>
<td>6946 Practicum in Adult Education</td>
<td>2-6</td>
<td>A problem-centered field study in the local community, school, government, office, social agency, business, or industry setting.</td>
</tr>
<tr>
<td>ADE</td>
<td>6971 Thesis: Masters/Education Specialist</td>
<td>2-19</td>
<td>Thesis/Specialist project hours.</td>
</tr>
<tr>
<td>ADE</td>
<td>7388 Adult Development and Learning</td>
<td>3</td>
<td>This is an advanced, in-depth study of the distinctive characteristics of adult life and learning.</td>
</tr>
<tr>
<td>ADE</td>
<td>7910 Directed Research In Adult Education</td>
<td>1-4</td>
<td>Directed research on topics related to adult education.</td>
</tr>
<tr>
<td>ADE</td>
<td>7937 Seminar in Adult Education</td>
<td>1-4</td>
<td>Seminar in advanced topics in Adult Education.</td>
</tr>
<tr>
<td>ADE</td>
<td>7947 Advanced Internship: Adult Education</td>
<td>2-4</td>
<td>Practical application in a clinical setting of knowledge acquired in the classroom. Hours may vary. May vary within an institution.</td>
</tr>
<tr>
<td>ADE</td>
<td>7980 Dissertation</td>
<td>2-30</td>
<td>Dissertation hours.</td>
</tr>
<tr>
<td>EDG</td>
<td>6906 Independent Study</td>
<td>1-19</td>
<td>Independent study in which students must have a contract with an instructor.</td>
</tr>
<tr>
<td>ECW</td>
<td>6695 School Community Relations</td>
<td>3</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>
<tr>
<td>ECW</td>
<td>6205 Administration Of Local Programs: Vocational</td>
<td>3</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 Supervision Of Local Programs: Vocational Education</td>
<td>3</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>ECT</td>
<td>6661 Trends and Issues in Career and Technical Education</td>
<td>3</td>
<td>Historical influences and current trends and issues in career and technical education. Emphasis on forces significantly shaping the course of CTE and its relationship with workforce development and academic education. Open to majors and non-majors.</td>
</tr>
<tr>
<td>ECT</td>
<td>6926 Staff Development</td>
<td>1-5</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 Seminar</td>
<td>3</td>
<td>Focuses on special topics, interaction with visiting scholars, recent research and major initiatives within the profession.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>3-6</td>
<td>Description</td>
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<tr>
<td>ECT 6948</td>
<td>Practicum: Industrial-Technical Education</td>
<td>3-6</td>
<td>A problem-centered field study in the local community, school, government, office, social agency, business, or industry.</td>
</tr>
<tr>
<td>EVT 6971</td>
<td>Thesis: Masters/Educational Specialist</td>
<td>2-19</td>
<td></td>
</tr>
<tr>
<td>ECW 7066</td>
<td>Foundations And Philosophy Of Vocational, Technical And Adult Education</td>
<td>3</td>
<td>Historical development and contemporary philosophies, cultural bases and practices of Vocational, Technical, and Adult Education.</td>
</tr>
<tr>
<td>ECW 7168</td>
<td>Instructional Development For Vocational, Technical, And Adult Education</td>
<td>3</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>
<tr>
<td>ECW 7105</td>
<td>Vocational And Adult Education Program Planning And Implementation</td>
<td>3</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>ECT 7791</td>
<td>Research Seminar In Vocational, Technical, And Adult Education</td>
<td>3</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>
<tr>
<td>ECT 7980</td>
<td>Dissertation</td>
<td>2-30</td>
<td>Independent study in which students must have a contract.</td>
</tr>
<tr>
<td>EDE 6906</td>
<td>Independent Study: Elementary/Early Childhood Education</td>
<td>1-6</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 p</td>
</tr>
<tr>
<td>EDE 6971</td>
<td>Thesis: Masters/Educational Specialist</td>
<td>2-19</td>
<td></td>
</tr>
<tr>
<td>EDE 7980</td>
<td>Dissertation</td>
<td>2-30</td>
<td></td>
</tr>
<tr>
<td>EIN 6183</td>
<td>Engineering Management Policy And Strategy</td>
<td>3</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 6154</td>
<td>Technical Entrepreneurship</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>EIN 6336</td>
<td>Production Control Systems</td>
<td>3</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 6386</td>
<td>Management of Technological Change</td>
<td>3</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 6934</td>
<td>Special Industrial Topics I</td>
<td>1-3</td>
<td></td>
</tr>
<tr>
<td>NGR 6221</td>
<td>Oncology Nursing Concepts</td>
<td>3</td>
<td>Provides advanced oncology nursing content with a focus on nursing management of physical problems resulting from cancer and its treatment. (CI)</td>
</tr>
<tr>
<td>NGR 6121</td>
<td>Theoretical Foundations</td>
<td>3</td>
<td>Examination of knowledge development in</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
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</tr>
<tr>
<td>NGR 6140</td>
<td>Pathophysiology for Advanced Practice</td>
<td>4</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 6220</td>
<td>Pathobiology Of Neoplasia</td>
<td>3</td>
<td>Emphasizes basic concepts of cellular differentiation and the abnormal cytological changes occurring in the pathogenesis of Neoplasia. Also emphasizes the role of the advanced practice nurse in relation to the role of the immune system and diet in oncology.</td>
</tr>
<tr>
<td>NGR 6143</td>
<td>Pathophysiologic Concepts in Acute Care Nursing</td>
<td>3</td>
<td>NGR 6140; NGR 6121; This course will explore pathophysiologic mechanisms of the major body systems in critically ill patients across the lifespan.</td>
</tr>
<tr>
<td>NGR 6737</td>
<td>Ethical, Legal, and Policy Issues in Advanced Nursing Practice</td>
<td>3</td>
<td>Emphasizes 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 6172</td>
<td>Pharmacotherapeutics for Advanced Practice Nursing</td>
<td>4</td>
<td>NGR 6140</td>
</tr>
<tr>
<td>ESI 6448</td>
<td>Integer Programming</td>
<td>3</td>
<td>ESI 6491.</td>
</tr>
<tr>
<td>ARC 5794</td>
<td>Florida Architectural History</td>
<td>3</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>
</tr>
<tr>
<td>BMS 5015</td>
<td>Clinical Diagnosis and Reasoning</td>
<td>var.</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/physical diagnosis/evidence based medicine.</td>
</tr>
<tr>
<td>FIN 6906</td>
<td>Independent Study</td>
<td>var.</td>
<td>Students must have a contract with an instructor.</td>
</tr>
<tr>
<td>FIN 6915</td>
<td>Directed Research</td>
<td>var.</td>
<td>Depending upon the scope and magnitude of the work required. Includes special lecture series.</td>
</tr>
<tr>
<td>FIN 6934</td>
<td>Selected Topics in Finance</td>
<td>1-4</td>
<td>FIN 6406, FIN 6804, ECO</td>
</tr>
<tr>
<td>FIN 7808</td>
<td>Advanced Micro Finance</td>
<td>3</td>
<td>FIN 6406, FIN 6804, ECO</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Units</td>
<td>Prerequisites</td>
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<tr>
<td>FIN 7817</td>
<td>Financial Markets</td>
<td>3</td>
<td>FIN 6246, FIN 6515</td>
</tr>
<tr>
<td>FIN 7930</td>
<td>Selected Topics in Finance</td>
<td>3</td>
<td>FIN 7808, QMB 7566</td>
</tr>
<tr>
<td>FIN 7935</td>
<td>Finance Research Seminar</td>
<td>3</td>
<td>FIN 7930</td>
</tr>
<tr>
<td>FIN 7980</td>
<td>Dissertation</td>
<td>2-19</td>
<td></td>
</tr>
<tr>
<td>ISM 6021</td>
<td>Management Information Systems</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>ISM 6123</td>
<td>Systems Analysis and Design</td>
<td>3</td>
<td>ISM 6021 or equiv.</td>
</tr>
<tr>
<td>ISM 6217</td>
<td>Database Administration</td>
<td>3</td>
<td>Advanced principles of Database Administration. Database Organization Models. Disaster Planning for Database Files.</td>
</tr>
<tr>
<td>ISM 6225</td>
<td>Distributed Information Systems</td>
<td>3</td>
<td>This course will focus on telecommunications, networks, and distributed applications. All forms of communication will be covered. Students will gain exposure to network management systems, local area networks (LANs), and global networks, such as Internet.</td>
</tr>
<tr>
<td>ISM 6305</td>
<td>Managing the Information System Function</td>
<td>3</td>
<td>ISM 6021 or equiv.</td>
</tr>
<tr>
<td>ISM 6905</td>
<td>Independent Study</td>
<td>1-6</td>
<td>Independent Study as directed by designated faculty.</td>
</tr>
<tr>
<td>ISM 6930</td>
<td>Selected Topics in MIS</td>
<td>1-6</td>
<td>Selected topics in MIS.</td>
</tr>
<tr>
<td>ISM 7905</td>
<td>Independent Study</td>
<td>1-6</td>
<td>Independent study in which student must have a contract with an instructor.</td>
</tr>
<tr>
<td>ISM 7910</td>
<td>MIS Research Seminar I</td>
<td>3</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 7911</td>
<td>MIS Research Seminar II</td>
<td>3</td>
<td>ISM 7910 ISM 7910.</td>
</tr>
<tr>
<td>ISM 7930</td>
<td>Selected Topics in MIS</td>
<td>1-3</td>
<td></td>
</tr>
<tr>
<td>Code</td>
<td>Title</td>
<td>Credits</td>
<td>Prerequisites/Requirements</td>
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<tr>
<td>ISM</td>
<td>7931 Directed Research</td>
<td>1-12</td>
<td></td>
</tr>
<tr>
<td>ISM</td>
<td>7980 Dissertation</td>
<td>2-21</td>
<td></td>
</tr>
<tr>
<td>QMB</td>
<td>6305 Managerial Decision Analysis</td>
<td>2</td>
<td></td>
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<tr>
<td>QMB</td>
<td>6375 Applied Linear Statistical Models</td>
<td>3</td>
<td>QMB 6305 or equiv.</td>
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<tr>
<td>QMB</td>
<td>6603 Operations Management and Quality</td>
<td>2</td>
<td>college algebra</td>
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<tr>
<td></td>
<td>Enhancement</td>
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<tr>
<td>QMB</td>
<td>7565 Introduction to Research Methods</td>
<td>3</td>
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<tr>
<td>QMB</td>
<td>7566 Applied Multivariate Statistical</td>
<td>3</td>
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<tr>
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<td>Methods</td>
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<tr>
<td>MAN</td>
<td>6055 Organizational Behavior and Leadership</td>
<td>2-3</td>
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<tr>
<td>MAN</td>
<td>6204 Organization Design and Structure</td>
<td>3</td>
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<tr>
<td>BCH</td>
<td>6888 Bioinformatics</td>
<td>3</td>
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<tr>
<td>MAN</td>
<td>6289 Organizational Change and Development</td>
<td>3</td>
<td>MAN 6055</td>
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<tr>
<td>MAN</td>
<td>6305 Human Resource Management</td>
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<tr>
<td>MAN</td>
<td>6601 International Management</td>
<td>3</td>
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</tr>
<tr>
<td>MAN</td>
<td>6905 Independent Study</td>
<td>1-19</td>
<td></td>
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<tr>
<td>Course Code</td>
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<tr>
<td>MAN 6911</td>
<td>Directed Research</td>
<td>1-19</td>
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<tr>
<td>MAN 6930</td>
<td>Selected Topics</td>
<td>1-4</td>
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<tr>
<td>EDE 7910</td>
<td>Directed Research in Elementary Education</td>
<td>1-19</td>
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<tr>
<td>MAN 7980</td>
<td>Dissertation</td>
<td>2-21</td>
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<tr>
<td>GEB 6445</td>
<td>Social, Ethical, Legal Systems</td>
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<td>GEB 6895</td>
<td>Integrated Business Applications</td>
<td>3-4</td>
<td>ACG 6026, ECO 6005, MAN 6147, MAR 6815, ISM 6021, FIN 6406, QMB 6305, FIN 6466 and MAN 6726</td>
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<tr>
<td>MAR 6158</td>
<td>International Marketing Management</td>
<td>3</td>
<td>MAR 6815</td>
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<tr>
<td>MAR 7931</td>
<td>Seminar on Selected Marketing Topics</td>
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<td>MAR 7980</td>
<td>Dissertation</td>
<td>2-21</td>
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<tr>
<td>ACG 5505</td>
<td>Governmental/Not-For-Profit Accounting</td>
<td>3</td>
<td>ACG 3113</td>
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<tr>
<td>CES 6118</td>
<td>Applied Finite Elements</td>
<td>3</td>
<td>CES 3102</td>
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<tr>
<td>TAX 5015</td>
<td>Federal Taxation of Business Entities</td>
<td>3</td>
<td>TAX 4001 with a grade of C or better, not C-.</td>
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<tr>
<td>EEL 6936</td>
<td>Special Topics</td>
<td>1-3</td>
<td>EEL 6427</td>
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<tr>
<td>PHC 6351</td>
<td>Occupational Medicine for Health Professionals</td>
<td>3</td>
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<tr>
<td>EEX 7868</td>
<td>Fieldwork With Exceptional Students</td>
<td>1-5</td>
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<tr>
<td>EEX 7911</td>
<td>Specialized Study In: Mental Retardation, Behavior Disorders, Specific Learning Disabilities, and Gifted Education</td>
<td>1-8</td>
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<tr>
<td>EEX 7980</td>
<td>Dissertation</td>
<td>2-30</td>
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<tr>
<td>EGI 5051</td>
<td>Nature and Needs of the Gifted</td>
<td>3</td>
<td>EGI 5051</td>
</tr>
<tr>
<td>EGI 6232</td>
<td>Advanced Educational Strategies for the Gifted</td>
<td>3</td>
<td>EGI 5051</td>
</tr>
<tr>
<td>EGI 6415</td>
<td>Consultation, Counseling, and Guidance Skills for Gifted Students</td>
<td>3</td>
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<tr>
<td>EGI 6936</td>
<td>Seminar in Education of the Gifted: Special Population</td>
<td>3</td>
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<tr>
<td>EGI 6943</td>
<td>Supervised Practicum in Gifted Education</td>
<td>1-12</td>
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<tr>
<td>ELD 6015</td>
<td>Advanced Theories and Practices in Specific Learning Disabilities</td>
<td>3</td>
<td>Introductory course in exceptional child education</td>
</tr>
<tr>
<td>ELD 6147</td>
<td>Educational Strategies for Student With Specific Learning Disabilities</td>
<td>3</td>
<td>ELD 6015, EEX 6222.</td>
</tr>
<tr>
<td>EMR 6052</td>
<td>Advanced Theories and Practices in Mental Retardation</td>
<td>3</td>
<td>introdutory course in exceptional student education.</td>
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<tr>
<td>EMR 6255</td>
<td>Educational Strategies for the Mentally Retarded</td>
<td>3</td>
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<tr>
<td>EPD 6944</td>
<td>Supervised Practicum in Motor Disabilities</td>
<td>3-12</td>
<td>EEX 4012</td>
</tr>
<tr>
<td>PHC 6314</td>
<td>Infection Control Program Design</td>
<td>3</td>
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<td>Credits</td>
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<tr>
<td>SDS 6411</td>
<td>Introduction to Student Personnel Work in Higher Education</td>
<td>2</td>
<td>Study of student personnel services in institutions of higher education. Identification of the needs of students and the ways to respond to these needs. Survey of service units on a campus in terms of structure, organization, funding, etc.</td>
</tr>
<tr>
<td>MAE 6316</td>
<td>Geometry and Measurement for Elementary Teachers</td>
<td>3</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 6315</td>
<td>Algebraic Thinking for Elementary Teachers</td>
<td>3</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>SCE 5337</td>
<td>Methods of Secondary Science Education</td>
<td>3</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>AFA 6355</td>
<td>African American Community Research: Ethnography</td>
<td>3</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 6207</td>
<td>African American Historiography</td>
<td>3</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>
</tr>
<tr>
<td>ANG 6155</td>
<td>Southeastern U.S. Archaeology</td>
<td>3</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 6081</td>
<td>Museum Methods</td>
<td>4</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>SOW 6931</td>
<td>Selected Topics in Social Work</td>
<td>1-4</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>RCS 5035</td>
<td>Rehabilitation Counseling: Concepts and Applications</td>
<td>3</td>
<td>This course focuses on the repair of structures using fiber reinforced polymers.</td>
</tr>
<tr>
<td>CES 6841</td>
<td>Infrastructure I: Repair/Rehab of Structures</td>
<td>3</td>
<td>This course focuses on the repair of structures using fiber reinforced polymers.</td>
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</tbody>
</table>
| ADE 6080   | Adult Education in the United States                                        | 4       | A study of the adult education movement in the United States from its beginnings to the
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Description</th>
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<tbody>
<tr>
<td>ADE 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</td>
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<td></td>
<td></td>
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<td>program, and the principles and procedures involved in designing, organizing,</td>
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<td></td>
<td></td>
<td></td>
<td>operating, and evaluating comprehensive adult education programs.</td>
</tr>
<tr>
<td>ADE 6161</td>
<td>Curriculum Construction in Adult Education</td>
<td>4</td>
<td></td>
<td>Curriculum scope, the process of planning and organizing instructional</td>
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<td>programs with emphasis on task analysis and process evaluation. Concentrates</td>
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<td></td>
<td></td>
<td></td>
<td>on basic principles affecting the planning of Adult Education activities,</td>
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<td>including an overview of the human</td>
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<tr>
<td>NGR 6404</td>
<td>Anatomy Physiology for Nurse Anesthesia I</td>
<td>3</td>
<td>BSC 2085 and BSC 2086 or equivalent undergraduate</td>
<td>This course focuses on human anatomy and physiology and its relevance to the</td>
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<td></td>
<td>Anatomy and Physiology course with a grade of B</td>
<td>practice of nurse anesthesia. Restricted to majors.</td>
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<td>or higher.</td>
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<tr>
<td>NGR 6422</td>
<td>Principles of Nurse Anesthesia through the Lifespan</td>
<td>3</td>
<td>NGR 6404, NGR 6400, NGR 6460, NGR 6800, PHC 6050</td>
<td>Emphasizes the considerations of nurse anesthesia practice, principles, and</td>
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<td></td>
<td></td>
<td>techniques for the obstetrical, pediatric and geriatric patient.</td>
</tr>
<tr>
<td>NGR 6432</td>
<td>Nurse Anesthesia Clinical Residency II</td>
<td>4</td>
<td>NGR 6431</td>
<td>This course focuses on clinical application of didactic material from the</td>
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<td></td>
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<td>nurse anesthesia curriculum through novice level practice in the role of a</td>
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<td>nurse anesthetist.</td>
</tr>
<tr>
<td>ADE 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</td>
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<td>problems of curriculum and instruction in program development and on</td>
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<td>culturally different adults.</td>
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<tr>
<td>MUL 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>
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<tr>
<td>EDG 6935</td>
<td>Seminar in Curriculum Research</td>
<td>1-3</td>
<td></td>
<td>Critical evaluation of current research and curriculum literature, design</td>
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<td>and analysis of individual research topics leading to satisfaction of</td>
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<td>research requirements.</td>
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<tr>
<td>EEC 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</td>
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<td></td>
<td></td>
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<td>instruction in early childhood.</td>
</tr>
<tr>
<td>EEC 7980</td>
<td>Dissertation</td>
<td>2-30</td>
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<tr>
<td>LAE 6315</td>
<td>Composing Texts: Disciplinary Practices for</td>
<td>3</td>
<td>LAE 4314 or equivalent</td>
<td>Examine writing as a multimodal, communicative practice embedded in social,</td>
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<tr>
<td></td>
<td>Writers &amp; Writing</td>
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<td>cultural, and disciplinary contexts. Demonstrate strategies to facilitate</td>
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<td>K-12 students’ writing development as well as develop leadership skills to</td>
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<td></td>
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<td>support writing teachers.</td>
</tr>
<tr>
<td>LAE 6415</td>
<td>Literature And The Learner</td>
<td>3</td>
<td></td>
<td>Nature, scope, and uses of literature for instructional, information, and</td>
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<td>recreational purposes and implications of current theory, significant</td>
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<td></td>
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<td></td>
<td>research, and issues in literature study as they relate to the learner.</td>
</tr>
<tr>
<td>LAE 6616</td>
<td>Trends in Language Arts</td>
<td>3</td>
<td>LAE 4314 or equivalent</td>
<td>Significant concepts, emerging trends,</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
<td>Description</td>
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<tr>
<td>LAE 7717</td>
<td>Theories And Patterns Of Advanced Language Arts Instruction</td>
<td>3</td>
<td>LAE 6616 or equiv.</td>
<td>New research findings and theories relating to language patterns and contemporary programs for teaching language arts.</td>
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<tr>
<td>LAE 7747</td>
<td>Literature Program Design</td>
<td>3</td>
<td>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>
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<tr>
<td>MUL 6656</td>
<td>Choral Literature 1800-present</td>
<td>3</td>
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<td>A study and analysis of choral music from 1800-present.</td>
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<tr>
<td>MAE 6115</td>
<td>Current Trends in Elementary Mathematics Education</td>
<td>3</td>
<td>MAE 4310 or equiv.</td>
<td>Philosophy, content, and process of mathematics instruction in elementary school programs.</td>
</tr>
<tr>
<td>RED 6116</td>
<td>Current Trends in Elementary Reading Instruction</td>
<td>3</td>
<td>RED 4310 or equiv.</td>
<td>Approaches, materials, and procedures in Elementary Reading instruction, with emphasis on pertinent research.</td>
</tr>
<tr>
<td>EDA 6106</td>
<td>Administrative Analysis and Change</td>
<td>3</td>
<td>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 6192</td>
<td>Educational Leadership</td>
<td>3</td>
<td>EDA 6061</td>
<td>Administration course that addresses change, influences, and planning systems. Also examines personnel functions for administrators.</td>
</tr>
<tr>
<td>EDA 6195</td>
<td>Policy Development</td>
<td>3</td>
<td>EDA 6061</td>
<td>Contemporary research on diffusion of innovations, political power in policy decision making. Role of establishing educational policies.</td>
</tr>
<tr>
<td>EDA 6242</td>
<td>School Finance</td>
<td>3</td>
<td>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 6262</td>
<td>Planning Educational Facilities</td>
<td>3</td>
<td>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 6503</td>
<td>The Principalship</td>
<td>3</td>
<td>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 6910</td>
<td>Directed Research</td>
<td>1-19</td>
<td>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>EDG 7667</td>
<td>Analysis of Curriculum and Instruction</td>
<td>3</td>
<td>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 7692</td>
<td>Issues in Curriculum and Instruction</td>
<td>3</td>
<td>EDG 6627</td>
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<tr>
<td>EDG 7910</td>
<td>Directed Research</td>
<td>1-19</td>
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<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
<td>Description</td>
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<tr>
<td>EDG 7931</td>
<td>Selected Topics</td>
<td>1-4</td>
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<td>Selected topics in advanced Education.</td>
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<tr>
<td>EDG 7937</td>
<td>Graduate Seminar</td>
<td>1-4</td>
<td></td>
<td>Seminar in advanced Education.</td>
</tr>
<tr>
<td>EDG 7980</td>
<td>Dissertation</td>
<td>2-19</td>
<td></td>
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<tr>
<td>EDA 6194</td>
<td>Educational Leadership II: Building Capacity</td>
<td>3</td>
<td>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>EDS 6131</td>
<td>Clinical Supervision</td>
<td>3</td>
<td>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 6239</td>
<td>Problems In Supervision</td>
<td>3</td>
<td>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 7130</td>
<td>Teacher Evaluation: Process and Instruments</td>
<td>3</td>
<td>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>EDH 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 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 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>EDH 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 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 7980</td>
<td>Dissertation</td>
<td>2-30</td>
<td></td>
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</tr>
<tr>
<td>EDF 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: (1) descriptive statistics, (2) Probability-sampling distributions, (3) Inferential statistics-interval estimation, tests of significance (z, t, F-one way ANOVA). Coordinated use o</td>
</tr>
<tr>
<td>EDF</td>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
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<td>6432</td>
<td>Foundations of Measurement</td>
<td>3</td>
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<td>6446</td>
<td>Development and Validation of Tests in Education</td>
<td>3</td>
<td>EDF 6432, EDF 6407</td>
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<td>6481</td>
<td>Foundations of Educational Research</td>
<td>3</td>
<td>EDF 6432</td>
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<td>6492</td>
<td>Applied Educational Program Evaluation</td>
<td>3</td>
<td>EDF 6432, EDF 6446</td>
</tr>
<tr>
<td></td>
<td>6971</td>
<td>Thesis: Masters/Educational Specialist</td>
<td>2-19</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7408</td>
<td>Statistical Analysis For Educational Research II</td>
<td>4</td>
<td>EDF 6407 or equiv</td>
</tr>
<tr>
<td></td>
<td>7410</td>
<td>Design Of Systematic Studies In Education</td>
<td>4</td>
<td>EDF 6407, EDF 7408 or equiv</td>
</tr>
<tr>
<td></td>
<td>7437</td>
<td>Advanced Educational Measurement I</td>
<td>3</td>
<td>EDF 6432 or equiv.; EDF 6407 or equiv.</td>
</tr>
<tr>
<td></td>
<td>7438</td>
<td>Advanced Educational Measurement II</td>
<td>4</td>
<td>EDF 7437</td>
</tr>
<tr>
<td></td>
<td>7484</td>
<td>Statistical Analysis For Educational Research III</td>
<td>4</td>
<td>EDF 7408</td>
</tr>
<tr>
<td></td>
<td>7477</td>
<td>Qualitative Research in Education Part I</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7478</td>
<td>Qualitative Research in Education Part II</td>
<td>4</td>
<td>EDF 7477</td>
</tr>
<tr>
<td></td>
<td>7485</td>
<td>Theory and Practice of Program Evaluation</td>
<td>3</td>
<td>EDF 6481.</td>
</tr>
<tr>
<td>Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
<td>Description</td>
</tr>
<tr>
<td>------</td>
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</tr>
<tr>
<td>EDF</td>
<td>Problems in Educational Data Analysis</td>
<td>2</td>
<td>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>MHS</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>Seminar In Guidance</td>
<td>1-4</td>
<td></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>Thesis: Masters/Educational Specialist</td>
<td>2-19</td>
<td></td>
<td>Thesis research hours under the supervision of Counselor Education faculty.</td>
</tr>
<tr>
<td>MHS</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>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>SDS</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>MHS</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>Dissertation</td>
<td>2-30</td>
<td></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>Group Theory and Practicum: Children</td>
<td>4</td>
<td>SDS 6411</td>
<td>Supervised counseling experiences for integration of knowledge and skills gained in didactic study. Focus is on working with</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
<td>Description</td>
</tr>
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</tr>
<tr>
<td>SDS 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.</td>
</tr>
<tr>
<td>EDF 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 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 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 6213</td>
<td>Biological Bases for Learning Behavior</td>
<td>3</td>
<td>EDF 6215</td>
<td>Human biological development and its influence upon learning and behavior.</td>
</tr>
<tr>
<td>EDF 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 6217</td>
<td>Behavior Theory and Classroom Learning</td>
<td>4</td>
<td>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 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>EDF 6288</td>
<td>Instructional Design I</td>
<td>3</td>
<td>EDF 6215</td>
<td>Instructional design models/theories and their systematic application to instructional goals.</td>
</tr>
<tr>
<td>EDF 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 life span with an analysis of the major personality theories.</td>
</tr>
<tr>
<td>EDF 7145</td>
<td>Cognitive Issues in Instruction</td>
<td>4</td>
<td>EDF 6215</td>
<td>Selected cognitive models of intelligence, memory, problem solving, thinking, and motivation applied to instructional strategies.</td>
</tr>
<tr>
<td>EDF 7227</td>
<td>Topics in Behavior Analysis and Automated Instruction</td>
<td>1-12</td>
<td>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 de</td>
</tr>
<tr>
<td>EDF 6517</td>
<td>Historical Foundations of American Education</td>
<td>3</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 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>EDF 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</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
<td>Description</td>
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</tr>
<tr>
<td>EDF 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 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 6883</td>
<td>Issues in Multicultural Education</td>
<td>4</td>
<td>EDF 6517, EDF 6544, EDF 6606</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 7586</td>
<td>Classics in Educational Research</td>
<td>4</td>
<td>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 7682</td>
<td>Education in Metropolitan Areas</td>
<td>3</td>
<td>EDF 6517, EDF 6544, EDF 6606</td>
<td>Modern public education and its relationship to national development.</td>
</tr>
<tr>
<td>SPS 7205</td>
<td>Advanced Consultation Processes in School Psychology</td>
<td>2-4</td>
<td>EDF 6166</td>
<td>Advanced topics and techniques in consultation processes for advanced school psychologists.</td>
</tr>
<tr>
<td>SPS 7700</td>
<td>Advanced Psychoeducational Interventions</td>
<td>2-4</td>
<td>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>SPS 7701</td>
<td>Advanced Child and Adolescent Psychotherapy</td>
<td>2-4</td>
<td>SPS 6702C</td>
<td>Covers advanced topics and techniques in child and adolescent psychotherapy relevant to school psychological services.</td>
</tr>
<tr>
<td>SPS 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 7980</td>
<td>Dissertation</td>
<td>2-30</td>
<td></td>
<td>Independent study in which students must have a contract with an instructor.</td>
</tr>
<tr>
<td>EDF 6906</td>
<td>Independent Study: Educational Foundations</td>
<td>1-6</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 6938</td>
<td>Selected Topics</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 6944</td>
<td>Field Experience</td>
<td>1-4</td>
<td></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 i</td>
</tr>
<tr>
<td>EDM 6622</td>
<td>Client Centered Middle Schools</td>
<td>3</td>
<td></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>EDM 6624</td>
<td>Effective Instruction for Middle Schools</td>
<td>3</td>
<td>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>EDM 6935</td>
<td>Middle School Issues Seminar</td>
<td>1-3</td>
<td></td>
<td>Combines discussion/individual study seminar.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
<td>Description</td>
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<td>-------------</td>
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</tr>
<tr>
<td>LAE 6366</td>
<td>New Perspectives on the Teaching of Young Adult Literature in Middle &amp; Secondary Schools</td>
<td>3</td>
<td>None.</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 of these perceptions.</td>
</tr>
<tr>
<td>LAE 6345</td>
<td>Teaching Written Composition</td>
<td>3</td>
<td>LAE 6366</td>
<td>Techniques for motivating, guiding, correcting, and evaluating student writing.</td>
</tr>
<tr>
<td>LAE 6637</td>
<td>Current Trends in Secondary English Education</td>
<td>3</td>
<td>LAE 6345 or LAE 6644</td>
<td>Curricular patterns and instructional practices in secondary English.</td>
</tr>
<tr>
<td>LAE 6644</td>
<td>Current Teaching of the English Language and the Study of Traditional Grammar</td>
<td>3</td>
<td>LAE 4335 or LAE 4642</td>
<td>Applications of recent techniques of language study to classroom teaching of English, especially in relation to the teaching of grammar. Presents an interactive approach to grammar instruction in which students learn the basic elements of English grammar.</td>
</tr>
<tr>
<td>LAE 6971</td>
<td>Thesis: Masters/Educational Specialist</td>
<td>2-19</td>
<td>None.</td>
<td>Designed for experienced classroom teachers, theoretical and practical implications of recent programs and methodology. Instructional practices in the teaching of foreign languages. Individual projects.</td>
</tr>
<tr>
<td>FLE 6665</td>
<td>Current Trends in Secondary Foreign Language Education</td>
<td>3</td>
<td>FLE 4314/FLE 4333</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 microcomputers, and the selection and evaluation of software and hardware.</td>
</tr>
<tr>
<td>CGS 6210</td>
<td>Computer Hardware Systems for Education</td>
<td>3</td>
<td>FLE 6665</td>
<td>This course focuses on the systematic design of instructional courseware, including analysis, media selection, and evaluation. Topics include instructional strategies, screen design, response analysis, feedback and interactivity.</td>
</tr>
<tr>
<td>EDF 6284</td>
<td>Problems in Instructional Design for Computers</td>
<td>3</td>
<td>FLE 6665</td>
<td>This course focuses on the systematic design of instructional courseware, including analysis, media selection, and evaluation. Topics include instructional strategies, screen design, response analysis, feedback and interactivity.</td>
</tr>
<tr>
<td>EME 5403</td>
<td>Computers in Education</td>
<td>3</td>
<td>FLE 6665</td>
<td>A survey course designed to introduce practicing teachers to microcomputer technology and its function in the classroom to augment the teaching and learning processes. Objectives include the use and evaluation of educational software, classroom use of computers, and the integration of technology into the classroom.</td>
</tr>
<tr>
<td>EME 6425</td>
<td>Technology For School Management</td>
<td>3</td>
<td>FLE 6665</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 data management.</td>
</tr>
<tr>
<td>EME 6613</td>
<td>Development of Technology-Based Instruction</td>
<td>3</td>
<td>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 6930</td>
<td>Programming Languages for</td>
<td>3</td>
<td>EDF 6284</td>
<td>Development of concepts, strategies, and implementation of programming languages in education.</td>
</tr>
<tr>
<td>EME 6930</td>
<td>Programming Languages for</td>
<td>3</td>
<td>EDF 6284</td>
<td>Development of concepts, strategies, and implementation of programming languages in education.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
<td></td>
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</tr>
<tr>
<td>EME 6936</td>
<td>Applications of Computers as Educational Tools</td>
<td>3</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.</td>
<td></td>
</tr>
<tr>
<td>EME 7938</td>
<td>Computer-Augmented Instructional Paradigms in Education</td>
<td>3</td>
<td>Seminar examining theory and application of computers and related technology in teaching and learning.</td>
<td></td>
</tr>
<tr>
<td>EME 7939</td>
<td>Research in Technology-Based Education</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>EME 7980</td>
<td>Dissertation</td>
<td>2-30</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>MAE 6337</td>
<td>Topics in Teaching Algebra</td>
<td>1-4</td>
<td>Topics in algebra, philosophy, new trends, and methods of teaching secondary school algebra.</td>
<td></td>
</tr>
<tr>
<td>MAE 6338</td>
<td>Topics in Teaching Geometry</td>
<td>1-4</td>
<td>Topics in geometry, philosophy, new trends, and methods of teaching secondary school geometry.</td>
<td></td>
</tr>
<tr>
<td>MAE 6356</td>
<td>Teaching of Pre-Secondary School Mathematics</td>
<td>3</td>
<td>12 hours of mathematics Development of strategies and materials for teaching mathematical concepts and skills appropriate to pre-secondary school years.</td>
<td></td>
</tr>
<tr>
<td>MAE 6971</td>
<td>Thesis: Masters/Educational Specialist</td>
<td>2-19</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>MAE 7980</td>
<td>Dissertation</td>
<td>2-30</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>SCE 5937</td>
<td>Selected Topics in Science Education</td>
<td>1-4</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>SCE 6865</td>
<td>Technology: Solving Societal Problems</td>
<td>3</td>
<td>Specific examples of mathematics/science/technology/society interaction are provided for integration into school-based mathematics and natural science courses.</td>
<td></td>
</tr>
<tr>
<td>SCE 6645</td>
<td>Mathematics and Science Education Policy, Change, and School Improvement</td>
<td>3</td>
<td>EDF 7655 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>
<td></td>
</tr>
<tr>
<td>SCE 6866</td>
<td>Understanding Mathematics, Science, and Technology: Human Enterprises</td>
<td>3</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>SCE 7980</td>
<td>Dissertation</td>
<td>2-30</td>
<td>---</td>
<td></td>
</tr>
</tbody>
</table>
| SSE 6636   | Trends in Secondary Social Science Education                                  | 3       | SSE 4333, SSE 4334, SSE 4335. This course is designed for graduate students to research the history, theory, practices and
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EEL 5594L</td>
<td>Wireless Circuits and Systems Laboratory</td>
<td>3</td>
<td>An extensive hands-on introduction to wireless radio frequency and microwave circuits and systems, involving modern measurements, fabrication and computer-aided design experiences at both component and sub-system levels.</td>
</tr>
<tr>
<td>GMS 6431</td>
<td>Cell Physiology</td>
<td>4</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 cur.</td>
</tr>
<tr>
<td>PCB 6275</td>
<td>Cell Signaling</td>
<td>3</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>AFA 6108</td>
<td>Social Construction of Race and Racism</td>
<td>3</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 6932</td>
<td>Topics in Africana Studies</td>
<td>3</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>GEY 6403</td>
<td>Multivariate Statistical Analysis for Aging Research</td>
<td>3</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>ECW 5315</td>
<td>Program Management: Diversified Cooperative Training</td>
<td>3</td>
<td>Organization, coordination, and budgeting of adult, cooperative, and special programs.</td>
</tr>
<tr>
<td>ECT 5386</td>
<td>Preparation and Development for Teaching</td>
<td>4</td>
<td>The development of selected instructional materials, use of new educational media, performance evaluation instruments, and counseling techniques.</td>
</tr>
<tr>
<td>GEY 6450</td>
<td>Gerontological Research and Planning</td>
<td>3</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 6461</td>
<td>Retirement and Long Term Care Housing for Elderly</td>
<td>3</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>
</tr>
<tr>
<td>GEY 6500</td>
<td>Seminar in Principles of Administration</td>
<td>3</td>
<td>This course deals with management problems and practices in the administration of institutions in the field of aging. Consideration</td>
</tr>
</tbody>
</table>
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.

Detailed study of velocities, accelerations and forces in machines with parts having rotating, reciprocating, and combined motion.

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.

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.

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.

Topics to be chosen by students and instructor permitting newly developing subdisciplinary special interests to be explored.

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.

Research and writing of a dissertation.

Fundamental and applied aspects of free surface flow, including river hydraulics, canal flow, and open channel design.

A study of the fundamentals of shoreline dynamics including distribution of wave energy, motion of beach sand, stable configurations and protective measures.

A study of the quantity and quality problems and solution techniques associated with urban runoff.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CWR 6534</td>
<td>Coastal and Estuary Modeling</td>
<td>3</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 6535</td>
<td>Hydrologic Models</td>
<td>3</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>GEO 6970</td>
<td>Geographic Research Design</td>
<td>3</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 7606</td>
<td>Seminar in Urban Environments</td>
<td>3</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 7021</td>
<td>Doctoral Dissertation Preparation</td>
<td>3</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>NGR 6713</td>
<td>Foundations of Nursing Education</td>
<td>3</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 6885</td>
<td>Bioethics in Contemporary Society</td>
<td>3</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>HMG 6972</td>
<td>Masters Thesis</td>
<td>1-6</td>
<td>All MS in Hospitality Courses. Independent Study under the direction of the thesis advisor. Individual discussion format &amp; Comprehensive review of the thought process, hypothesis, development, research emthodology, data collection, data analysis, etc. Restricted to Majors/repeatable.</td>
</tr>
<tr>
<td>PCB 5616</td>
<td>Molecular Phylogenetics</td>
<td>3</td>
<td>PCB 3063. 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>URP 6232</td>
<td>Research Methods for Urban and Research Planning</td>
<td>3</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>RLG 6143</td>
<td>Religion, Culture, and Society</td>
<td>3</td>
<td>Scholarly study of religion in its complex relationship of culture and society, including</td>
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<tr>
<td>Course Code</td>
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<td>Prerequisites</td>
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<tr>
<td>EML 6232</td>
<td>Composite Laminated Materials</td>
<td>3</td>
<td>EML 3500</td>
</tr>
<tr>
<td>BMS 6100C</td>
<td>Gross Anatomy</td>
<td>5-10</td>
<td></td>
</tr>
<tr>
<td>GMS 6601</td>
<td>Introduction to Laboratory Medicine and Diagnosis</td>
<td>2</td>
<td>GMS 6608</td>
</tr>
<tr>
<td>GMS 6604</td>
<td>Human Embryology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>GMS 6608</td>
<td>Pathology Case Studies 5</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>PHC 6725</td>
<td>Focus Group Research Strategies</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>GEA 6406</td>
<td>Seminar in Latin American and Caribbean Geography</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>EGN 5424</td>
<td>Engineering Applications of Complex Analysis</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>GIS 5049</td>
<td>GIS for Non-Majors</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MUS 6793</td>
<td>Techniques Of Research In</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
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</tr>
<tr>
<td>MUS 6906</td>
<td>Independent Study</td>
<td>1-19</td>
<td>Independent study in which student must have a contract with an instructor.</td>
</tr>
<tr>
<td>MUS 6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td>An individual, formal project as a terminal requirement.</td>
</tr>
<tr>
<td>MUS 6976</td>
<td>Graduate Recital</td>
<td>2</td>
<td>A professional bibliography and with an individual, formal project as a terminal requirement.</td>
</tr>
<tr>
<td>MUT 6545</td>
<td>Analysis of 18th and 19th Century Music</td>
<td>3</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 6586</td>
<td>Critical Analysis-History</td>
<td>2</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>MUT 6665</td>
<td>Seminar Jazz Styles And Analysis</td>
<td>2</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 6751</td>
<td>Teaching of Music Theory</td>
<td>3</td>
<td>Comparative study of teaching, techniques, procedures, and materials used in teaching visual and aural theory.</td>
</tr>
<tr>
<td>MUT 6760</td>
<td>History of Music Theory</td>
<td>3</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 6451</td>
<td>Applied Trumpet</td>
<td>4</td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVB 6452</td>
<td>Applied French Horn</td>
<td>4</td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVB 6453</td>
<td>Applied Trombone</td>
<td>4</td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVB 6454</td>
<td>Applied Euphonium</td>
<td>4</td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVB 6455</td>
<td>Applied Tuba</td>
<td>4</td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVB 6451</td>
<td>Applied Piano</td>
<td>4</td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVP 5251</td>
<td>Applied Percussion, Secondary</td>
<td>2-4</td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVP 6451</td>
<td>Applied Percussion</td>
<td>4</td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVS 6451</td>
<td>Applied Violin</td>
<td>4</td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVS 6452</td>
<td>Applied Viola</td>
<td>4</td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVS 6453</td>
<td>Applied Violoncello</td>
<td>4</td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVS 6454</td>
<td>Applied Double Bass</td>
<td>4</td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVV 6451</td>
<td>Applied Voice</td>
<td>4</td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVV 6451</td>
<td>Applied Flute</td>
<td>4</td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>Course Code</td>
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<td>Credits</td>
<td>Description</td>
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<tr>
<td>MVW 6452</td>
<td>Applied Oboe</td>
<td>4</td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVW 6453</td>
<td>Applied Clarinet</td>
<td>4</td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVW 6454</td>
<td>Applied Bassoon</td>
<td>4</td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVW 6455</td>
<td>Applied Saxophone</td>
<td>4</td>
<td>Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVK 6650</td>
<td>Graduate Piano Pedagogy I</td>
<td>2</td>
<td>Emphasis on techniques used in teaching the individual student in performance.</td>
</tr>
<tr>
<td>MVK 6651</td>
<td>Graduate Piano Pedagogy II</td>
<td>2</td>
<td>Emphasis on techniques used in teaching the individual student in performance.</td>
</tr>
<tr>
<td>PHY 7910</td>
<td>Directed Research</td>
<td>1-9</td>
<td>This course will explore the unique characteristics of modern and post-modern civilization, with special attention given to the secularizing effects of modern science, technology, economics, and politics on the world’s religions and their various response</td>
</tr>
<tr>
<td>RLG 6196</td>
<td>Religion and Modernization</td>
<td>3</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 6115</td>
<td>Planning, policy and politics</td>
<td>3</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 6930</td>
<td>Special Topics in Urban and Regional Planning</td>
<td>3</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>
<tr>
<td>URP 6940</td>
<td>Internship in Urban and Regional Planning</td>
<td>3-6</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 f</td>
</tr>
<tr>
<td>SCE 6444</td>
<td>Community Resources for Environmental Education</td>
<td>3</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>
<tr>
<td>SCE 6646</td>
<td>Environmental Site Explorations</td>
<td>3</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>
</tr>
<tr>
<td>PHC 6442</td>
<td>Global Health Applications in the Field</td>
<td>3</td>
<td>Design of underdrains, wells, soil filters, fabric filters, and dewatering systems with special</td>
</tr>
<tr>
<td>ECH 6932</td>
<td>Special Technical Topics</td>
<td>1-4</td>
<td>Special Topics in Technology.</td>
</tr>
<tr>
<td>ECH 6971</td>
<td>Thesis: Master’s</td>
<td>2-19</td>
<td></td>
</tr>
<tr>
<td>ECH 7915</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
</tr>
<tr>
<td>ECH 7980</td>
<td>Dissertation: Doctoral</td>
<td>2-19</td>
<td></td>
</tr>
<tr>
<td>CEG 6415</td>
<td>Seepage and Subsurface Drainage</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Title</td>
<td>Credits</td>
<td>Prerequisites</td>
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<tr>
<td>CES 5105C</td>
<td>Advanced Mechanics of Materials I</td>
<td>3</td>
<td>EGN 3331, MAP 2302</td>
</tr>
<tr>
<td>CES 5209</td>
<td>Structural Dynamics</td>
<td>3</td>
<td>CES 3102, EGN 3321.</td>
</tr>
<tr>
<td>CES 5715C</td>
<td>Prestressed Concrete</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CES 6107C</td>
<td>Advanced Mechanics Of Materials II</td>
<td>3</td>
<td>CES 5105C.</td>
</tr>
<tr>
<td>GMS 6400C</td>
<td>Core Physiology</td>
<td>4-6</td>
<td></td>
</tr>
<tr>
<td>CES 6326</td>
<td>Design of Concrete Bridges</td>
<td>3</td>
<td>CES 4702, CES 5715C.</td>
</tr>
<tr>
<td>CES 6609</td>
<td>Advanced Steel Design</td>
<td>3</td>
<td>CES 4605.</td>
</tr>
<tr>
<td>CES 6706</td>
<td>Advanced Concrete Design</td>
<td>3</td>
<td>CES 4702</td>
</tr>
<tr>
<td>CGN 6906</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
</tr>
<tr>
<td>ENV 5334</td>
<td>Hazardous Waste Management and Remedial Action</td>
<td>3</td>
<td>ENV 5345 and one of the following: ENV 6347, ENV 6519, ENV 6558;</td>
</tr>
<tr>
<td>ENV 6519</td>
<td>Physical and Chemical Processes for Groundwater Remediation</td>
<td>3</td>
<td>ENV 6666</td>
</tr>
<tr>
<td>ENV 6539</td>
<td>Sludge Treatment &amp; Disposal</td>
<td>3</td>
<td>ENV 6667</td>
</tr>
<tr>
<td>ENV 6666</td>
<td>Aquatic Chemistry</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>EVR 6922</td>
<td>ESP Capstone Seminar</td>
<td>3</td>
<td></td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
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<tr>
<td>CAP 6100</td>
<td>Human Computer Interface</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CAP 6415</td>
<td>Computer Vision</td>
<td>3</td>
<td>CAP 5400</td>
</tr>
<tr>
<td>CAP 6615</td>
<td>Neural Networks</td>
<td>3</td>
<td>CAP 5600</td>
</tr>
<tr>
<td>CAP 6672</td>
<td>Robot Intelligence and Computer Vision</td>
<td>3</td>
<td>COP 2400 or equiv.</td>
</tr>
<tr>
<td>SSE 5641</td>
<td>Reading and Basic Skills in the Content Area</td>
<td>3</td>
<td></td>
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<tr>
<td>SSE 5332</td>
<td>Methods &amp; Strategies in Social Science Education</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SSE 5331</td>
<td>Foundations, Curriculum &amp; Instruction of Social Science Education</td>
<td>3</td>
<td></td>
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<tr>
<td>CIS 6900</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
</tr>
<tr>
<td>CIS 6930</td>
<td>Special Topics</td>
<td>1-5</td>
<td></td>
</tr>
<tr>
<td>CIS 6940</td>
<td>Graduate Instruction Methods</td>
<td>1-4</td>
<td></td>
</tr>
<tr>
<td>CIS 6971</td>
<td>Thesis: Master's</td>
<td>2-19</td>
<td></td>
</tr>
<tr>
<td>PHC 6412</td>
<td>Health Disparities and Social Determinants</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CIS 7910</td>
<td>Directed Research</td>
<td>1-19</td>
<td></td>
</tr>
</tbody>
</table>

In the fall semester, the program selects an environmental issue to serve as a case study. Some anticipated themes include global warming, water qu
<table>
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<tr>
<th>Course Code</th>
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<th>Credits</th>
<th>Prerequisites</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDA 5416</td>
<td>Computer System Verification</td>
<td>3</td>
<td>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>CIS 7980</td>
<td>Dissertation: Doctoral</td>
<td>2-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COP 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 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>EEL 5771</td>
<td>Introduction to Computer Graphics I</td>
<td>3</td>
<td>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 6706</td>
<td>Testing And Fault Tolerance In Digital Systems</td>
<td>3</td>
<td>COP 2400, CDA 4201</td>
<td>Test generation for combinational and sequential digital circuits, fault analysis and diagnosis. Methods for reliability improvement through fault tolerant and testable circuit design. Introduction to software reliability.</td>
</tr>
<tr>
<td>NGR 6500L</td>
<td>Psychiatric APN Practicum: Psychiatric Care Outpatient</td>
<td>1-6</td>
<td></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>EEL 6764</td>
<td>Principles Of Computer Architecture</td>
<td>3</td>
<td>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 considerat</td>
</tr>
<tr>
<td>EEE 5344C</td>
<td>Digital CMOS/VLSI Design</td>
<td>3</td>
<td>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 ex</td>
</tr>
<tr>
<td>EEL 6357</td>
<td>Analog CMOS/VLSI Design</td>
<td>3</td>
<td>EEE 4301</td>
<td>Design of analog circuits for CMOS/VLSI design, Op amps, comparators, D to A and A to D converters, switched capacitor filters and analog simulation.</td>
</tr>
<tr>
<td>EEE 5382</td>
<td>Physical Basis Of Microelectronics</td>
<td>3</td>
<td>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>
</tr>
<tr>
<td>EEL 5935</td>
<td>Special Electrical Engineering Topics I</td>
<td>1-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EEL 5936</td>
<td>Special Electrical Engineering Topics II</td>
<td>1-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EEL 5937</td>
<td>Special Electrical Engineering Topics III</td>
<td>1-3</td>
<td></td>
<td></td>
</tr>
<tr>
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<td>Credits</td>
<td>Description</td>
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<tr>
<td>EEE 6318</td>
<td>Characterization of Semiconductors</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>EEE 6345</td>
<td>VLSI for Signal Processing</td>
<td>3</td>
<td>VLSI applications in signal processing and telecommunications. General purpose DSP architectures. ASIS architectures: systolic arrays, data-flow multiprocessing, wavefront arrays. Case histories: modems, echo cancelers, digital PLL, etc. High-speed arith</td>
<td></td>
</tr>
<tr>
<td>EEE 6353</td>
<td>Semiconductor Device Theory I</td>
<td>3</td>
<td>Theory of operation and application of circuits and devices.</td>
<td></td>
</tr>
<tr>
<td>PHC 7045</td>
<td>Practical Issues in Epidemiology</td>
<td>3</td>
<td>This course provides an understanding of the everyday tasks faced by an epidemiologist working in research. Topics include, ethics, data collection, and implementation of interventions.</td>
<td></td>
</tr>
<tr>
<td>INR 5012</td>
<td>Globalization</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>EEL 6846</td>
<td>Coding Theory</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>EIN 6319</td>
<td>Work Design And Productivity Engineering</td>
<td>3</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 th</td>
<td></td>
</tr>
<tr>
<td>EML 6157</td>
<td>Radiation</td>
<td>3</td>
<td>Review of basic principles of radiation, grey bodies and real surfaces, calculation of shape factors, absorbing gases.</td>
<td></td>
</tr>
<tr>
<td>BME 5320</td>
<td>Theory and Design of Bioprocesses</td>
<td>3</td>
<td>Introduction to biotechnology, including applied microbiology, enzyme technology, biomass production, bioreactor design, and transport processes in biosystems.</td>
<td></td>
</tr>
<tr>
<td>BME 5040</td>
<td>Pharmaceutical Engineering</td>
<td>2</td>
<td>Introduction to pharmaceutical engineering, including dosage forms (tablets, capsules,</td>
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<td>Code</td>
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<tr>
<td>BME</td>
<td>6000 Biomedical Engineering</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>ECH</td>
<td>5747C Selected Topics in Chemical Engineering</td>
<td>1-3</td>
<td>Selected topics in engineering in biotechnology, including cell separation technology, immobilized enzymes and cells, food engineering, biohazardous waste, and bioseparations.</td>
<td></td>
</tr>
<tr>
<td>BME</td>
<td>5910 Directed Research in Bioengineering</td>
<td>1-3</td>
<td>Directed research in an area of biomedical engineering or engineering biotechnology.</td>
<td></td>
</tr>
<tr>
<td>ECH</td>
<td>5930 Special Topics III</td>
<td>1-4</td>
<td>Independent student-faculty research course.</td>
<td></td>
</tr>
<tr>
<td>ECH</td>
<td>5931 Special Topics IV</td>
<td>1-4</td>
<td>New technical topics of interest to civil engineering students.</td>
<td></td>
</tr>
<tr>
<td>EDF</td>
<td>7910 Directed Research in Measurement and Evaluation</td>
<td>1-19</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 signifi</td>
<td></td>
</tr>
<tr>
<td>ECH</td>
<td>5748 Selected Topics in Biomedical Engineering</td>
<td>1-3</td>
<td>Biomedical engineering analysis, including biomedical engineering, biomedical instruments, biomaterials, medical imaging, biomedical instrumentation, tissue/cellular engineering, clinical engineering, prosthetic/medical devices, and regulatory issues.</td>
<td></td>
</tr>
<tr>
<td>CGN</td>
<td>5933 Special Topics in Civil Engineering and Mechanics</td>
<td>1-5</td>
<td>New technical topics of interest to civil engineering students.</td>
<td></td>
</tr>
<tr>
<td>ENV</td>
<td>5103 Air Pollution Control</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>ENV</td>
<td>6614 Quantitative Environmental Risk Analysis</td>
<td>3</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 signifi</td>
<td></td>
</tr>
<tr>
<td>PAD</td>
<td>6275 Political Economy for Public Managers</td>
<td>3</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 manag</td>
<td></td>
</tr>
<tr>
<td>TTE</td>
<td>5501 Transportation Planning and Economics</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>MUT</td>
<td>6575 Analysis of Twentieth Century Music</td>
<td>3</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 theoret</td>
<td></td>
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<td>Course Code</td>
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<td>Credits</td>
<td>Prerequisites</td>
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<tr>
<td>SPS 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>PHC 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 6500</td>
<td>Theoretical and Behavioral Basis for Health Education</td>
<td>4</td>
<td></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>
</tr>
<tr>
<td>PHC 6505</td>
<td>Program Planning in Community Health</td>
<td>3</td>
<td>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>MAE 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>RED 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>SCE 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>
<tr>
<td>PHC 6507</td>
<td>Health Education Intervention Methods</td>
<td>3</td>
<td>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 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 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 6535</td>
<td>International Maternal and Child Health</td>
<td>3</td>
<td></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 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 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 6358</td>
<td>Physical Agents - Assessment</td>
<td>2</td>
<td></td>
<td>Presents advanced aspects of recognition,</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
<td>Description</td>
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<tr>
<td>PHC 6360</td>
<td>Safety Management Principles and Practices</td>
<td>2</td>
<td>PHC 6356</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 6361</td>
<td>Industrial Ergonomics</td>
<td>2</td>
<td>PHC 6360</td>
<td>Systems logic and methodology for assessing the potential impact of work environments on the health and safety of workers; application of occupational ergonomics and human factors to the design and evaluation of complex work environments.</td>
</tr>
<tr>
<td>PHC 6362</td>
<td>Industrial Ventilation</td>
<td>2</td>
<td>PHC 6356</td>
<td>Basic principles of fluid mechanics and exhaust ventilation are employed in the design and evaluation of the performance of industrial ventilation systems.</td>
</tr>
<tr>
<td>PHC 6364</td>
<td>Industrial Hygiene Aspects of Plant Operations</td>
<td>2</td>
<td>PHC 6356</td>
<td>Field visits to industrial plants will be conducted so as to familiarize students without prior experience to the health hazards associated with various processes and the methods of control employed to prevent excessive exposures.</td>
</tr>
<tr>
<td>RED 6846</td>
<td>Practicum in Reading</td>
<td>3</td>
<td>RED 6540, RED 6544, RED 6545, RED 6749</td>
<td>Practicum in Reading is a graduate course covering topics relevant to assessment and remediation of literacy in school-aged children. Students work with struggling readers. Intervention is also directed at implementing reading strategies within STEM areas</td>
</tr>
<tr>
<td>BMS 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>BMS 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>TTE 6837</td>
<td>Pavement Management Systems</td>
<td>3</td>
<td>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>MAE 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>RED 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</td>
</tr>
<tr>
<td>RED 6540</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
<td>Description</td>
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<tr>
<td>GEY 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>EEL 5250</td>
<td>Power System Analysis</td>
<td>3</td>
<td>EGN 3375</td>
<td>Analysis and design technique for AC power systems.</td>
</tr>
<tr>
<td>EEE 5356</td>
<td>Integrated Circuit Technology</td>
<td>3</td>
<td>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>EEL 5462</td>
<td>Antenna Theory</td>
<td>3</td>
<td>EEL 4471</td>
<td>Antenna theory beginning with fundamental parameter definitions and continuing with mathematical concepts, elemental antennas and arrays.</td>
</tr>
<tr>
<td>BME 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>PAD 6710</td>
<td>Public Information Management</td>
<td>3</td>
<td></td>
<td>Intro to policy issues related to managing public info. by non-technical public &amp; nonprofit managers. Non-tech. manager’s role with strategic tech. planning, process re-engineering, appl. dev., data admin., procurement, security, public access, Internet. Can be repeated up to 3 total credits.</td>
</tr>
<tr>
<td>ART 6449C</td>
<td>Intaglio</td>
<td>4</td>
<td></td>
<td>Advanced graduate research in intaglio process.</td>
</tr>
<tr>
<td>ART 6581C</td>
<td>Painting</td>
<td>4</td>
<td></td>
<td>Advanced graduate research in painting.</td>
</tr>
<tr>
<td>ART 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 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 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 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>MUL 6555</td>
<td>Band/Wind Literature Ensemble</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 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>
</tbody>
</table>
| MUN 6145    | Wind Ensemble                            | 1       |                      | Open to all university students with the
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUN 6215</td>
<td>University Orchestra</td>
<td>1</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 6315</td>
<td>University Singers</td>
<td>1</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 6385</td>
<td>University-Community Chorus</td>
<td>1</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>MUE 6080</td>
<td>Foundations And Principles Of Music Education</td>
<td>3</td>
<td>Investigation of historical, philosophical, and psychological foundations of music education.</td>
</tr>
<tr>
<td>MUE 6116</td>
<td>Advanced Techniques and Research in K-12 General Music Education</td>
<td>3</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 6336</td>
<td>Advanced Techniques and Research in Vocal/Choral Music Education</td>
<td>3</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 voca</td>
</tr>
<tr>
<td>GEY 6613</td>
<td>Physical Change and Aging</td>
<td>3</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>MUE 6347</td>
<td>Advanced Techniques and Research in Instrumental Music Education</td>
<td>3</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 6906</td>
<td>Independent Study: Music Education</td>
<td>1-6</td>
<td>Independent study in which students must have a contract with an instructor.</td>
</tr>
<tr>
<td>MUE 6971</td>
<td>Thesis: Masters/Eds</td>
<td>2-19</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 6300</td>
<td>Principles of Immunology and Infectious Diseases</td>
<td>var.</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</td>
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<tr>
<td>Course Code</td>
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<td>Credits</td>
<td>Description</td>
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<tr>
<td>FRW 5755</td>
<td>African and Caribbean Literature</td>
<td>3</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. Taught in French.</td>
</tr>
<tr>
<td>FRW 5829</td>
<td>An Introduction to Modern French Literary Criticism</td>
<td>3</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 literary criticism, the French having been at the avant-garde of the field.</td>
</tr>
<tr>
<td>ANG 6175</td>
<td>Topics in Mediterranean Archaeology</td>
<td>3</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>HUM 6940</td>
<td>Internship in Humanities</td>
<td>1-3</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>MAN 6256</td>
<td>Politics and Control in Organizations</td>
<td>3</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</td>
</tr>
<tr>
<td>MAN 6448</td>
<td>Negotiating Agreement and Resolving Conflict</td>
<td>3</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>MVJ 5250</td>
<td>Applied Jazz Piano Secondary</td>
<td>2</td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVJ 5253</td>
<td>Applied Jazz Guitar Secondary</td>
<td>2</td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>GEY 6614</td>
<td>Aging and Mental Disorders</td>
<td>3</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>
</tr>
<tr>
<td>NGR 7881</td>
<td>Responsible Conduct of Nursing Research</td>
<td>2</td>
<td>An analysis of contemporary core issues relating to responsible conduct of research designed to enable critical reasoning and encourage best practices in the conduct of nursing research.</td>
</tr>
<tr>
<td>NGR 7892</td>
<td>Health Care Policy &amp; Clinical Prevention for Imprv Pop Health</td>
<td>3</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 7941</td>
<td>Nursing Research Pro Seminar</td>
<td>1-6</td>
<td>The Pro Seminar provides experiential opportunities for students to test innovative</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
</tr>
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<tr>
<td>GEB 6896</td>
<td>Integrated Business Applications II</td>
<td>3</td>
<td>GEB 6895.</td>
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<tr>
<td>HSC 6055</td>
<td>Survival Analysis</td>
<td>3</td>
<td>PHC 6051, PHC 6701</td>
</tr>
<tr>
<td>HSC 6056</td>
<td>Survey Sampling Methods in Health Sciences</td>
<td>3</td>
<td>PHC 6050, PHC 6701</td>
</tr>
<tr>
<td>ISM 6124</td>
<td>Advanced Systems Analysis and Design</td>
<td>3</td>
<td></td>
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<tr>
<td>LIS 6711</td>
<td>Organization of Knowledge I</td>
<td>3</td>
<td></td>
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<tr>
<td>SDS 6042</td>
<td>Introduction of Student Affairs</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SOW 6559</td>
<td>Field Instruction Sequence IIIB: Part-Time</td>
<td>2</td>
<td>SOW 6558.</td>
</tr>
<tr>
<td>EDH 6906</td>
<td>Independent Study</td>
<td>1-19</td>
<td></td>
</tr>
<tr>
<td>EDH 6947</td>
<td>Internship in Higher Education</td>
<td>1-6</td>
<td></td>
</tr>
<tr>
<td>SOW 6553</td>
<td>Field Instruction Sequence IA: Part-Time</td>
<td>2</td>
<td>SOW 6114, SOW 6348.</td>
</tr>
<tr>
<td>SOW 6554</td>
<td>Field Instruction Sequence IB: Part-Time</td>
<td>2</td>
<td>SOW 6553</td>
</tr>
</tbody>
</table>

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Knowledge Dissemination. Methods and technologies in a variety of educational or clinical settings. Seminars designed to critique current research in the area.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOW 6555</td>
<td>Field Instruction Sequence IIA: Part-Time</td>
<td>2</td>
<td>Taught by an agency field instructor with a one-hour practice seminar taught by a University-based instructor.</td>
</tr>
<tr>
<td>SOW 6556</td>
<td>Field Instruction Sequence IIB: Part-Time</td>
<td>2</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 6557</td>
<td>Field Instruction Sequence IIC: Part-Time</td>
<td>2</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>
<tr>
<td>SDS 6645</td>
<td>Student Development Theory</td>
<td>3</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 educ</td>
</tr>
<tr>
<td>PPE 6058</td>
<td>Personality</td>
<td>3</td>
<td>Survey of research and theories of personality, including its relationship to the development of normal and abnormal behavior.</td>
</tr>
<tr>
<td>PHC 6193</td>
<td>Qualitative Methods in Community Health Research</td>
<td>3</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</td>
</tr>
<tr>
<td>PHC 6401</td>
<td>Homelessness: Implications for Behavioral Healthcare</td>
<td>3</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 home</td>
</tr>
<tr>
<td>MUG 6930</td>
<td>Advanced Choral Techniques</td>
<td>3</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>PHC 7055</td>
<td>Biostatistical Computing</td>
<td>3</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, Newt</td>
</tr>
<tr>
<td>GMS 6875</td>
<td>Ethical and Regulatory Aspects of Clinical Research</td>
<td>2</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>SPA 7980</td>
<td>Dissertation</td>
<td>2-19</td>
<td>PR: Admission to Candidacy. Doctoral</td>
</tr>
<tr>
<td>Course</td>
<td>Code</td>
<td>Title</td>
<td>Credits</td>
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<tr>
<td>AFA</td>
<td>6910</td>
<td>Directed Research</td>
<td>1-12</td>
</tr>
<tr>
<td>GMS</td>
<td>6067</td>
<td>Current Topics in Molecular Medicine</td>
<td>1</td>
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<tr>
<td>BSC</td>
<td>7910</td>
<td>Directed Research</td>
<td>1-19</td>
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<tr>
<td>CCJ</td>
<td>6936</td>
<td>Current Issues in Law Enforcement</td>
<td>3</td>
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<tr>
<td>ANG</td>
<td>6270</td>
<td>Chiefdoms</td>
<td>3</td>
</tr>
<tr>
<td>ANG</td>
<td>6706</td>
<td>Foundations of Applied Anthropology II</td>
<td>3</td>
</tr>
<tr>
<td>MUE</td>
<td>7815</td>
<td>Social Psychology of Music</td>
<td>3</td>
</tr>
<tr>
<td>IDS</td>
<td>6948</td>
<td>Gallery and Museum Internship</td>
<td>2-6</td>
</tr>
<tr>
<td>GEY</td>
<td>6616</td>
<td>Mental Health Assessment and Intervention with Older Adults</td>
<td>3</td>
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<tr>
<td>ART</td>
<td>5740C</td>
<td>Sculpture</td>
<td>4</td>
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<tr>
<td>ART</td>
<td>5910</td>
<td>Research</td>
<td>1-4</td>
</tr>
<tr>
<td>FIL</td>
<td>5469C</td>
<td>Cinematography</td>
<td>4</td>
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<tr>
<td>MUE</td>
<td>6694</td>
<td>Multimedia Methods in Music Education</td>
<td>3</td>
</tr>
<tr>
<td>LAE</td>
<td>6339</td>
<td>Methods of Teaching</td>
<td>4</td>
</tr>
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<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites/Notes</td>
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<tr>
<td>ESE 7910</td>
<td>Directed Research in Secondary Education</td>
<td>1-19</td>
<td>Directed research under the direction of a faculty member in Secondary Education. Student must have contract with instructor.</td>
</tr>
<tr>
<td>GEW 5606</td>
<td>Faust</td>
<td>3</td>
<td>Sources, form, content, and literary significance of Urfaust and Faust.</td>
</tr>
<tr>
<td>ECO 7406</td>
<td>Mathematical Economics II</td>
<td>3</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>CRW 6236</td>
<td>Nonfiction Writing</td>
<td>3</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>SDS 7945</td>
<td>Advanced Internship in Student Affairs Administration</td>
<td>1-6</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 7980</td>
<td>Dissertation</td>
<td>2-24</td>
<td>Provides students with an understanding of the changing demographics, environmental and developmental issues facing college students.</td>
</tr>
<tr>
<td>SDS 6624</td>
<td>Ecology of Campus Life</td>
<td>3</td>
<td>Provides students with an understanding of the changing demographics, environmental and developmental issues facing college students.</td>
</tr>
<tr>
<td>EEX 7745</td>
<td>Historical, Ethical, and Disciplinary Foundations of Special Education</td>
<td>3</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 Edua</td>
</tr>
<tr>
<td>EEX 7910</td>
<td>Directed Research</td>
<td>1-19</td>
<td>This course provides higher education program graduate students with an opportunity for directed research under the supervision of an higher education program faculty member.</td>
</tr>
<tr>
<td>EEX 7815</td>
<td>Research Seminar</td>
<td>1-9</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.</td>
</tr>
<tr>
<td>EEX 6602</td>
<td>Observational Methods and Functional Assessment</td>
<td>3</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>
</tr>
<tr>
<td>PHI 6634</td>
<td>Seminar in Biomedical Ethics</td>
<td>3</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>PHZ 5156C</td>
<td>Computational Physics I</td>
<td>3</td>
<td>C or Fortran programming applied to science and engineering problems. Data analysis,</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
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</tr>
<tr>
<td>ANG 6393</td>
<td>Anthropology, Contemporary Culture and the Media</td>
<td>3</td>
<td>Course entails the anthropological study of the role 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 familiarity with programming in a compiled language assumed.</td>
</tr>
<tr>
<td>EDF 5607</td>
<td>Trends in Education Politics</td>
<td>3</td>
<td>Contemporary education politics in the U.S. with interdisciplinary social-science perspectives.</td>
</tr>
<tr>
<td>GMS 6002</td>
<td>Success Skills in Biomedical Sciences</td>
<td>1</td>
<td>This course will introduce the beginning graduate student the tasks and skills necessary for success in the Biomedical Sciences PhD program, with an emphasis on ethical principles involved.</td>
</tr>
<tr>
<td>GMS 6921</td>
<td>Building a Patient-Oriented Research Center</td>
<td>1</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>ISM 6208</td>
<td>Data Warehousing</td>
<td>3</td>
<td>This course is designed for the MS graduate student and interested MBA students. The course covers the rapidly emerging data warehousing and data mining technologies that are likely to play a strategic role in business organizations.</td>
</tr>
<tr>
<td>ISM 6136</td>
<td>Data Mining</td>
<td>3</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 6316</td>
<td>Project Management</td>
<td>3</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>MAE 6334</td>
<td>Problem Solving for Elementary Teachers</td>
<td>3</td>
<td>This course analyzes problem-solving strategies of elementary teachers and their students.</td>
</tr>
<tr>
<td>LIS 6726C</td>
<td>Metadata</td>
<td>3</td>
<td>This course introduces concepts, principles, practices, and current issues of metadata, with the emphasis on the metadata implementations in the library, archive, and museum communities.</td>
</tr>
<tr>
<td>PHY 7980</td>
<td>Dissertation: Doctoral</td>
<td>2-12</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 6056</td>
<td>Practice of Public Management</td>
<td>3</td>
<td>Discusses community development principles</td>
</tr>
<tr>
<td>PAD 6336</td>
<td>Community Development</td>
<td>3</td>
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<tr>
<td>Program</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
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<tr>
<td>PAD 6355</td>
<td>Urban Growth Management</td>
<td>3</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>MVB 5251</td>
<td>Applied Trumpet</td>
<td>2-4</td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVB 5252</td>
<td>Applied French Horn</td>
<td>2-4</td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVB 5253</td>
<td>Applied Trombone</td>
<td>2-4</td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVB 5254</td>
<td>Applied Euphonium</td>
<td>2-4</td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVB 5255</td>
<td>Applied Tuba</td>
<td>2-4</td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVB 5251</td>
<td>Applied Piano</td>
<td>2-4</td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVS 5251</td>
<td>Applied Violin</td>
<td>2-4</td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVS 5252</td>
<td>Applied Viola</td>
<td>2-4</td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVS 5253</td>
<td>Applied Cello</td>
<td>2-4</td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVS 5254</td>
<td>Applied Double Bass</td>
<td>2-4</td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVV 5251</td>
<td>Applied Voice</td>
<td>2-4</td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVV 5251</td>
<td>Applied Flute</td>
<td>2-4</td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVV 5252</td>
<td>Applied Oboe</td>
<td>2-4</td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVV 5253</td>
<td>Applied Clarinet</td>
<td>2-4</td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVV 5254</td>
<td>Applied Bassoon</td>
<td>2-4</td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>MVW 5255</td>
<td>Applied Saxophone</td>
<td>2-4</td>
<td>Private and class instruction.</td>
</tr>
<tr>
<td>NGR 6538</td>
<td>Psychopharmacology</td>
<td>3</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>
</tr>
<tr>
<td>NGR 6650</td>
<td>Occupational Health Nursing I</td>
<td>2</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 6650L</td>
<td>Clinical Experiences In</td>
<td>1</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 6651</td>
<td>Occupational Health Nursing II</td>
<td>2</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>
<tr>
<td>NGR 6651L</td>
<td>Clinical Experiences in</td>
<td>1</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 6710</td>
<td>Teaching Strategies in Nursing Education</td>
<td>3</td>
<td>This course focuses on classroom and clinical teaching in nursing, including computer-based</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
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<tr>
<td>GEY 6627</td>
<td>Women and Aging</td>
<td>3</td>
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<tr>
<td>GEY 6643</td>
<td>End of Life Care for Dementia Patients</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>GEY 6646</td>
<td>Gerontological Issues and Concepts</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>GEY 6221</td>
<td>Ethical and Legal Issues in Aging</td>
<td>3</td>
<td></td>
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<tr>
<td>NGR 6800</td>
<td>Nursing Research</td>
<td>3</td>
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<tr>
<td>NGR 6905</td>
<td>Directed Independent Study</td>
<td>1-6</td>
<td>NGR 6800</td>
</tr>
<tr>
<td>NGR 6915</td>
<td>Directed Research</td>
<td>1-3</td>
<td>NGR 6800</td>
</tr>
<tr>
<td>NGR 6931</td>
<td>Selected Topics in Nursing</td>
<td>1-6</td>
<td></td>
</tr>
<tr>
<td>NGR 6944</td>
<td>Practicum in Acute Care Nursing</td>
<td>1-9</td>
<td>NGR 6143, NGR 6333 or NGR 6232</td>
</tr>
<tr>
<td>NGR 6947</td>
<td>Practicum in Nursing Education</td>
<td>2</td>
<td>NGR 6822, NGR 6710, NGR 6712</td>
</tr>
<tr>
<td>NGR 6971</td>
<td>Thesis: Master’s</td>
<td>1-9</td>
<td>NGR 6800</td>
</tr>
<tr>
<td>SDS 6641</td>
<td>Student Affairs Auxiliary Functions</td>
<td>3</td>
<td>SDS 6042</td>
</tr>
<tr>
<td>ACG 6028</td>
<td>Measuring Organizational</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>
### Effectiveness

An 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 level, their organizations are operating.

**ANG 5395 Visual Anthropology**

3

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.

**ART 6911 Directed Research**

1-19

Directed Research in which student must have a contract with an instructor.

**PHC 6907 Independent Study: Public Health**

1-6

Independent study determined by the student’s needs and interests.

**PHC 6930 Public Health Seminar**

1-3

Interaction of faculty, students and select health professionals in relation to public health issues and research.

**PHC 6934 Selected Topics in Public Health**

1-6

The content of this course will be governed by student demand and instructor interest.

**PHC 6945 Supervised Field Experience**

1-12

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.

**PHC 6971 Thesis: Master of Science in Public Health**

2-19

Research-oriented study for students seeking the M.S. degree in Public Health.

**PHC 6977 Special Project: MPH**

3

In-depth study of a selected issue in public health. A topic will be selected according to student’s needs and interests.

**PHC 7908 Specialized Study in Public Health**

1-9

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.

**PHC 7910 Directed Research**

1-19

Advanced research design and application.

**PHC 7931 Advanced Interdisciplinary Seminar in Public Health**

1-3

Students, faculty and other health professionals will participate in presenting and discussing contemporary health issues and possible solutions.

**PHC 7935 Special Topics In Public Health**

1-3

Content will include recent or current issues in public health.

**PHC 7980 Dissertation**

2-19

**PHC 6365C Analytical Methods in Industrial Hygiene I**

2

PHC 6356

Analytical measuring methodologies and instruments employed in evaluating exposure to chemical agents are described and detailed. Hands-on laboratory exercises permit full familiarization in the calibration and use of these instruments. Problem solving se

**PHC 6366C Analytical Methods in Industrial Hygiene II**

2

PHC 6356

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 se

**PHC 6510 Exotic and Emerging Infectious Diseases**

3

A study of human infectious disease with particular emphasis on diseases caused by
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Description</th>
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<tbody>
<tr>
<td>PHC 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>
<tr>
<td>PHC 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>SSE 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>PHC 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 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>
</tr>
<tr>
<td>PHC 6007</td>
<td>Cancer Epidemiology</td>
<td>3</td>
<td>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 6008</td>
<td>Cardiovascular Disease Epidemiology</td>
<td>3</td>
<td>PHC 6756 with a minimum grade of B-</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 6050</td>
<td>Biostatistics I</td>
<td>3</td>
<td>College Algebra</td>
<td>Concepts, principles, and methods of statistics applied to public health issues.</td>
</tr>
<tr>
<td>PHC 6051</td>
<td>Biostatistics II</td>
<td>3</td>
<td>PHC 6756 with a minimum grade of B</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 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 6020</td>
<td>Clinical Trials: Design, Conduct, and Analysis</td>
<td>3</td>
<td>PHC 6051 and (PHC 6053 or PHC 6756 or PHC 6757), all with a minimum grade of C</td>
<td>The course will familiarize students with the issues in the design, conduct, and analysis of clinical trials. Factors involved in randomization, sample size and power, missing data, RCT data analysis, reporting and interpreting RCT findings.</td>
</tr>
<tr>
<td>Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
<td>Description</td>
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</tr>
<tr>
<td>PHC</td>
<td>7018 Environmental Epidemiology</td>
<td>3</td>
<td>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 Occupational Epidemiology</td>
<td>3</td>
<td>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>6196 Information Systems in Healthcare Management</td>
<td>3</td>
<td></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>6102 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>
</tr>
<tr>
<td>PHC</td>
<td>6110 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>6146 Health Services Planning and Evaluation</td>
<td>3</td>
<td></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>6151 Health Policy and Politics</td>
<td>3</td>
<td></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 Health Care Financial Management</td>
<td>3</td>
<td>ACG 2021 or ACG 2071</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 Health Finance Applications</td>
<td>3</td>
<td>PHC 6160 with a minimum grade of C</td>
<td>The development and application of skills in finance, costing, and capital decision making relevant to health care management.</td>
</tr>
<tr>
<td>PHC</td>
<td>6180 Health Services Management</td>
<td>3</td>
<td></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 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</td>
</tr>
<tr>
<td>PHC</td>
<td>6104 Management of Public Health Programs</td>
<td>3</td>
<td></td>
<td>Application of principles and methods for organization and management of government and non-government public health programs.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Name</td>
<td>Credits</td>
<td>Prerequisites</td>
<td>Description</td>
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<tr>
<td>PHC 6191</td>
<td>Quantitative Analysis in Health</td>
<td>3</td>
<td>PHC 6760 with a minimum</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 queueing.</td>
</tr>
<tr>
<td></td>
<td>Services</td>
<td></td>
<td>grade of C</td>
<td></td>
</tr>
<tr>
<td>PHC 6430</td>
<td>Health Economics I</td>
<td>3</td>
<td>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>SYD 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>PHC 6760</td>
<td>Research Methods in Public</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></td>
<td>Health Programs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GEA 6745</td>
<td>Asian Geography Seminar</td>
<td>3</td>
<td></td>
<td>Analysis of regional divisions and spatial variations within Asia. Examines the significance of Asia in the global context. Focus on political, economic, cultural, and historical geographies, including development, environment, religion, and gender.</td>
</tr>
<tr>
<td>GIS 6038C</td>
<td>Remote Sensing</td>
<td>3</td>
<td>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>
</tr>
<tr>
<td>GEO 6215</td>
<td>Geomorphology Seminar</td>
<td>3</td>
<td>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>
<tr>
<td>GEO 6263</td>
<td>Soils Seminar</td>
<td>3</td>
<td>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 6288</td>
<td>Hydrological Systems</td>
<td>3</td>
<td>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>
<tr>
<td>CWR 6538</td>
<td>Advanced Hydrologic Models</td>
<td>3</td>
<td>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>GEO 6347</td>
<td>Natural Hazards</td>
<td>3</td>
<td>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 6475</td>
<td>Political Geography Seminar</td>
<td>3</td>
<td>GEO 4471</td>
<td>Advanced investigation of geopolitical issues including: the human construction of</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO 6545</td>
<td>Economic Geography Seminar</td>
<td>3</td>
<td>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 6605</td>
<td>Contemporary Urban Issues</td>
<td>3</td>
<td>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>
</tr>
<tr>
<td>GEO 6704</td>
<td>Advanced Transportation Geography</td>
<td>3</td>
<td>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>CES 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>EEX 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</td>
</tr>
<tr>
<td>SDS 7640</td>
<td>Student Affairs Administration</td>
<td>4</td>
<td>SDS 6042</td>
<td>Leadership, management and organizational models, perspectives and issues in administration of Student Affairs will be studied.</td>
</tr>
<tr>
<td>EME 7631</td>
<td>Research in Technology Project Management</td>
<td>3</td>
<td>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,</td>
</tr>
<tr>
<td>FLE 7939</td>
<td>Advanced Seminar in Foreign Language Education</td>
<td>3</td>
<td>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 fie</td>
</tr>
<tr>
<td>EME 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>SSE 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>EDH 6051</td>
<td>Higher Education in America</td>
<td>3</td>
<td></td>
<td>For current and prospective faculty, administrators, policy analysts, and staff</td>
</tr>
<tr>
<td>Code</td>
<td>Number</td>
<td>Title</td>
<td>Credits</td>
<td>Description</td>
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<tr>
<td>SDS</td>
<td>6701</td>
<td>Issues in Diversity</td>
<td>2</td>
<td>Addresses individual and organizational issues of multiculturalism and diversity in higher education.</td>
</tr>
<tr>
<td>ARH</td>
<td>6891</td>
<td>Paris Art History</td>
<td>4</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 o</td>
</tr>
<tr>
<td>MUE</td>
<td>7935</td>
<td>Seminar on Music in Higher Education</td>
<td>2</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</td>
</tr>
<tr>
<td>MAN</td>
<td>6726</td>
<td>Strategic Business Analysis</td>
<td>2</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</td>
</tr>
<tr>
<td>NGR</td>
<td>6723</td>
<td>Leadership and Applied Management in Nursing Healthcare</td>
<td>3</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>ECP</td>
<td>6415</td>
<td>Issues in Regulation and Antitrust</td>
<td>3</td>
<td>ECO 3101 or ECP 3703 or GEB 6114 Issues concerning rationale, structure and performance of government regulation and antitrust policy.</td>
</tr>
<tr>
<td>EIN</td>
<td>5275</td>
<td>Work Physiology and Biomechanics</td>
<td>3</td>
<td>Human physiological limitations encountered in design, analysis and evaluation of man-machine systems.</td>
</tr>
<tr>
<td>GEA</td>
<td>6215</td>
<td>Seminar in North American Geography</td>
<td>3</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>6504</td>
<td>Seminar in European Geography</td>
<td>3</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>
</tr>
<tr>
<td>GEO</td>
<td>6115</td>
<td>Advanced Field Techniques</td>
<td>3</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>GEO 6058 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>GIS</td>
<td>6100</td>
<td>Advanced Geographic Information Systems</td>
<td>3</td>
<td>Spatial problem solving utilizing GIS mapping and statistical methods. The course is designed</td>
</tr>
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<td>Credits</td>
<td>Prerequisites</td>
<td>Description</td>
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<tr>
<td>GIS 6039</td>
<td>Remote Sensing Seminar</td>
<td>3</td>
<td>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>GEO 6166</td>
<td>Multivariate Statistical Analysis</td>
<td>3</td>
<td>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>GIS 6307</td>
<td>GIS Seminar</td>
<td>3</td>
<td>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>
</tr>
<tr>
<td>GEO 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 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 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 d</td>
</tr>
<tr>
<td>PHC 6423</td>
<td>Environmental and Occupational Health Law</td>
<td>3</td>
<td></td>
<td>Review and analysis of Federal and State laws and regulations in relation to occupational and environmental health and safety.</td>
</tr>
<tr>
<td>HUM 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>JOU 6006</td>
<td>Digital Media and Democracy</td>
<td>3</td>
<td></td>
<td>This course will provide perspectives on and historical development of the practice of journalism in the digital era. Students will also make determinations about the efficacy of digital journalism in building or diminishing democracy.</td>
</tr>
<tr>
<td>BCH 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 6411</td>
<td>Biomedical Genomics and Genetics</td>
<td>4</td>
<td>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</td>
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<td>Course Code</td>
<td>Course Title</td>
<td>Units</td>
<td>Description</td>
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<tr>
<td>BME 6108</td>
<td>Biomaterials II Biocompatibility</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>NGR 7980</td>
<td>Dissertation: Doctoral</td>
<td>2-12</td>
<td>Directed research and writing of dissertation topic appropriate to the discipline. Restricted to majors; repeatable for credit</td>
<td></td>
</tr>
<tr>
<td>ANG 6495</td>
<td>Oral History and Life History: Approaches to Qualitative Research</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>ART 6688</td>
<td>Electronic Media</td>
<td>4</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>
<td></td>
</tr>
<tr>
<td>EVR 6936</td>
<td>Seminar in Environmental Science</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>RED 6449</td>
<td>Literacy and Technology</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>SCE 6947</td>
<td>Internship in Secondary Education for Social Sciences</td>
<td>6</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>
<td></td>
</tr>
<tr>
<td>SSE 6947</td>
<td>Internship in Secondary Education for Science</td>
<td>6</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>
<td></td>
</tr>
<tr>
<td>RED 6656</td>
<td>Literature for a Diverse Society</td>
<td>3</td>
<td>Focuses on the examination of historical and contemporary multicultural children’s, adolescent and young adult literature in order gain a pluralistic perspective of society. On-line course requires intensive writing and how to write in an Academic Voice.</td>
<td></td>
</tr>
<tr>
<td>MUS 6910</td>
<td>Directed Research</td>
<td>1-19</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>
<td></td>
</tr>
<tr>
<td>COM 6045</td>
<td>Communicating Leadership</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>COM 6017</td>
<td>Gender in the Workplace</td>
<td>3</td>
<td>This course focuses on the workplace as a site of gendered communication practices. A</td>
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<td>Course Code</td>
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<tr>
<td>GLY 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>LAE 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>PHY 6753</td>
<td>Measurement and Instrumentation</td>
<td>3</td>
<td></td>
<td>Measurement, signals and noise; analog/digital conversion; data communication; digital signal processing. LabVIEW programming, instrument control, data acquisition through RS232 and GPIB interface. Familiarity with electronic circuits recommended.</td>
</tr>
<tr>
<td>FIN 6416</td>
<td>Advanced Financial Management</td>
<td>3</td>
<td>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 tra</td>
</tr>
<tr>
<td>PHC 7058</td>
<td>Biostatistical Inference II</td>
<td>3</td>
<td>STA 6447</td>
<td>This course covers the foundation of biostatistical inference, required for biostatistic program. Topics include likelihood theory, modern Bayes theory, estimation and testing, non-parametric theory.</td>
</tr>
<tr>
<td>EEX 6307</td>
<td>Qualitative Research in Special Education</td>
<td>3</td>
<td>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>PHC 7098</td>
<td>Generalized Linear Models</td>
<td>3</td>
<td></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 equat</td>
</tr>
<tr>
<td>PHC 7059</td>
<td>Advanced Survival Data Analysis</td>
<td>3</td>
<td>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 7056</td>
<td>Longitudinal Data Analysis</td>
<td>3</td>
<td>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>
</tr>
<tr>
<td>PHC 6057</td>
<td>Biostatistical Inference I</td>
<td>3</td>
<td>PHC 6096, with a minimum</td>
<td>This course is primarily designed for students</td>
</tr>
<tr>
<td>Course Code</td>
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<tr>
<td>PHC 6120</td>
<td>Community Partnerships and Advocacy</td>
<td>3</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...</td>
<td></td>
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<tr>
<td>EIN 5350</td>
<td>Technology and Finance</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>EEL 6425</td>
<td>RF &amp; Microwave Measurements</td>
<td>2</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>
<td></td>
</tr>
<tr>
<td>LIS 6110</td>
<td>History of Libraries</td>
<td>3</td>
<td>Development of libraries as found from the earliest records to the great libraries of modern times, and the library as a social institution.</td>
<td></td>
</tr>
<tr>
<td>LIS 6111</td>
<td>History of Children's Literature</td>
<td>3</td>
<td>Historical bibliographical survey of imaginative and information literature for children.</td>
<td></td>
</tr>
<tr>
<td>ANG 6100</td>
<td>Topics in Archaeological Science</td>
<td>3</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>
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<tr>
<td>LIS 6528</td>
<td>Storytelling</td>
<td>3</td>
<td>LIS 6585</td>
<td></td>
</tr>
<tr>
<td>LIS 6260</td>
<td>Foundations of Information Science and Technology</td>
<td>3</td>
<td>Overview of the interdisciplinary field of information science. The fundamental concepts of information retrieval systems and subsystems, related information technologies, and other core functions in the organization, access, and use of information.</td>
<td></td>
</tr>
<tr>
<td>LIS 6303</td>
<td>Preparing Instructional Media</td>
<td>3</td>
<td>Fundamentals of preparing and using audiovisuals as they relate to the communication process.</td>
<td></td>
</tr>
<tr>
<td>LIS 6271</td>
<td>Research Methods in Library and Information Science</td>
<td>3</td>
<td>LIS 5020, LIS 6603, and LIS 6725 or LIS 6735.</td>
<td></td>
</tr>
<tr>
<td>JOU 5105</td>
<td>Newswriting and Editing</td>
<td>3</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</td>
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<tr>
<td>MMC 6206</td>
<td>Mass Communications Ethics</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>PUR 6607</td>
<td>Strategic Communication Management</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>PHC 6411</td>
<td>Introduction to Social Marketing for Public Health</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>MAN 6607</td>
<td>Managing International Cultural Differences</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>FIN 6406</td>
<td>Financial Management</td>
<td>2-3</td>
<td>ACG 6025 and ECP 6702. 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 un</td>
<td></td>
</tr>
<tr>
<td>ENG 6018</td>
<td>Studies in Criticism and Theory I</td>
<td>3</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>
<td></td>
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<tr>
<td>ANG 6153</td>
<td>Topics in North American Archaeology</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>ANG 6163</td>
<td>Topics in Mesoamerican Archaeology</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>ANG 6165</td>
<td>Topics in South American Archaeology</td>
<td>3</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</td>
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<td>Course Code</td>
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<tr>
<td>PCB 6455</td>
<td>Statistical Ecology</td>
<td>3</td>
<td>Introduction to exploratory data analysis in ecology. Techniques for dealing with encountered data are emphasized.</td>
<td></td>
</tr>
<tr>
<td>CCJ 6707</td>
<td>Quantitative Analysis in Criminology II</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>ISS 6184</td>
<td>Development Ethics: Principles and Practice</td>
<td>3</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 g</td>
<td></td>
</tr>
<tr>
<td>CCJ 7980</td>
<td>Doctoral Dissertation</td>
<td>2-12</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>
<td></td>
</tr>
<tr>
<td>CCJ 7910</td>
<td>Advanced Research</td>
<td>1-12</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>
<td></td>
</tr>
<tr>
<td>CCJ 6931</td>
<td>Seminar in Criminological Theory</td>
<td>3</td>
<td>Course is designed to provide an in-depth analysis of specific theoretical issues in criminology.</td>
<td></td>
</tr>
<tr>
<td>CCJ 6905</td>
<td>Directed Independent Study</td>
<td>1-12</td>
<td>Independent study in which student must have contract with instructor.</td>
<td></td>
</tr>
<tr>
<td>HIM 6114</td>
<td>Integrated Electronic Medical Records</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>HIM 6350</td>
<td>e-Medicine Business Models</td>
<td>3</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.</td>
<td></td>
</tr>
<tr>
<td>EDF 6935</td>
<td>Wellness Programming Seminar</td>
<td>2</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 p</td>
<td></td>
</tr>
<tr>
<td>SOW 6126</td>
<td>Health, Illness, and Disability</td>
<td>2</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>
<td></td>
</tr>
<tr>
<td>SDS 7642</td>
<td>Advanced Seminar in Student Affairs</td>
<td>1-4</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>
<td></td>
</tr>
<tr>
<td>ACG 6457</td>
<td>Accounting Systems Audit, Control, and Security</td>
<td>3</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>
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<td>Course Code</td>
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<td>Prerequisites</td>
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<tr>
<td>NGR 6210C</td>
<td>Clinical Management of the Acutely Ill Adult</td>
<td>7</td>
<td>NGR 6002C and NGR 6143</td>
<td>Students will learn to manage commonly encountered chronic episodic health problems in adults and older adults. The course will review the spectrum of care from stabilizing the patient's condition to preventing complications and restoring maximum health.</td>
</tr>
<tr>
<td>CCJ 6708</td>
<td>Quantitative Analysis in Criminology III</td>
<td>3</td>
<td>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 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.</td>
</tr>
<tr>
<td>POS 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 cri</td>
</tr>
<tr>
<td>PCB 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 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>EDE 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>
</tr>
<tr>
<td>EDE 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>GEY 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>EDE 6458</td>
<td>Reflecting on Instructional Decision Making</td>
<td>1-3</td>
<td></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>EVR 6921</td>
<td>Scholarly Presentation of Environmental Research</td>
<td>1-2</td>
<td></td>
<td>Discussion and practice in methods of writing, presenting, and defending cross-disciplinary environmental research. Written and oral assignments on communicating research</td>
</tr>
<tr>
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<td>Credits</td>
<td>Corequisites</td>
<td>Description</td>
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<tr>
<td>GIS 5075</td>
<td>Global Positioning Systems</td>
<td>3</td>
<td>GIS 5049</td>
<td>Examination of the theory, operation and application of Global Positioning Systems (GPS).</td>
</tr>
<tr>
<td>GIS 6355</td>
<td>Water Resources Applications of GIS</td>
<td>3</td>
<td>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>
</tr>
<tr>
<td>GIS 6112</td>
<td>Spatial Database Development</td>
<td>3</td>
<td>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 6103</td>
<td>Programming for GIS</td>
<td>3</td>
<td>GEO 6157</td>
<td>Examination of the concepts and techniques for customization of Geographical Information Systems (GIS) using object-oriented programming.</td>
</tr>
<tr>
<td>EVR 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>MCB 5655</td>
<td>Applied and Environmental Microbiology</td>
<td>3</td>
<td>MCB 3020</td>
<td>A Study of the applications of microbiology to the food/beverage industry, agriculture, public health and bioremediation. This course is a microbiology elective and has a mandatory field trip.</td>
</tr>
<tr>
<td>MUE 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>FLE 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>LAE 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>NGR 6215</td>
<td>Primary Care: Adult Health Management</td>
<td>3</td>
<td>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>
</tr>
<tr>
<td>ISM 6155</td>
<td>Enterprise Information Systems Management</td>
<td>3</td>
<td>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</td>
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<tr>
<td><strong>LIS 5268</strong></td>
<td>Microcomputer Applications</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td><strong>WST 6900</strong></td>
<td>Directed Readings</td>
<td>1-3</td>
<td>Supervised program of intensive readings of an interdisciplinary nature focusing on women. Student must have contract with instructor.</td>
<td></td>
</tr>
<tr>
<td><strong>WST 6910</strong></td>
<td>Directed Research</td>
<td>1-3</td>
<td>Provide graduate students with research experience in areas of specific interest utilizing feminist perspectives and research methods.</td>
<td></td>
</tr>
<tr>
<td><strong>EML 6653</strong></td>
<td>Applied Elasticity</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td><strong>WST 6406</strong></td>
<td>Women of Color: Activism and Social Change</td>
<td>3</td>
<td>Intensive reading and discussion of the participation of women of color in contemporary and reformist activities.</td>
<td></td>
</tr>
<tr>
<td><strong>WST 6560</strong></td>
<td>Advanced Feminist Theory</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td><strong>EDF 7265</strong></td>
<td>Psychology of Oral and Written Language Development</td>
<td>4</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>
<td></td>
</tr>
<tr>
<td><strong>LAS 6936</strong></td>
<td>Seminar in Latin American Studies I</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td><strong>GEY 6940</strong></td>
<td>Field Placement</td>
<td>1-6</td>
<td>An internship in an agency or organization engaged in planning or administering programs for older people or in providing direct services for older people.</td>
<td></td>
</tr>
<tr>
<td><strong>PHM 5126</strong></td>
<td>Social Issues in Biomedical Ethics</td>
<td>3</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 t</td>
<td></td>
</tr>
<tr>
<td><strong>ISM 6971</strong></td>
<td>Thesis: Master’s</td>
<td>2-6</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 allow</td>
<td></td>
</tr>
<tr>
<td><strong>ISM 7912</strong></td>
<td>Seminar on Behavioral IS Research</td>
<td>3</td>
<td>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.</td>
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<tr>
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<tr>
<td>MAN</td>
<td>Leadership and Teams</td>
<td>3</td>
<td>haplaceholders.</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...</td>
</tr>
<tr>
<td>AML</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 cult...</td>
</tr>
<tr>
<td>CCE</td>
<td>Construction Management &amp; Planning</td>
<td>3</td>
<td>EGN 3613C.</td>
<td>Fundamentals of construction management. Topics include: general definitions, organizational roles, types of contracts, analysis of labor and equipment, cost estimating, contractor cash flow analysis, planning and scheduling, project control, constructo...</td>
</tr>
<tr>
<td>FLE</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>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. Rep...</td>
</tr>
<tr>
<td>SLA</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...</td>
</tr>
<tr>
<td>SLA</td>
<td>Directed Research in Second Language Acquisition/ Instructional Technology</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>SLA</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 exp...</td>
</tr>
<tr>
<td>SLA</td>
<td>Dissertation</td>
<td>2-18</td>
<td></td>
<td>...</td>
</tr>
<tr>
<td>NGR</td>
<td>Nurse Anesthesia Clinical Residency IV</td>
<td>4</td>
<td>NGR 6002C, NGR 6080, NGR 6121, NGR 6140, NGR 6172, NGR 6737, NGR 6800 AND NGR 6200, 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>MUE</td>
<td>Techniques and Research in Alternate Music Education Methods</td>
<td>3</td>
<td>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>Course Code</td>
<td>Course Title</td>
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<td>Description</td>
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<tr>
<td>PHC 6369</td>
<td>Industrial Toxicology</td>
<td>2</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...</td>
<td></td>
</tr>
<tr>
<td>PHC 7368</td>
<td>Aerosol Technology in Industrial Hygiene</td>
<td>2</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...</td>
<td></td>
</tr>
<tr>
<td>LIS 6624</td>
<td>Information Sources and Services in Business and Law</td>
<td>3 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>
<td></td>
</tr>
<tr>
<td>BME 6107</td>
<td>Biomaterials I: Material Properties</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>EDF 6531</td>
<td>History of Childhood</td>
<td>3</td>
<td>History of modern childhood, including diversity of childhood experiences and social construction of age categories.</td>
<td></td>
</tr>
<tr>
<td>EDF 7167</td>
<td>Experiential Learning: Theory and Methods</td>
<td>3</td>
<td>Theory and methods of experiential learning in both formal and organizational contexts.</td>
<td></td>
</tr>
<tr>
<td>CRW 6164</td>
<td>The Craft of Fiction</td>
<td>3</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...</td>
<td></td>
</tr>
<tr>
<td>PHC 6060</td>
<td>Biostatistical Case Studies and Collaboration I</td>
<td>3</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...</td>
<td></td>
</tr>
<tr>
<td>PHC 6061</td>
<td>Biostatistical Case Studies and Collaboration II</td>
<td>3 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.</td>
<td></td>
</tr>
<tr>
<td>COM 6313</td>
<td>Interpreting Communication Research</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>COM 6418</td>
<td>Communication and Systems Practice</td>
<td>3</td>
<td>Systems theories offer possibilities for understanding interconnections and emergence, identities and environments, and...</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Pre-requisites</td>
<td>Description</td>
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<tr>
<td>EEX 7428</td>
<td>Teacher Education in Special Education: Conceptual</td>
<td>3</td>
<td></td>
<td>Stability and change, with communication processes being central. We explore social systems principles by linking theory and praxis. This four-semester seminar focuses on teacher education in special education.</td>
</tr>
<tr>
<td>EML 6570</td>
<td>Principles of Fracture Mechanics</td>
<td>3</td>
<td>EML 3500.</td>
<td>Introduction to the mechanics of brittle and ductile fracture. Linear elastic fracture, elastic-plastic fracture, testing, metals and non-metal materials, and fatigue fracture.</td>
</tr>
<tr>
<td>ENG 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>FLE 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>
</tr>
<tr>
<td>FLE 5145</td>
<td>Language Principles, Acquisition and Teaching</td>
<td>3</td>
<td>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>TSL 5940</td>
<td>ESOL Practicum</td>
<td>1-3</td>
<td>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>GEO 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>GMS 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 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>
</tr>
<tr>
<td>GMS 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>
</tr>
<tr>
<td>INR 6690</td>
<td>Research Seminar</td>
<td>3</td>
<td>INR 5012.</td>
<td>Examination and presentation of research from...</td>
</tr>
<tr>
<td>Course Code</td>
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<td>Credits</td>
<td>Prerequisites</td>
<td>Description</td>
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<tr>
<td>ORI 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>NGR 7823</td>
<td>Psychometrics and Measurement for Nursing Research</td>
<td>3</td>
<td>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>GEY 6941</td>
<td>Field Placement in Mental Health</td>
<td>1-6</td>
<td>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>PHC 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.</td>
</tr>
<tr>
<td>BSC 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>ENV 5504C</td>
<td>Environmental Engineering Processes</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>CWR 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.</td>
</tr>
<tr>
<td>ENV 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. CI.</td>
</tr>
<tr>
<td>FLE 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 5331</td>
<td>Methods of Teaching Foreign Language and ESOL in the Secondary School</td>
<td>3</td>
<td>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>BCH 6627</td>
<td>Molecular Basis of Disease</td>
<td>4</td>
<td>GMS 6200C</td>
<td>The course will deal with the genetic, molecular, and biochemical basis of human diseases.</td>
</tr>
<tr>
<td>SDS 7643</td>
<td>Advanced Student</td>
<td>4</td>
<td>SDS 6645 or equivalent</td>
<td>Contemporary theories of college student</td>
</tr>
<tr>
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<td>Title</td>
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<td>Description</td>
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<tr>
<td>SDS</td>
<td>Development Theories</td>
<td>4</td>
<td>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 program.</td>
<td></td>
</tr>
<tr>
<td>PHC</td>
<td>Enrollment Management</td>
<td>4</td>
<td>Introduction to and overview of a multifaceted 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>
<td></td>
</tr>
<tr>
<td>PHC</td>
<td>Theoretical Application to Public Health Issues</td>
<td>3</td>
<td>Designed for the advanced doctoral student focusing on the application of theory for developing, implementing, and evaluating public health interventions.</td>
<td></td>
</tr>
<tr>
<td>PHC</td>
<td>Risk Communication in Public Health</td>
<td>3</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.</td>
<td></td>
</tr>
<tr>
<td>PHC</td>
<td>Policy and Practice in Community and Family Health</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>PHC</td>
<td>Health Care Law, Regulation and Ethics</td>
<td>3</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 practice.</td>
<td></td>
</tr>
<tr>
<td>PHC</td>
<td>Disease Surveillance and Monitoring</td>
<td>3</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 principles will be examined.</td>
<td></td>
</tr>
<tr>
<td>PHC</td>
<td>Secondary Data Analysis in Maternal and Child Health</td>
<td>3</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.</td>
<td></td>
</tr>
<tr>
<td>PHC</td>
<td>Managing Quality in Health Care</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>PHC</td>
<td>Writing for Scholarly Publication in Health Science</td>
<td>3</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>
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<tr>
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<tr>
<td>NGR 6824</td>
<td>Data Analysis for Health Sciences</td>
<td>3</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 biops.</td>
<td></td>
</tr>
<tr>
<td>BSC 7911</td>
<td>Directed Research in Cancer Biology</td>
<td>1-12</td>
<td>Student research will be performed under the guidance of Ph.D. prior to formation of dissertation committee.</td>
<td></td>
</tr>
<tr>
<td>ZOO 5456L</td>
<td>Ichthyology Lab</td>
<td>1</td>
<td>Laboratory portion of Ichthyology relating to evolution, systematics, structure, behavior, physiology and ecology of fishes.</td>
<td></td>
</tr>
<tr>
<td>NGR 5871</td>
<td>Informatics in Nursing and Healthcare</td>
<td>3</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.</td>
<td></td>
</tr>
<tr>
<td>AFA 6905</td>
<td>Independent Study</td>
<td>1-19</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>
<td></td>
</tr>
<tr>
<td>SSE 7910</td>
<td>Directed Research in Social Sciences Education</td>
<td>1-9</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>
<td></td>
</tr>
<tr>
<td>SCE 7910</td>
<td>Directed Research in Science Education</td>
<td>1-19</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>
<td></td>
</tr>
<tr>
<td>MAE 7910</td>
<td>Directed Research in Mathematics Education</td>
<td>1-19</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>
<td></td>
</tr>
<tr>
<td>LAE 7910</td>
<td>Directed Research in English Education</td>
<td>1-19</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>
<td></td>
</tr>
<tr>
<td>GMS 6513</td>
<td>Principles of Pharmacology and Therapeutics</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>ESE 5342</td>
<td>Teaching the Adolescent Learner</td>
<td>3</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 resp.</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credit</td>
<td>Prerequisites</td>
<td>Description</td>
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<tr>
<td>NGR 622L</td>
<td>Practicum I in Advanced Oncology Nursing Practice</td>
<td>3</td>
<td>NGR 6140, NGR 6172, NGR 6002C, NGR 6121, NGR 6737, NGR 6080, NGR 6800, NGR 6220, NGR 6221.</td>
<td>Provides clinical experiences in advanced oncology nursing focused on the application of theoretical and conceptual knowledge relevant to adults with cancer or at risk. Clinical assessment is focused on developing assessment skills and documentation.</td>
</tr>
<tr>
<td>NGR 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>ART 5580C</td>
<td>Painting</td>
<td>4</td>
<td></td>
<td>Research in painting</td>
</tr>
<tr>
<td>GMS 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>ECH 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>SCE 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>PHC 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>SPA 6349</td>
<td>Advanced Study of Sensory Aids for Hearing Impaired</td>
<td>3</td>
<td>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>SSE 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>MHS 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 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</td>
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<tr>
<td>MHS 6900</td>
<td>Special Topics in Planning, Evaluation and Accountability</td>
<td>1-3</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>
<td></td>
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<tr>
<td>MHS 5905</td>
<td>Directed Studies</td>
<td>1-4</td>
<td>Independent studies on a selected topic.</td>
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<tr>
<td>INP 6057</td>
<td>Industrial Psychology</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>PHY 5720C</td>
<td>Electronics for Research</td>
<td>3</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 instrumentat</td>
<td></td>
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<tr>
<td>TSL 5085</td>
<td>ESOL I - Theory and Practice of Teaching English Language Learners</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>TSL 5086</td>
<td>ESOL II-Secondary Language &amp; Literacy Acquisition in Children &amp; Adolescents</td>
<td>3</td>
<td>TSL 5085. 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>
<td></td>
</tr>
<tr>
<td>FLE 5895</td>
<td>Dual Language Education</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>FLE 5946</td>
<td>Practicum in Foreign Language/ESOL Teaching</td>
<td>3</td>
<td>FLE 5313. 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>
<td></td>
</tr>
<tr>
<td>MAE 6126</td>
<td>Current Trends in Middle Grades Mathematics</td>
<td>3</td>
<td>MAE 6356. 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>
<td></td>
</tr>
<tr>
<td>MAE 6127</td>
<td>Probability and Statistics for Middle Grades Teachers</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>MAE 6643</td>
<td>Communication Skills in Mathematics</td>
<td>3</td>
<td>This course examines issues related to communicating in mathematics, including reading, writing, speaking, and listening. It</td>
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<tr>
<td>MAE 6324</td>
<td>Advanced Math Topics - Middle Grades Teachers</td>
<td>3</td>
<td>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>SSE 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 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>SSE 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 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>PHC 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 implicat</td>
</tr>
<tr>
<td>PUR 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 &quot;bridge&quot; between undergraduate and graduate public relations and advertising education, and between professional communication practices and strategic communication scholarship.</td>
</tr>
<tr>
<td>SPA 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 6102</td>
<td>Neuroanatomy for Speech and Hearing</td>
<td>3</td>
<td>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 6311</td>
<td>Medical Audiology</td>
<td>3</td>
<td>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</td>
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<tr>
<td>SPA 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>GEY 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 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>ADE 6198</td>
<td>Effective Continuing Education for Professionals</td>
<td>3</td>
<td>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 7076</td>
<td>Continuing Education in Higher Education</td>
<td>3</td>
<td>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 7676</td>
<td>Human Resource Development Policy Seminar</td>
<td>3</td>
<td>ADE 6370</td>
<td>This course emphasizes complex skills, concepts and strategies related to the adult teaching/learning component and policy formation of human resource development in business, industry, government, education, and voluntary organizations.</td>
</tr>
<tr>
<td>ADE 7930</td>
<td>Seminar in Adult Education</td>
<td>4</td>
<td>ADE 6385 and ADE 6080</td>
<td>This is an intensive induction into doctoral studies in adult education stressing scholarly inquiry, professionalism, collegiality, and the doctoral degree process.</td>
</tr>
<tr>
<td>EIN 6145</td>
<td>Project Management</td>
<td>3</td>
<td>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>
</tr>
<tr>
<td>PAD 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>BMS 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</td>
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<tr>
<td>GEY 7604</td>
<td>Biomedical Aging</td>
<td>3</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>
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</tr>
<tr>
<td>GEY 7610</td>
<td>Psychological Issues of Aging: Interdisciplinary Perspective</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>PET 6235</td>
<td>Motor Learning</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>PET 6317</td>
<td>Applied Biomechanics</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>APK 6111</td>
<td>Advanced Exercise Physiology</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>APK 6104</td>
<td>Developmental Exercise Physiology</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>PET 6525L</td>
<td>Laboratory Techniques in Exercise Science</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>PET 6971</td>
<td>Thesis: Physical Education</td>
<td>1-5</td>
<td>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>
<td></td>
</tr>
<tr>
<td>PHC 6313</td>
<td>Indoor Environmental Quality</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>PHC 7937</td>
<td>Advanced Seminar in Grant-Writing</td>
<td>3</td>
<td>This course addresses advanced skills and techniques necessary for writing successful research grant proposals. The focus is on</td>
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<tr>
<td>PHC 6230</td>
<td>Foundations of Humanitarian Assistance</td>
<td>3</td>
<td></td>
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<tr>
<td>PHC 6233</td>
<td>Current Challenges in the Humanitarian Field</td>
<td>3</td>
<td>PHC 6230, 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 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 6232</td>
<td>From Emergency to Development and Prevention</td>
<td>3</td>
<td>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>EIN 6430</td>
<td>Overview of Regulated Industries</td>
<td>3</td>
<td></td>
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<tr>
<td>EIN 6431</td>
<td>Regulated Quality Systems and Control</td>
<td>3</td>
<td>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 6432</td>
<td>Regulated Product Approval Process</td>
<td>3</td>
<td>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 6433</td>
<td>Human Factors Engineering in Medical Devices</td>
<td>3</td>
<td>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 6434</td>
<td>Design Controls for Medical Devices</td>
<td>3</td>
<td>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>
</tr>
<tr>
<td>EIN 6435</td>
<td>International Regulations for</td>
<td>3</td>
<td>EIN 6430</td>
<td>The course provides students with information</td>
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<tr>
<td>MHS 6645</td>
<td>Medical Devices</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>EDF 7412</td>
<td>Application of Structural Equation Modeling in Education</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>EVR 6101</td>
<td>Geomorphology for Environmental Scientists</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>EVR 6930</td>
<td>Research Colloquium in Environmental Science and Policy</td>
<td>1</td>
<td>Scholarly presentations by invited academic researchers and leading policy decision-makers.</td>
<td></td>
</tr>
<tr>
<td>BCH 6746</td>
<td>Structural Biology</td>
<td>3</td>
<td>The theory and application of modern physical biochemical techniques.</td>
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</tr>
<tr>
<td>GMS 6200C</td>
<td>Biochemistry, Molecular and Cellular Biology</td>
<td>5</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>
<td></td>
</tr>
<tr>
<td>MHS 6311</td>
<td>Online Services in Counseling and Helping Professions</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>BME 6420</td>
<td>Human Sensory Processes</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>BME 6931</td>
<td>Selected Topics in Biomedical Engineering</td>
<td>1-3</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>
<td></td>
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<tr>
<td>EIN 5174</td>
<td>Total Quality Management Concepts</td>
<td>3</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.</td>
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<tr>
<td>EIN 6177</td>
<td>Total Quality Management Seminar</td>
<td>3</td>
<td>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 6178</td>
<td>ISO 9000/14000</td>
<td>3</td>
<td>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 6179</td>
<td>Advanced TQM Methods: Six Sigma</td>
<td>3</td>
<td>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>
</tr>
<tr>
<td>ENV 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>EEE 6425</td>
<td>Introduction to Nanotechnology</td>
<td>3</td>
<td>Physics I, Chemistry I and Calculus 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>EVR 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>
</tr>
<tr>
<td>PHC 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>ACG 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>GEY 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 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>EDF 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</td>
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<tr>
<td>NGR</td>
<td>6305L</td>
<td>Primary Care Practicum: Children</td>
<td>2-3</td>
<td>NGR 6002C, NGR 6121, NGR 6140, NGR 6199</td>
</tr>
<tr>
<td>EEC</td>
<td>7056</td>
<td>Leadership and Advocacy: Issues Affecting Young Children</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>EEC</td>
<td>7416</td>
<td>Sociocultural Approaches to Working with Children and Families</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>EEC</td>
<td>7057</td>
<td>Critical Perspectives in Early Childhood Education</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>GEY</td>
<td>7623</td>
<td>Social and Health Issues in Aging</td>
<td>3</td>
<td></td>
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<tr>
<td>EEC</td>
<td>7615</td>
<td>Trends and Issues in Early Childhood Education</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>EEC</td>
<td>7306</td>
<td>Teaching and Learning in Early Childhood</td>
<td>3</td>
<td></td>
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<tr>
<td>GLY</td>
<td>6255</td>
<td>Tracer Geochemistry</td>
<td>3</td>
<td>GLY 6246</td>
</tr>
<tr>
<td>GLY</td>
<td>6836</td>
<td>Numerical Modeling of Hydrogeologic Systems</td>
<td>3</td>
<td>GLY 6827C</td>
</tr>
<tr>
<td>LAE</td>
<td>5862</td>
<td>Classroom Communication in English Education</td>
<td>3</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
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<tr>
<td>ANG 6302</td>
<td>Gender in Cross-Cultural Perspective</td>
<td>3</td>
<td></td>
<td>you become effective classroom communication managers. Emphasis on role of media &amp; non-print texts in students’ lives.</td>
</tr>
<tr>
<td>ANG 6731</td>
<td>Health and Disasters</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>
<tr>
<td>MCB 6433</td>
<td>Clinical Correlations in Molecular Medicine</td>
<td>3</td>
<td>GMS 6001 or GMS 6200.</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>GEB 6118</td>
<td>Business Enterprise</td>
<td>3</td>
<td></td>
<td>The course applies knowledge in finance, marketing, management and accounting in determining how a business enterprise is formed and operated. The course will emphasize pre-business feasibility studies, start-up, management and succession or termination.</td>
</tr>
<tr>
<td>GMS 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.</td>
</tr>
<tr>
<td>GMS 6012</td>
<td>Basic Medical Genetics</td>
<td>3</td>
<td>1 yr. Biology; 1 yr. Chemistry.</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>
</tr>
<tr>
<td>GMS 6141</td>
<td>Basic Medical Immunology and Microbiology</td>
<td>3</td>
<td>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 6440</td>
<td>Basic Medical Physiology</td>
<td>3</td>
<td>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 6505</td>
<td>Basic Medical Pharmacology</td>
<td>3</td>
<td>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</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
<td>Course Description</td>
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<tr>
<td>SCE 6744</td>
<td>Survey Update of Environmental Research</td>
<td>3</td>
<td></td>
<td>Current &amp; future scientific research topics of long term importance are explored</td>
</tr>
<tr>
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<td>Management Policies</td>
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<td>providing an integrated update in science. Complex connections among the various</td>
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<td></td>
<td>natural, math, &amp; social science; agriculture; psychology; &amp; engineering are</td>
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<td></td>
<td></td>
<td>emphasized.</td>
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<tr>
<td>NGR 7123</td>
<td>Theory Development in Nursing</td>
<td>3</td>
<td></td>
<td>This course focuses on the process and</td>
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<td>foundations of theory development and theory</td>
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<td></td>
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<td>construction in nursing science. Elements of scientific underpinnings of</td>
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<td>knowledge development in the discipline are incorporated. The relationship between</td>
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<td>theory constru</td>
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<tr>
<td>NGR 7915</td>
<td>Advanced Directed Research in Nursing</td>
<td>1-6</td>
<td></td>
<td>Specialized individual participation in research activity, including but not limited</td>
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<td>to pilot studies and other investigative activities.</td>
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<tr>
<td>GEY 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</td>
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<td>causes/consequences of aging &amp; its effects on the populations of the U.S. and the</td>
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<td>world. Emphasis is on demographic, social, political, and economic processes. Not</td>
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<td>repeatable.</td>
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<tr>
<td>GEB 6368</td>
<td>Global Business Environment</td>
<td>3</td>
<td></td>
<td>An overview of how international business</td>
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<td>operates in the changing global environment. The course looks at emerging patterns</td>
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<td>of international trade, foreign investment and international competitiveness for</td>
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<td>both large corporations and small firms.</td>
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<tr>
<td>SPA 6307</td>
<td>Speech Perception and Sensorineural Hearing Loss</td>
<td>3</td>
<td>SPA 5120, SPA 5303.</td>
<td>The course will provide an overview of the factors involved in quantifying speech</td>
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<td>perception ability in listeners with normal and impaired hearing.</td>
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<tr>
<td>TSL 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</td>
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<td>learners in their schools. Provides them with current research and guidance in the</td>
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<td>areas of program development, legislative mandates, and learner characteristics.</td>
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<tr>
<td>FLE 6167</td>
<td>Cross-Cultural Issues in Teaching ESOL</td>
<td>3</td>
<td></td>
<td>Designed for K-12 &amp; adult educ environment to help participants develop awareness &amp;</td>
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<td>understanding of the major cultures represented by the different language groups</td>
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<td>within the State of Florida (teach cultural awareness &amp; cross-cultural understanding).</td>
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<tr>
<td>TSL 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</td>
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<td>relevant to the field of applied linguistics 7 second language teaching. Course</td>
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<td>will survey sub-fields of linguistics (phonetics, phonology, morphology, semantics,</td>
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<td></td>
<td></td>
<td></td>
<td>and syntax).</td>
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<tr>
<td>TSL 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, adap</td>
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<td>t, design assessment instruments &amp; testing techniques reflective of instructional</td>
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<td>goals &amp; needs of linguistically &amp; culturally diverse.</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
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<tr>
<td>EIN 6217</td>
<td>Construction Safety Engineering</td>
<td>3</td>
<td></td>
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<tr>
<td>TSL 6390</td>
<td>Instruct Methods and Strategies for Teaching ESOL</td>
<td>3</td>
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<tr>
<td>GMS 6710</td>
<td>Introduction to Behavioral Medicine</td>
<td>4</td>
<td>GMS 6066.</td>
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<tr>
<td>GMS 6943</td>
<td>Biotechnology Internship</td>
<td>3</td>
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<tr>
<td>GEY 7651</td>
<td>Ph.D. Seminar in Cognition</td>
<td>3</td>
<td></td>
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<tr>
<td>LAE 6738</td>
<td>Teaching Reading in English Curriculum</td>
<td>3</td>
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<tr>
<td>LAE 6793</td>
<td>Professional Leadership and Research in the Teaching of Writing</td>
<td>3</td>
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<tr>
<td>LAE 6923</td>
<td>Teachers Writing: A Writing Workshop Approach to the Teaching of Writing</td>
<td>3</td>
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<tr>
<td>LAE 7739</td>
<td>The Education of English Teachers</td>
<td>3</td>
<td></td>
<td></td>
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<tr>
<td>NGR 7951</td>
<td>Scientific Writing - Writing for</td>
<td>3</td>
<td></td>
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</tr>
</tbody>
</table>

- **EIN 6217 Construction Safety Engineering**: 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.

- **TSL 6390 Instruct Methods and Strategies for Teaching ESOL**: 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.

- **GMS 6710 Introduction to Behavioral Medicine**: 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.

- **GMS 6943 Biotechnology Internship**: 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.

- **GEY 7651 Ph.D. Seminar in Cognition**: 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.

- **LAE 6738 Teaching Reading in English Curriculum**: Course is to improve the quality of reading instruction in mid & sec English classes through the study of the reading process, research, & evaluation related to sec reading, understand how research impacts instruction, process of educational reform.

- **LAE 6793 Professional Leadership and Research in the Teaching of Writing**: Develop professional leadership of teachers of writing, demonstrate research-based, classroom-based, writing strategies to their peers by linking research directly to instruction. Form support network for Teacher Consultants of the National Writing Proj.

- **LAE 6923 Teachers Writing: A Writing Workshop Approach to the Teaching of Writing**: 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.

- **LAE 7739 The Education of English Teachers**: Introduces & 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 & practices of teacher educ.

- **NGR 7951 Scientific Writing - Writing for**: This course focuses on the development of a
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>PHC 5933</td>
<td>Special Topics</td>
<td>1-3</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>ADE 6906</td>
<td>Independent Study</td>
<td>1-19</td>
<td>Independent Study in which students must have a contract with an instructor.</td>
</tr>
<tr>
<td>ADE 6931</td>
<td>Selected Topics in ADE and HRD</td>
<td>1-5</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 7169</td>
<td>Instructional Development Using Adult Education</td>
<td>3</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 7268</td>
<td>Leadership in Adult Continuing Education and HRD</td>
<td>3</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 7269</td>
<td>Organization and Administration of ACE and HRD</td>
<td>3</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>
</tr>
<tr>
<td>EDF 7555</td>
<td>Moral Development and Education</td>
<td>3-4</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>ESE 7343</td>
<td>Teaching and Learning in the Content Area</td>
<td>3</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>ECT 6197</td>
<td>Enhancing Career and Technical Education Curriculum</td>
<td>3</td>
<td>Enhancing career &amp; technical education curriculum including broadening mission, goals &amp; outcomes, integration with academics, work-based learning, contextual learning, appropriate technology &amp; certifying student mastery. Open to majors &amp; non-majors.</td>
</tr>
<tr>
<td>GMS 6093</td>
<td>Clinical and Translational Mentored Research</td>
<td>1-12</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 6094</td>
<td>Experimental Design and Analysis</td>
<td>3</td>
<td>A focused course designed to introduce students to the scientific method, experimental designs, approaches, and analyses that are essential to the modern</td>
</tr>
</tbody>
</table>
### GMS 6092 Principles of Intellectual Property

**3**

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.

### NGR 6460 Pharmacology for Nurse Anesthesia I

**3**

This course focuses on the pharmacokinetics, pharmacodynamics and general pharmacological principles of anesthetic drugs and adjunctive agents. Restricted to majors.

### NGR 6492 Nurse Anesthesia Role Development

**3**

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.

### NGR 6929 Clinical Correlational Conferences

**1**

NGR 6431 or NGR 6432 or NGR 6433 or NGR 6434.

This course is designed to complement each clinical residency; these conferences will discuss clinical experience, morbidity and mortality utilizing current research.

### NGR 6343C Primary Care of Women

**5**

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.

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.

### GEY 7902 Directed Individual Study in Aging Studies

**1-9**

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.

### GEY 7911 Directed Research in Aging Studies

**1-19**

Research on selected topics in aging studies under the direct supervision of a member of the graduate faculty in aging studies.

### NGR 6491 Nurse Anesthesia Practice Comprehensive

**2**

NGR 6433, NGR 7892, NGR 6929.

This course is designed to measure the knowledge base and clinical competency of the nurse anesthesia student.

### NGR 6423 Theoretical Foundations of Nurse Anesthesia: Advanced Principles I

**3**

NGR 6424, NGR 6490, NGR 6492, NGR 6420, NGR 6400, NGR 6404, NGR 6460, NGR 6800, GMS 6461, NGR 6140, NGR 6422, NGR 6002C, PHC 6050.

This course explores neuraxial anesthetic approaches to include spinal, epidural, and caudal anesthesia and the performance of peripheral nerve blocks of the upper and lower extremities.

### NGR 6424 Principles of Nurse Anesthesia

**3**

NGR 6140, NGR 6422, NGR 6404, NGR 6400, NGR 6460, GMS 6461, NGR 6002C, PHC 6050, NGR 6800.

Physiology, pathophysiology and anesthetic management and evaluation of orthopedic, neurologic, endocrine, hepatic, urology systems with emphasis on anesthetic implications and anesthesia management for surgery.

### GMS 6453 Functional Approach to Diabetes and Coronary Heart

**3**

The course examines specific aspects of diabetes and coronary heart disease critical to understanding factors that result in degraded cardiovascular tone and the cellular...
<table>
<thead>
<tr>
<th>GMS</th>
<th>6751</th>
<th>Integrated Clinical Neurobiology</th>
<th>3</th>
<th>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.</th>
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<tbody>
<tr>
<td>GMS</td>
<td>6752</td>
<td>Autoimmune Diseases and Cognitive Function</td>
<td>3</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>ECW</td>
<td>6696</td>
<td>Equity and Access in the New Economy</td>
<td>3</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</td>
</tr>
<tr>
<td>ECH</td>
<td>5786</td>
<td>Green Engineering</td>
<td>3</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>LIS</td>
<td>6316</td>
<td>Visualization of Knowledge</td>
<td>3</td>
<td>LIS 6260 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>BSC</td>
<td>5425</td>
<td>Genetic Engineering and Recombinant DNA Technology</td>
<td>3</td>
<td>PCB3023, PCB3063, either PCB3023L or PCB3063L 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>ECH</td>
<td>5785</td>
<td>Sustaining the Earth: An Engineering Approach</td>
<td>3</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>EVR</td>
<td>6320</td>
<td>Environmental Management</td>
<td>3</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>GMS</td>
<td>6452</td>
<td>Clinical Nutrition</td>
<td>3</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</td>
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<tr>
<td>Course Code</td>
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<td>Prerequisites</td>
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<tr>
<td>MUC 6448</td>
<td>Electronic Music: Computer Music Research</td>
<td>3</td>
<td>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>
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<tr>
<td>NGR 6201</td>
<td>Primary Care of Adults I</td>
<td>3</td>
<td>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>
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<tr>
<td>NGR 6202C</td>
<td>Primary Care of Adults II</td>
<td>6</td>
<td>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 6301C</td>
<td>Primary Care of Children &amp; Adolescents I</td>
<td>6</td>
<td>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 6302C</td>
<td>Primary Care of Children and Adolescents II</td>
<td>6</td>
<td>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>ECP 7406</td>
<td>Industrial Organization II</td>
<td>3</td>
<td>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>GMS 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 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 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>NGR 7974</td>
<td>Doctor of Nursing Practice</td>
<td>1-3</td>
<td></td>
<td>This course provides for synthesis and life-cycle nutrition.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Name</td>
<td>Credits</td>
<td>Description</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>SPA 6565</td>
<td>Seminar in Dysphagia</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>SPA 6564</td>
<td>Seminar in Aging, Cognition, and Communication</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>SPA 6417</td>
<td>Communication + Cognition in Traumatic Brain Injury</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>SPA 6225</td>
<td>Advanced Fluency Disorders</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>SPA 6211</td>
<td>Advanced Vocal Disorders</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>CES 6835</td>
<td>Design of Masonry Structures</td>
<td>3</td>
<td>CES 4702. 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>
<td></td>
</tr>
<tr>
<td>NGR 6898</td>
<td>Microsystem Concepts of Health Care Finance</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>NGR 6872C</td>
<td>Concepts in Information Management</td>
<td>1</td>
<td>NGR 6770C 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>
<td></td>
</tr>
<tr>
<td>NGR 6777C</td>
<td>Shaping the Practice Environment</td>
<td>1</td>
<td>NGR 6872C, NGR 6723 Concepts essential to shape the clinical practice environment, including components of a patient centered, safe effective and equitable care environment.</td>
<td></td>
</tr>
<tr>
<td>EDF 7359</td>
<td>Resilience in Human Development</td>
<td>4</td>
<td>This course explores developmental, neuro-psychological, socio-emotional, and cultural perspectives on resiliency in various areas of...</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
<td>Description</td>
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</tr>
<tr>
<td>EDS 6050</td>
<td>Principles and Practices of Educational Supervision</td>
<td>3</td>
<td>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>IDS 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>NGR 6420</td>
<td>Foundations &amp; Methods of Nurse Anesthesia Practice</td>
<td>4</td>
<td>NGR6404, NGR6400, NGR6420, 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 6431</td>
<td>Nurse Anesthesia Clinical Residency I</td>
<td>4</td>
<td>GMS6461, NGR6002C, NGR6140, NGR 6400, NGR6404, NGR6420, 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 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>SCE 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>SOW 7980</td>
<td>Dissertation Hours</td>
<td>2-4</td>
<td></td>
<td>Dissertation hours</td>
</tr>
<tr>
<td>EES 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 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 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; preven</td>
</tr>
<tr>
<td>ENV 6105</td>
<td>Air Pollution Fundamentals</td>
<td>3</td>
<td>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,</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
<td>Description</td>
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<tr>
<td>GEY 7936</td>
<td>Proseminar in Aging Studies</td>
<td>1-10</td>
<td>PHC 6756 with a minimum grade of C</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 presentation.</td>
</tr>
<tr>
<td>PHC 6591</td>
<td>Reproductive and Perinatal Epidemiology</td>
<td>3</td>
<td>PHC 6756 with a minimum grade of C</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>MCB 5208</td>
<td>Cellular Microbiology</td>
<td>3</td>
<td>PCB 3023 ; MCB 3033</td>
<td>Cellular Microbiology is a lecture-based and literature-based course on the interactions between mammalian cells and microbial pathogens and/or their toxins, with a special emphasis on bacteria.</td>
</tr>
<tr>
<td>ANG 7487</td>
<td>Advanced Quantitative Research Methods Applied Anthropology</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>IDS 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 6946</td>
<td>Sustainability Internship</td>
<td>3-6</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>NGR 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>LIS 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>MHS 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 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>
<tr>
<td>TSL 5242</td>
<td>ESOL III-Language Principles</td>
<td>3</td>
<td>TSL 5086.</td>
<td>This course provides an overview of the fundamentals of language acquisition and development.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
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</tr>
<tr>
<td>MAN 6116</td>
<td>Diversity and Organizational Justice</td>
<td>3</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 cultures are also studied.</td>
<td></td>
</tr>
<tr>
<td>GEB 6224</td>
<td>Improvisation in Business Organizations</td>
<td>3</td>
<td>Facilitates learning and skill building based on organization studies research on business improvisation. Students will participate in a variety of experiential exercises and cases from organizational behavior and theatrical improvisation.</td>
<td></td>
</tr>
<tr>
<td>MAN 6950</td>
<td>Capstone Experience in Leading Organizations</td>
<td>3</td>
<td>Student team assessment exercise of real organization leading to evaluating report and presentation demonstrating skills required in the program.</td>
<td></td>
</tr>
<tr>
<td>MUL 6624</td>
<td>Song Literature</td>
<td>2</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>
<td></td>
</tr>
<tr>
<td>MVV 6652</td>
<td>Voice Pedagogy</td>
<td>2</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>
<td></td>
</tr>
<tr>
<td>GEY 7980</td>
<td>Dissertation and Doctoral</td>
<td>2-12</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 and family health.</td>
<td></td>
</tr>
<tr>
<td>HSC 6552</td>
<td>Community-Based Prevention in Behavioral Health</td>
<td>3</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 and family health.</td>
<td></td>
</tr>
<tr>
<td>NGR 6700C</td>
<td>Advanced Practice Nurse Transitions</td>
<td>5</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>
<td></td>
</tr>
<tr>
<td>NGR 6773L</td>
<td>CNL Residency</td>
<td>5</td>
<td>Residency practice in the role of the Clinical Nurse Leader.</td>
<td></td>
</tr>
<tr>
<td>MAN 6107</td>
<td>Leading Sustainable Enterprise: Goals and Processes</td>
<td>2-3</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>
<td></td>
</tr>
<tr>
<td>MAN 6147</td>
<td>Leadership/Management Concepts</td>
<td>2</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>
<td></td>
</tr>
<tr>
<td>MAN 6746</td>
<td>Designing Sustainable Enterprise</td>
<td>3</td>
<td>Examines an analytical framework for organizations to build more sustainable economies, societies, and natural resources.</td>
<td></td>
</tr>
<tr>
<td>Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
<td>Description</td>
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</tr>
<tr>
<td>MAN</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>MHS</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>PHC</td>
<td>Advanced Seminar in Health Care Management</td>
<td>2</td>
<td>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 problems.</td>
</tr>
<tr>
<td>PHC</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>
</tr>
<tr>
<td>PHC</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>REE</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>RCS</td>
<td>Counseling Approaches for Substance Abusers</td>
<td>3</td>
<td>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>WST</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.</td>
</tr>
<tr>
<td>WST</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>MAN</td>
<td>Leadership and Corporate Accountability</td>
<td>3</td>
<td></td>
<td>A final synthesis of core learning, with student groups conducting a strategic stakeholder analysis of an organization in the community. Issues of Leadership and Corporate Governance are discussed.</td>
</tr>
</tbody>
</table>
| MAN  | Organizational Strategies for                                               | 3       | FIN 6465 and ECO 6419                                                      | An integrated course that ties together
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisites</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAE 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>EDA 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>FIN 6465</td>
<td>Financial Statement Analysis</td>
<td>3</td>
<td>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>FIN 6537</td>
<td>Financial Options &amp; Futures</td>
<td>3</td>
<td>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>GMS 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 multifaceted adaptations of these microbial pathogens to infect the human host.</td>
</tr>
<tr>
<td>EDF 7498</td>
<td>Analysis for Single-Case Experiments</td>
<td>3</td>
<td>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>MAE 6654</td>
<td>Teaching Technology-Enhanced Algebra in the Middle Grades</td>
<td>3</td>
<td></td>
<td>Develops algebraic thinking appropriate for middle grades teachers using technology. Topics include fundamental concepts in algebra. The framework used in the course will develop a teacher's technological pedagogical content knowledge.</td>
</tr>
<tr>
<td>MAE 6650</td>
<td>Technology-Enhanced Numerical Analysis in the Middle Grades</td>
<td>3</td>
<td></td>
<td>Examines descriptive analyses of numerical data and probability concepts appropriate for teaching middle grades mathematics using technology.</td>
</tr>
<tr>
<td>HMG 6259</td>
<td>Lodging Management</td>
<td>3</td>
<td></td>
<td>This course examines research, critical issues, trends in the lodging industry from a strategic perspective. This course is the application of research to practical and theoretical issues in the lodging industry.</td>
</tr>
<tr>
<td>HMG 6267</td>
<td>Restaurant and Foodservice Management</td>
<td>3</td>
<td></td>
<td>This course allows students to apply the principles of management, analysis, and planning that they have learned in their prior required coursework to issues in multi-unit restaurant and foodservice operations.</td>
</tr>
<tr>
<td>HMG 6296</td>
<td>Strategic Mgmt &amp; Competitive Strategy for Hospitality &amp;</td>
<td>3</td>
<td>HMG 6246</td>
<td>The course is designed to provide students with an opportunity to develop and hone their concepts, principles, and skills useful in strategic management and strategic direction making with issues of ethics and responsibility in organizations in the 21st century.</td>
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<tr>
<td>Tourism</td>
<td>analytical and interpretive skills using strategic management principles and practices in a hospitality &amp; tourism business setting.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HMG 6335</td>
<td>Graduate Seminar in Club Management</td>
<td>3</td>
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<td></td>
</tr>
<tr>
<td>This seminar course allows students to apply the principles of management, analysis, and planning that they have learned in their prior required coursework to issues in club operations.</td>
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</tr>
<tr>
<td>HMG 6756</td>
<td>Graduate Seminar in Convention and Exhibition Mgmt.</td>
<td>3</td>
<td></td>
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<tr>
<td>This seminar course allows students to apply the principles of management, analysis, and planning that they have learned in their prior required coursework to issues in convention and exhibition management.</td>
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<tr>
<td>JOU 6114</td>
<td>Multimedia Reporting</td>
<td>3</td>
<td></td>
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</tr>
<tr>
<td>This course teaches the writing and visual skills specific to journalism across all digital media platforms. It makes a decisive break with traditional print and frames the future of the reporter as digital and global.</td>
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<tr>
<td>JOU 6360</td>
<td>Digital Media Technology</td>
<td>3</td>
<td></td>
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<tr>
<td>Creating quality online news reports means being a producer. In this course students will hone critical thinking skills while becoming familiar with the digital technologies of modern journalism. This has an exclusive digital focus.</td>
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<tr>
<td>JOU 6361</td>
<td>Digital Video Production</td>
<td>1</td>
<td></td>
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</tr>
<tr>
<td>Shooting quality online video for news reports is a skill each modern journalist should know. You will hone your critical thinking skills while becoming familiar with what comprises a publishable news video for online use. Hands-on learning is included.</td>
<td></td>
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<tr>
<td>JOU 6362</td>
<td>Digital Audio Production</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recording quality audio for online news reports is a skill all modern journalists should know. You will hone your critical thinking skills while becoming familiar with what comprises publishable audio for online news use. Hands-on learning is included.</td>
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<tr>
<td>EEX 7342</td>
<td>Making your Research Accessible</td>
<td>3</td>
<td></td>
<td></td>
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<tr>
<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>
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<tr>
<td>PHC 7122</td>
<td>Vaccinology</td>
<td>3</td>
<td></td>
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<tr>
<td>Graduate or undergraduate immunology course. 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 6121</td>
<td>Vaccines</td>
<td>3</td>
<td></td>
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<tr>
<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>
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<tr>
<td>PET 6098</td>
<td>Topics in Strength and Conditioning</td>
<td>3</td>
<td></td>
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<tr>
<td>Covers selected topics in strength and conditioning. Some of the topics to be covered include: program design, periodization, core</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
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<tr>
<td>PET 6494</td>
<td>Legal Aspects of Physical Activity</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>ESI 6353</td>
<td>Risk and Decision Analysis</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>EDG 7046</td>
<td>Trends and Issues in Educational Policy: Literacy and Teacher</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>EDE 7481</td>
<td>Teacher Education Seminar</td>
<td>3</td>
<td>This course prepares doctoral students to integrate, assimilate, and evaluate major research and research issues confronting the field of teacher education.</td>
<td></td>
</tr>
<tr>
<td>EDE 7206</td>
<td>Critical Analysis of Curriculum in Elementary Schools</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>EEC 7627</td>
<td>Arts &amp; Aesthetics in Early Childhood Education</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>EEC 7317</td>
<td>ICT in the Early Years</td>
<td>3</td>
<td>Explores the interface between young children and information and communication technology (ICT) from a developmental perspective.</td>
<td></td>
</tr>
<tr>
<td>EDE 7327</td>
<td>Differentiated Supervision &amp; Teacher Professional Development</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>NGR 7848</td>
<td>Fundamentals of Statistics for Clinicians</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>SYA 7980</td>
<td>Doctoral Dissertation</td>
<td>2-20</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>
<td></td>
</tr>
<tr>
<td>LIS 6949</td>
<td>Practicum in Archives and Special Collections</td>
<td>2-6</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>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
<td>Description</td>
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<tr>
<td>PHC 6035</td>
<td>Comorbidity of Mental and Physical Disorders</td>
<td>3</td>
<td>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>MAE 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>EDG 6975</td>
<td>Project: Master's/Specialist</td>
<td>1-9</td>
<td></td>
<td>Individual scholarly project planned and completed with the approval of the advisor and program committee.</td>
</tr>
<tr>
<td>MHS 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>CST 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>ESI 6420</td>
<td>Non-Linear Programming</td>
<td>3</td>
<td>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>
<tr>
<td>PET 6947</td>
<td>Internship in Exercise Science</td>
<td>1-6</td>
<td></td>
<td>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 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>LAE 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>
</tr>
<tr>
<td>ESI 6447</td>
<td>Large-scale and Computational Optimization</td>
<td>3</td>
<td>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>EDG 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 7939</td>
<td>Advanced Graduate Seminar: Research in Progress</td>
<td>3</td>
<td>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</td>
</tr>
<tr>
<td>Course Code</td>
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<td>Credits</td>
<td>Prerequisites</td>
<td>Description</td>
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<tr>
<td>EDF 7474</td>
<td>Applied Multilevel Modeling in Education</td>
<td>3</td>
<td></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>TSL 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>PHC 6716</td>
<td>Advanced Formative Research Methods</td>
<td>3</td>
<td>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 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>
<tr>
<td>PHC 6460</td>
<td>Social Marketing Program Management</td>
<td>3</td>
<td>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 6461</td>
<td>Advanced Social Marketing</td>
<td>3</td>
<td>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>ACG 6496</td>
<td>Computer Forensics and Accounting</td>
<td>3</td>
<td>ACG 2021, ACG 3103, ACG 3113, ACG 3401, AND ACG 4632</td>
<td>Introduces the current IT audit, forensic and investigative software and processes used to explore contemporary accounting systems and databases. Students are exposed to electronic and other means of surveillance in use today.</td>
</tr>
<tr>
<td>ACG 6688</td>
<td>Forensic Accounting and the Legal Environment</td>
<td>3</td>
<td>ACG 2021</td>
<td>Designed to further the student's knowledge of the contemporary legal environment faced by forensic accountants.</td>
</tr>
<tr>
<td>ACG 6686</td>
<td>Fraud Examination</td>
<td>3</td>
<td>ACG 2021, ACG 3103, ACG 3113, ACG 3401, AND ACG 4632</td>
<td>This course is an important component in the study of forensic accounting, and exposes the student to current theories and practices relating to the detection and prevention of fraud and white-collar crime.</td>
</tr>
<tr>
<td>ISM 6156</td>
<td>Enterprise Resource Planning &amp; Business Process Management</td>
<td>3</td>
<td></td>
<td>This course introduces students to business processes management and enterprise resource planning systems, and their use and implementation in key functional areas of today's global businesses.</td>
</tr>
<tr>
<td>ISM 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</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Pre-requisites</td>
<td>Course Description</td>
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<tr>
<td>PHC 7437</td>
<td>Applications in Health Economics</td>
<td>3</td>
<td>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 7702</td>
<td>Advanced Public Health Research and Evaluation Methods</td>
<td>3</td>
<td>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>
</tr>
<tr>
<td>HSC 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>JOU 6503</td>
<td>Entrepreneurial Journalism</td>
<td>3</td>
<td></td>
<td>Most future journalists will be independent entrepreneurs. Students will explore how media management and community business leaders collaborate and explore emerging economic models of independent journalists operating in the digital media environment.</td>
</tr>
<tr>
<td>JOU 6606</td>
<td>Photo Journalism</td>
<td>1</td>
<td></td>
<td>Taking quality online still photos for news reports is a skill all modern journalists need to know. You will hone your critical thinking skills while becoming familiar with what comprises a publishable photo for online use. Hands-on learning is included.</td>
</tr>
<tr>
<td>JOU 6708</td>
<td>Digital Media Law and Ethics</td>
<td>3</td>
<td></td>
<td>Online publishers must recognize and avoid unlawful conduct and are responsible for developing and adhering to ethical processes. This course focuses on the law and ethics of gathering, creating and publishing online content.</td>
</tr>
<tr>
<td>VIC 6310</td>
<td>Visual Information Design</td>
<td>3</td>
<td></td>
<td>This course teaches practical applications of information designs in an exclusively digital media environment. Students learn to create information images in all their forms, from the static to motion graphics, but all for online presentation.</td>
</tr>
<tr>
<td>EDF 6461</td>
<td>Foundations of Applied Evaluation</td>
<td>3</td>
<td>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 7491</td>
<td>Consulting and Project Management Skills for Evaluators</td>
<td>3</td>
<td>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>EIN 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>
</tr>
<tr>
<td>EDF 7462</td>
<td>Metaevaluation</td>
<td>4</td>
<td>EDF 7940</td>
<td>In-depth study of the theory and practice of metaevaluation; planned field applications of</td>
</tr>
</tbody>
</table>

Note: The table includes course codes, titles, credits, pre-requisites, and brief descriptions of the course content.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDF 7497</td>
<td>Theory and Practice of Personnel Evaluation</td>
<td>3</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>ISM 6436</td>
<td>Operations &amp; Supply Chain Processes</td>
<td>3</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 6770</td>
<td>A Metabolic Approach to Pain Management</td>
<td>3</td>
<td>Provides a basic understanding of the clinical implications of the application of intravenous therapy to treat various physiological conditions and for advanced nutrition.</td>
</tr>
<tr>
<td>GMS 6550</td>
<td>Introduction to IV Therapies</td>
<td>3</td>
<td>Provides students with a basic understanding 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 6240</td>
<td>Metabolic Approaches to Pediatrics</td>
<td>3</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 6310</td>
<td>Toxic Metals &amp; Functional Toxicology</td>
<td>3</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 6771</td>
<td>Aging and Neuroscience</td>
<td>3</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 6772</td>
<td>The Spinal Cord: Development, Pathology and Therapy</td>
<td>3</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>ATR 5605</td>
<td>Youth Injury Epidemiology</td>
<td>3</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>
</tr>
<tr>
<td>ATR 6236</td>
<td>Pediatric Sports Medicine</td>
<td>3</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 6446</td>
<td>Medical Conditions of 3</td>
<td></td>
<td>Focuses on non-orthopedic conditions in</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
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<tr>
<td>ATR 6615</td>
<td>Evidence Based Research and Writing</td>
<td>3</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>PHZ 6204</td>
<td>Atomic/Molecular Spectra</td>
<td>3</td>
<td>Hydrogen atom, one electron systems, central field and vector models, perturbations, Zeeman and Stark effect, hyperfine structure, atomic structure calculations; diatomic spectra, rotational and vibration analysis, intensities, temperatures from spectra, iso.</td>
</tr>
<tr>
<td>PHY 6447</td>
<td>Physics of Lightwave Devices and Applications</td>
<td>3</td>
<td>Nonlinear optics including optical phase conjugation, second harmonic and sum frequency generation, and stimulated Raman scattering. Selected applications of lasers and nonlinear optics.</td>
</tr>
<tr>
<td>MUL 6565</td>
<td>Chamber Music Literature</td>
<td>2</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>NGR 6719</td>
<td>Clinical Case Studies in Nursing Education</td>
<td>3</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 6441L</td>
<td>Nurse Anesthesia Simulation Lab II</td>
<td>2</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 6442L</td>
<td>Nurse Anesthesia Simulation Lab III</td>
<td>2</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 6440L</td>
<td>Nurse Anesthesia Simulation Lab I</td>
<td>2</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>
</tr>
<tr>
<td>NGR 6342</td>
<td>Reproductive Health for the Young to Middle Aged Adult</td>
<td>1</td>
<td>This course provides the knowledge and skill required to promote reproductive health. The emphasis is on evidence-based practice in the assessment, diagnosis, and management of reproductive health conditions in young to middle-aged adults.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisite(s)</td>
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<tr>
<td>NGR 6339C</td>
<td>Primary Care of Children and Adolescents: Special Topics</td>
<td>6</td>
<td>NGR 6302.</td>
</tr>
<tr>
<td>NGR 6244C</td>
<td>Health Management of Adults and Older Adults II</td>
<td>6</td>
<td>NGR 6207C</td>
</tr>
<tr>
<td>NGR 6207C</td>
<td>Health Management of Adults and Older Adults I</td>
<td>6</td>
<td>NGR 6002C</td>
</tr>
<tr>
<td>NGR 6146</td>
<td>Pathophysiology/Pharmacology for the Advanced Generalist Nurse</td>
<td>4</td>
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<tr>
<td>NGR 6152</td>
<td>Advanced Physiology and Pathophysiology</td>
<td>4</td>
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<tr>
<td>SPB 6719</td>
<td>Sport and Entertainment Marketing Strategy</td>
<td>3</td>
<td>MAR 6815.</td>
</tr>
<tr>
<td>RED 7798</td>
<td>Research in Transdisciplinary Texts and Teaching</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>EML 6594</td>
<td>Haptics</td>
<td>3</td>
<td>EML 3041, EML 4312.</td>
</tr>
<tr>
<td>GEY 5501</td>
<td>Health Care Operations in Long Term Care</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>GEY 5476</td>
<td>Program Evaluation in an Aging Society</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>
| RED 6658  | Foundations and Application of Differentiated Reading Instruction             | 3       |                                                                                | Topics explored include: the fundamental aspects of literacy learning and rationale, the analytic process, reading motivation, linguistic
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOP 6739</td>
<td>Cultural Competence</td>
<td>3</td>
<td>PSY 6218.</td>
<td>Addresses core concerns of multicultural and cross-cultural psychology, with particular emphasis on research methodology, critical thinking, and applications of research.</td>
</tr>
<tr>
<td>CLP 6623</td>
<td>Professional and Ethical Issues in Psychology</td>
<td>3</td>
<td></td>
<td>This graduate course is designed to expose students to the professional, ethical, and legal problems that face psychologists and through the course of their practice as clinicians, researchers, and educators.</td>
</tr>
<tr>
<td>CLP 6318</td>
<td>Prevention Science &amp; Health Psychology</td>
<td>3</td>
<td>PSY 6218.</td>
<td>Introduction to current theories, research, and practice in prevention science and health behavior research. Evaluation of the contributions of psychology &amp; prevention science to a wide range of evidence-based health promotion &amp; prevention interventions.</td>
</tr>
<tr>
<td>CLP 6478</td>
<td>Develop Disabilities/Disorders of Childhood and Adolescence</td>
<td>3</td>
<td></td>
<td>This graduate level course is designed to provide students with a foundation in concepts and research in the scientific study of developmental disabilities and other disorders of childhood and adolescence.</td>
</tr>
<tr>
<td>DEP 6607</td>
<td>Typical and Atypical Development</td>
<td>3</td>
<td></td>
<td>Introduction to theory and research on both typical and atypical development of individuals from birth to late life.</td>
</tr>
<tr>
<td>GMS 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 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 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>NGR 6613C</td>
<td>Health Management of Families: Special Topics</td>
<td>5</td>
<td>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 6291C</td>
<td>Health Mgmt of Adults and Older Adults: Special Topics</td>
<td>6</td>
<td>NGR 6207C, NGR 6244C</td>
<td>Focuses on selected theoretical, clinical, business, and practical knowledge and skills relevant to the Adult-Gerontology Nurse Practitioner role. Management of patients with complex care needs and/or multi-system diseases are emphasized.</td>
</tr>
<tr>
<td>NGR 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</td>
</tr>
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<td>Course Code</td>
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<td>Prerequisites</td>
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<tr>
<td>NGR 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 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>
<tr>
<td>NGR 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 6064C</td>
<td>Advanced Diagnostics &amp; Procedures</td>
<td>3</td>
<td>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>NGR 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>FIN 6466</td>
<td>Financial Analysis</td>
<td>2</td>
<td>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>ISS 6942</td>
<td>Field Practice and Evaluation in Infant-Family Mental Health</td>
<td>3</td>
<td>CLP 6462.</td>
<td>This course requires interning for a minimum of 10 hours a week or working in an agency serving infants/toddlers and their families. It includes content on program evaluation, staff and agency collaboration, and self-assessment of IFMH practices.</td>
</tr>
<tr>
<td>CLP 6462</td>
<td>Working with Families of Infants and Toddlers</td>
<td>3</td>
<td>PSY 6477, SOW 6243.</td>
<td>Addresses principles and emerging promising practices for intervening to promote coparenting of children aged 0-3 in nuclear, fragile, extended and kinship families; high conflict post-divorce families; military families; and other diverse family systems.</td>
</tr>
<tr>
<td>NGR 6940</td>
<td>Classroom/Online Teaching Practicum</td>
<td>2</td>
<td>NGR 6713.</td>
<td>Provides knowledge and experience in the application of teaching strategies in the classroom and online settings.</td>
</tr>
<tr>
<td>CLP 6477</td>
<td>Infant Family Mental Health</td>
<td>3</td>
<td>DEP 4053 and CLP 4620.</td>
<td>The class will address the theoretical bases of infant mental health infant development and infant caregiver relationships with an emphasis on coparenting and family relationship dynamics that support infant and toddler development in cultural context.</td>
</tr>
<tr>
<td>NGR 6234</td>
<td>Reproductive Health for the</td>
<td>1</td>
<td>NGR 6342.</td>
<td>This course provides the knowledge and skill in reproductive health.</td>
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<tr>
<td>Course Code</td>
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<td>Description</td>
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<tr>
<td>HMG 6908</td>
<td>Independent Study</td>
<td>1-6</td>
<td>The Independent Study course in the School of Hotel &amp; Restaurant Management permits a graduate student to enrich his/her interest in a particular area of specialized hospitality knowledge, research, and/or practice.</td>
<td></td>
</tr>
<tr>
<td>HMG 6938</td>
<td>Special Topics in Hospitality</td>
<td>1-6</td>
<td>Special Topics course to be used for new courses to be taught as a trial basis or until approved, etc. All topics are to be selected by instructor and department Dean. This is a graduate level Special Topics course.</td>
<td></td>
</tr>
<tr>
<td>HMG 6946</td>
<td>Graduate Internship</td>
<td>1-6</td>
<td>Coordinated hospitality training combines practical experience with integrated academic analysis of principles, theory, and standard practices applied to operational situations. Approval from Advisor/Dean to take graduate internship.</td>
<td></td>
</tr>
<tr>
<td>EDE 6076</td>
<td>Teacher Leadership for Student Learning</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>EDE 6486</td>
<td>Teacher Research for Student Learning</td>
<td>3</td>
<td>EDE 6076. 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>
<td></td>
</tr>
<tr>
<td>EDE 6556</td>
<td>Coaching for Student Learning</td>
<td>3</td>
<td>EDE 6076, EDE 6486. Prepares coaches for facilitating preservice &amp; inservice educator learning with specific focus on P-6 student learning.</td>
<td></td>
</tr>
<tr>
<td>EDE 6366</td>
<td>Professional Development for Student Learning</td>
<td>3</td>
<td>EDE 6076, EDE 6486, EDE 6366. This course prepares effective teacher leaders for facilitating job-embedded educator learning with a specific focus on P-6 student learning.</td>
<td></td>
</tr>
<tr>
<td>ECW 7167</td>
<td>Career Development in Career and Workforce Education Change</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>NGR 6211C</td>
<td>Acute Care of Adults &amp; Older Adults: Special Topics</td>
<td>7</td>
<td>NGR 6210C, NGR 6244C, NGR 6232C 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>
<td></td>
</tr>
<tr>
<td>EDA 6213</td>
<td>Culturally Relevant Leadership</td>
<td>3</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</td>
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<tr>
<td>EDA 6271</td>
<td>Data-based Decision Making Strategies for Educational Leaders</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>EDA 7197</td>
<td>Current Readings and Discourse in Educational Leadership</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>EDA 7287</td>
<td>Educational Politics and Policy: Theory &amp; Issues</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>EDA 7281</td>
<td>Policy Analysis and Implementation Strategies for Educational</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>EDH 7057</td>
<td>Introduction to Research Studies in Higher Education</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>ECT 7981</td>
<td>Scholarly Writing for Doctoral Students</td>
<td>1</td>
<td>ECT 7791. 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>
<td></td>
</tr>
<tr>
<td>ECT 7768</td>
<td>Information Research Strategies</td>
<td>1</td>
<td>ECT 7791. 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>
<td></td>
</tr>
<tr>
<td>SOW 6243</td>
<td>Working with Systems of Care to Benefit Infants and Toddlers</td>
<td>3</td>
<td>CLP 6477. Course includes theoretical approaches for IFMH services at the systems level, analyzing family, agency, and community systems and how they interact. It reviews social policy and service system dynamics that impact infant/toddler and family development.</td>
<td></td>
</tr>
<tr>
<td>EDA 6274</td>
<td>Technology and Data Analysis for School Leaders</td>
<td>3</td>
<td>Course focuses on current research principles, methods and practices in eduction and learning technologies. Content will focus on the role of research in methods of constructing hypothesis, developing research designs, selecting procedures for observation</td>
<td></td>
</tr>
<tr>
<td>ECO 6419</td>
<td>Managerial Analysis</td>
<td>3</td>
<td>MBA Essentials or their equivalent A combination of statistical methods and micro-economic analysis and their application for managers of organizations. The course uses statistics and economic reasoning to help</td>
<td></td>
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<tr>
<td>Course Code</td>
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<td>Credits</td>
<td>Prerequisites</td>
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<tr>
<td>ECO 7207</td>
<td>Macroeconomics II</td>
<td>3</td>
<td>ECO 6206</td>
<td>Empirical study of economic growth, business cycles, and the other macroeconomic phenomena.</td>
</tr>
<tr>
<td>SOW 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 6539</td>
<td>Field Instruction IV</td>
<td>4</td>
<td>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>
</tr>
<tr>
<td>SOW 8907</td>
<td>Capstone Project</td>
<td>1</td>
<td>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>PHC 6006</td>
<td>Epidemiological Methods in Infectious Diseases</td>
<td>3</td>
<td>PHC 6588 with a minimum grade of C, PHC 6756 with a minimum grade of C</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 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 6081</td>
<td>Intermediate SAS in Epidemiology</td>
<td>3</td>
<td>PHC 6701 with a minimum grade of C+</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>EEX 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 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 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>
</tr>
<tr>
<td>EEX 7746</td>
<td>Ethics in Teacher Education and</td>
<td>3</td>
<td></td>
<td>This course will focus on the philosophical and</td>
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<td>Credits</td>
<td>Description</td>
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</tr>
<tr>
<td>EEX</td>
<td>Teacher Development</td>
<td></td>
<td>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>
<td></td>
</tr>
<tr>
<td>EEX</td>
<td>Special Education Leadership Studies</td>
<td>1-2</td>
<td>Introduction to doctoral studies in the Department of Special Education. Discussion forum for new students, mentoring and support.</td>
<td></td>
</tr>
<tr>
<td>APK</td>
<td>Neuromuscular Aspects of Exercise Physiology</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>PSY</td>
<td>Teaching of Psychology</td>
<td>3</td>
<td>Application of psychological principles to the educational process. Learner-centered model of instruction. Focus on development, behavioral, cognitive, social learning, effective instruction, educational assessment, student motivation and classroom management.</td>
<td></td>
</tr>
<tr>
<td>GMS</td>
<td>Microbial Pathogenesis and Host-Parasite Interactions</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>SPB</td>
<td>Sport and Entertainment Finance</td>
<td>3</td>
<td>This course provides the opportunity to apply financial concepts, tools, and techniques to the global sport and entertainment industry.</td>
<td></td>
</tr>
<tr>
<td>SPB</td>
<td>Issues in the American Sport Industry</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>SPB</td>
<td>Social Media in Sport</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>SPB</td>
<td>Global Environment of Sport</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>SPB</td>
<td>Sport and Social Issues</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>SPB</td>
<td>Economics of Sport</td>
<td>3</td>
<td>This course applies the principles of macro and micro economics to global sport organizations, including topics such as industrial organization,</td>
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<tr>
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<td>Description</td>
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<tr>
<td>HUM 6814</td>
<td>Introduction to Graduate Study</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>HUM 6588</td>
<td>Themes and Genres in Film and New Media</td>
<td>3</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.</td>
<td></td>
</tr>
<tr>
<td>HUM 6587</td>
<td>National Cinemas</td>
<td>3</td>
<td>Course will explore key films, filmmakers, and cinematic techniques and approaches of selected national cinema styles from around the globe.</td>
<td></td>
</tr>
<tr>
<td>HUM 6584</td>
<td>Global Cinema and New Media since 1960</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>HUM 6583</td>
<td>Global Cinema and New Media to 1960</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>IDS 6236</td>
<td>Sustainable Tourism Development: Principles &amp; Practices</td>
<td>3</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>
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</tr>
<tr>
<td>IDS 6237</td>
<td>Ecotourism &amp; Sustainable Tourism Mgmt Coastal/Marine Habitat</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>POS 7980</td>
<td>Dissertation</td>
<td>2-19</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>
<td></td>
</tr>
<tr>
<td>POS 7910</td>
<td>Directed Independent Research</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>GMS 6443</td>
<td>Promoting Organizational Wellness</td>
<td>3</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>
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<tr>
<td>GMS 6442</td>
<td>Nutrition, Obesity and</td>
<td>3</td>
<td>Designed to give a broad understanding and</td>
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<tr>
<td>GMS 6511</td>
<td>Current Literature in Pharmacology</td>
<td>1</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 the field.</td>
<td></td>
</tr>
<tr>
<td>GMS 6433</td>
<td>Membrane Physiology</td>
<td>4</td>
<td>Advanced readings and discussion of the molecular physiology of excitable membranes.</td>
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</tr>
<tr>
<td>GMS 6482</td>
<td>Cardiovascular Health</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>GMS 6404</td>
<td>Systems Neurophysiology</td>
<td>4</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>
<td></td>
</tr>
<tr>
<td>GMS 6403</td>
<td>Endocrine Mechanisms</td>
<td>4</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>
<td></td>
</tr>
<tr>
<td>GMS 6130</td>
<td>Molecular Biology of Tumor Viruses</td>
<td>2</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 biology.</td>
<td></td>
</tr>
<tr>
<td>GMS 6104</td>
<td>Cellular Immunology</td>
<td>3</td>
<td>Current concepts of cellular interactions in the immune response.</td>
<td></td>
</tr>
<tr>
<td>GMS 6054</td>
<td>Cancer Biology</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>PHC 6307</td>
<td>Principles of Exposure Assessment &amp; Control</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>PHC 6355</td>
<td>Principles of Occupational Safety</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>PHC 6300</td>
<td>Principles of Environmental Health</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>PHC 6325</td>
<td>Environmental Laboratory</td>
<td>3</td>
<td>This course familiarizes students with analytical methods used in environmental and occupational health.</td>
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<tr>
<td>GMS 6754</td>
<td>Memory Loss</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>GMS 6010</td>
<td>Personalized Medicine</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>PHC 6345</td>
<td>HSE Management &amp; Administration</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>EDH 7325</td>
<td>Supervised Teaching in Childhood Ed &amp; Literacy Studies I</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>EDH 7326</td>
<td>Supervised Teaching in Childhood Ed &amp; Literacy Studies II</td>
<td>3</td>
<td>The purpose of this course is to provide new graduate assistants a foundation for studying their teaching at the collegiate level.</td>
<td></td>
</tr>
<tr>
<td>LAE 7718</td>
<td>Linguistic Foundations in Literacy</td>
<td>3</td>
<td>Examines the historical, theoretical, and applied aspects of the relationships between linguistics and literacy.</td>
<td></td>
</tr>
<tr>
<td>ARC 6930</td>
<td>Special Topics in Urban and Community Design</td>
<td>1-6</td>
<td>Special topics related to urban and community design and planning issues.</td>
<td></td>
</tr>
<tr>
<td>CGN 6945</td>
<td>Graduate Research Methods in Civil &amp; Environmental Engineering</td>
<td>2</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>
<td></td>
</tr>
<tr>
<td>GMS 6418</td>
<td>Core Principles and the Musculoskeletal System</td>
<td>3-7</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>
<td></td>
</tr>
<tr>
<td>ATR 6514</td>
<td>Ethical &amp; Legal Issues in Healthcare</td>
<td>1</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>
<td></td>
</tr>
<tr>
<td>ATR 6627</td>
<td>Capstone Project 2</td>
<td>3</td>
<td>ATR 6617</td>
<td>Focus on completing a SWOT analysis of the plan &amp; a formal written document. The final</td>
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<tr>
<td>ATR</td>
<td>Capstone Project 1</td>
<td>3</td>
<td>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>
</tr>
<tr>
<td>ATR</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>ATR</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>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>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>HIM</td>
<td>Case Studies in Health Information Management</td>
<td>3</td>
<td>HIM 6118.</td>
<td>This course provides an in-depth discussion of selected case studies in health informatics management and is designed to assist integration of the study of the basic principles and applications of health informatics.</td>
</tr>
<tr>
<td>HIM</td>
<td>e-Healthcare Ethics</td>
<td>2</td>
<td>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>
</tr>
<tr>
<td>HIM</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 MIS including acquiring, storing and interpreting information of interest to the informaticist and healthcare professional.</td>
</tr>
<tr>
<td>HIM</td>
<td>Legal Aspects of Health Information Management</td>
<td>3</td>
<td>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>Pharmacy Informatics</td>
<td>3</td>
<td>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</td>
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<tr>
<td>SPA 6535L</td>
<td>Audiology Clinical Laboratory I</td>
<td>3</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>
<td></td>
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<tr>
<td>SPA 6536L</td>
<td>Audiology Clinical Laboratory II</td>
<td>3</td>
<td>SPA 5506.</td>
<td></td>
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<tr>
<td>ENC 6261</td>
<td>Professional and Technical Communication</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>EEX 7797</td>
<td>Language and Learning Variability in Urban Schools</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>PET 6534</td>
<td>Research Methods in Exercise Science</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>APK 6109</td>
<td>Cardiorespiratory Aspects of Exercise Physiology</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>MHS 6065</td>
<td>Issues and Trends in Developmental Disabilities</td>
<td>3</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 lifespan.</td>
<td></td>
</tr>
<tr>
<td>SOW 7775</td>
<td>Critical Issues in Social Work</td>
<td>3</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>
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<tr>
<td>ECT 6767</td>
<td>Improving Career and Technical Education Programs</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>MHS 5889</td>
<td>BRIDGE Community Field Experience</td>
<td>2</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</td>
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<tr>
<td>MHS 5746</td>
<td>Applied Quantitative Research Methods</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>MHS 5722</td>
<td>BRIDGE Pro Seminar II</td>
<td>2</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>
<td></td>
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<tr>
<td>MHS 5721</td>
<td>BRIDGE Proseminar I</td>
<td>2</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>
<td></td>
</tr>
<tr>
<td>MHS 5745</td>
<td>Applied Qualitative Research Methods</td>
<td>3</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 certificate.</td>
<td></td>
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<tr>
<td>MAR 6577</td>
<td>Seminar in Consumer Behavior</td>
<td>3</td>
<td>A study of how individuals make consumption-related decisions, as well as how individuals dispose of products they consume. Ethical issues in consumer decision-making as well as corporate social responsibility in marketing are also discussed.</td>
<td></td>
</tr>
<tr>
<td>NGR 6470</td>
<td>Assessment, Radiology, and Psychology of Pain</td>
<td>3</td>
<td>Designed to examine the theoretical &amp; clinical knowledge needed to make proper assessments &amp; diagnoses in regards to the chronic pain patient. It also examines the importance of the psychological aspect of pain for proper diagnosis &amp; treatment.</td>
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</tr>
<tr>
<td>NGR 6471</td>
<td>Concepts of Pain Pathophysiology</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>NGR 7916</td>
<td>Grant Writing for Translational Science</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>NGR 6473C</td>
<td>Interventional Procedures/Simulations in Pain Management</td>
<td>2</td>
<td>NGR 6470, NGR 6471</td>
<td></td>
</tr>
<tr>
<td>NGR 6472</td>
<td>Pharmacology of Pain Management</td>
<td>3</td>
<td>This course focuses on introduction of radiology &amp; various interventional techniques used in treatment of pain syndromes. Interventional modalities of pain management will be performed in a Simulation/Cadaver Teaching environment for this course.</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</td>
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<tr>
<td>NGR</td>
<td>6157</td>
<td>Physiology &amp; Pharmacology for Nurse Anesthetists II</td>
<td>5</td>
<td>NGR 6404 and NGR 6460.</td>
</tr>
<tr>
<td>MAN</td>
<td>6068</td>
<td>Social Issues in Management</td>
<td>3</td>
<td></td>
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<tr>
<td>PHZ</td>
<td>7940</td>
<td>Industrial Practicum</td>
<td>3</td>
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<tr>
<td>EVR</td>
<td>6876</td>
<td>Wetlands, People and Public Policy</td>
<td>3</td>
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<tr>
<td>ADE</td>
<td>7677</td>
<td>Emerging Trends in Adult Education: Critical Race Theory</td>
<td>3</td>
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<tr>
<td>NGR</td>
<td>7874</td>
<td>Informatics and Patient Care Technology</td>
<td>3</td>
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<tr>
<td>PHC</td>
<td>6539</td>
<td>Foundations in Adolescent Behavioral Health</td>
<td>3</td>
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<tr>
<td>PHC</td>
<td>6722</td>
<td>Laboratory Rotations in Global Health Research</td>
<td>3</td>
<td></td>
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<tr>
<td>QMB</td>
<td>6303</td>
<td>Applied Business Analytics</td>
<td>3</td>
<td></td>
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<tr>
<td>QMB</td>
<td>6357</td>
<td>Statistics for Business Professionals</td>
<td>3</td>
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<tr>
<td>PHZ 5154C</td>
<td>Introduction to Computational Physics</td>
<td>3</td>
<td>Introduction to the use of computers for solving problems in physics. No programming experience required.</td>
<td></td>
</tr>
<tr>
<td>PHZ 5430</td>
<td>Introductory Physics of Materials</td>
<td>3</td>
<td>Phenomenological introduction to the structural, thermal, electrical, magnetic, mechanical, and optical properties of materials.</td>
<td></td>
</tr>
<tr>
<td>PHY 6436</td>
<td>Applied Materials Physics</td>
<td>3</td>
<td>Introduces students to properties and applications of advanced functional materials, such as nanostructured materials and biomaterials.</td>
<td></td>
</tr>
<tr>
<td>PHZ 6715</td>
<td>Biophysics I</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>EML 6290</td>
<td>Micro and Nano Manufacturing</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>EME 6235</td>
<td>Technology Management Project Management</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>EME 6457</td>
<td>Distance Learning</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>EME 6215</td>
<td>Instructional Graphics</td>
<td>3</td>
<td>Advance knowledge and application of the principles underlying the design and use of graphics in instructional settings.</td>
<td></td>
</tr>
<tr>
<td>EME 6208</td>
<td>Interactive Media</td>
<td>3</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>
<td></td>
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<tr>
<td>EME 6207</td>
<td>Web Design</td>
<td>3</td>
<td>This course focuses on the design and development of instructional and informational web sites.</td>
<td></td>
</tr>
<tr>
<td>EME 6055</td>
<td>Current Trends in Instructional Technology</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>EME 6053</td>
<td>Internet in Education</td>
<td>3</td>
<td>The course is completely online. Topics include: educational resources, copyright and safety</td>
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<tr>
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<td>Title</td>
<td>Credits</td>
<td>Prerequisites</td>
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<tr>
<td>EME 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>EDG 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>PHC 6546</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>LIS 6773</td>
<td>Digital Curation</td>
<td>3</td>
<td>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>PHC 6728</td>
<td>Translational Research Methods in Adolescent Behavioral Health</td>
<td>3</td>
<td>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>PHZ 6716</td>
<td>Biophysics II</td>
<td>3</td>
<td>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>GEB 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 others’ support, which includes consensus building, motivating and convincing others. The course explores persuasion methods and applies them in a contemporary business setting.</td>
</tr>
<tr>
<td>ISM 6405</td>
<td>Informatics and Business Intelligence</td>
<td>3</td>
<td></td>
<td>Organizations use information systems to support the collection and analysis of information in order to strengthen their competitive positions. This course focuses on the technologies, methods and information used to promote IT-enabled decision making.</td>
</tr>
<tr>
<td>PHC 6729</td>
<td>Advanced Research Education in Adolescent Behavioral</td>
<td>3</td>
<td>PHC 6539, PHC 6728</td>
<td>Focuses on advanced topics in community-based participatory research in adolescent</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
<td>Description</td>
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</tr>
<tr>
<td>PHC 6946</td>
<td>Service Learning in Adolescent Behavioral Health I</td>
<td>2</td>
<td>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>LIS 6515</td>
<td>Web Archiving</td>
<td>3</td>
<td>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>GMS 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 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 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 “wellness” using motivational approaches to effect these lifestyle modifications.</td>
</tr>
<tr>
<td>GMS 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 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 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>
</tr>
<tr>
<td>GMS 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>SPA 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 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...</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
<td>Description</td>
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<tr>
<td>SPA 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 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>PHC 6947</td>
<td>Service Learning in Adolescent Behavioral Health II</td>
<td>2</td>
<td>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 6948</td>
<td>Service Learning in Adolescent Behavioral Health III</td>
<td>2</td>
<td>PHC 6539, PHC 6728, PHC 6729, 6946.</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>
<tr>
<td>QMB 6615</td>
<td>Lean Operations</td>
<td>3</td>
<td>ISM 6436.</td>
<td>Course focuses on the concepts/principles of Lean Operations. Methods/tools/techniques utilized in Value Stream Transformation and for improving operational efficiencies as they relate to manufacturing, service, and healthcare organizations are emphasized.</td>
</tr>
<tr>
<td>QMB 6696</td>
<td>Six Sigma</td>
<td>3</td>
<td>QMB 6357, ISM 6436.</td>
<td>Course focuses on the concepts/principles of Six Sigma. Methods/tools/techniques utilized to design and optimize product/process/service quality for Six Sigma levels of performance in manufacturing, service, and healthcare organizations are emphasized.</td>
</tr>
<tr>
<td>PAD 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>
</tr>
<tr>
<td>GEB 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>GMS 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 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>
<tr>
<td>GMS 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</td>
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<tr>
<td>Course Code</td>
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<td>Credits</td>
<td>Description</td>
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<tr>
<td>GMS 6446</td>
<td>Sports Medicine and Nutrition</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>CIS 6946</td>
<td>Internships/Practicums/Clinical Practice</td>
<td>0-3</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>
<td></td>
</tr>
<tr>
<td>HIS 6935</td>
<td>Graduate Reading Seminar in History</td>
<td>3</td>
<td>Introduce Graduate Students to a wide body of scholarship surrounding the topic of the course. Course topics and titles will vary.</td>
<td></td>
</tr>
<tr>
<td>HIS 6936</td>
<td>Graduate Writing Seminar in History</td>
<td>2-4</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>
<td></td>
</tr>
<tr>
<td>LAE 6427</td>
<td>Children's Literature: Teaching Literature Appreciation</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>MUN 6135</td>
<td>Symphonic Band</td>
<td>1</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>
<td></td>
</tr>
<tr>
<td>PCB 6932</td>
<td>Bioethics for Cancer Researchers</td>
<td>1</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>
<td></td>
</tr>
<tr>
<td>PCB 6526</td>
<td>Cancer Biology IV - Concepts and Techniques in Cancer Genetics</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>PCB 6956</td>
<td>Scientific Grant Writing</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>PCB 6093</td>
<td>Advances in Scientific Review</td>
<td>2</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>
<td></td>
</tr>
<tr>
<td>PHH 6426</td>
<td>Seminar in Eighteenth Century Philosophy</td>
<td>4</td>
<td>Examines major texts in Eighteenth Century Philosophy.</td>
<td></td>
</tr>
<tr>
<td>PHH 6310</td>
<td>Seminar in Seventeenth Century Philosophy</td>
<td>4</td>
<td>This course will examine major texts in Seventeenth Century Philosophy.</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
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</tr>
<tr>
<td>PHH 6645</td>
<td>Contemporary Continental Philosophy</td>
<td>4</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>
<td></td>
</tr>
<tr>
<td>PHP 6405</td>
<td>Seminar in Descartes' Philosophy</td>
<td>4</td>
<td>Examination of Descartes' major philosophical texts.</td>
<td></td>
</tr>
<tr>
<td>PHP 6420</td>
<td>Seminar in Leibniz's Philosophy</td>
<td>4</td>
<td>Examination of Leibniz's major philosophical texts.</td>
<td></td>
</tr>
<tr>
<td>PHP 6505</td>
<td>Seminar on Hegel’s Philosophy</td>
<td>4</td>
<td>Careful interpretation and critical analysis of Hegel’s seminal and perhaps most enduring work, the Phenomenology of Spirit.</td>
<td></td>
</tr>
<tr>
<td>PHP 6525</td>
<td>Nietzsche and the Nietzscheans</td>
<td>4</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>
<td></td>
</tr>
<tr>
<td>PHP 6624</td>
<td>Adorno</td>
<td>4</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>
<td></td>
</tr>
<tr>
<td>PHP 6645</td>
<td>Foucault</td>
<td>4</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>
<td></td>
</tr>
<tr>
<td>RED 6316</td>
<td>Emergent Literacy: Skills, Strategies, &amp; Assessment</td>
<td>3</td>
<td>Understand the developmentally appropriate, research-based theories and practices that support children's emergent literacy and language learning.</td>
<td></td>
</tr>
<tr>
<td>URP 6058</td>
<td>Community Development Planning</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>GEY 6971</td>
<td>Master's Thesis</td>
<td>3-6</td>
<td>The Master's Thesis for the MA in Gerontology is a research project designed to result in an original research product.</td>
<td></td>
</tr>
<tr>
<td>MAN 6789</td>
<td>Social Media Management and Strategy</td>
<td>3</td>
<td>This course builds a basic foundation of the “how to” of online social networking sites to help students understand how these sites can be used by businesses and professionals to manage, network, recruit, market, and address customer concerns.</td>
<td></td>
</tr>
<tr>
<td>PHH 6205</td>
<td>Seminar in Medieval Philosophy</td>
<td>4</td>
<td>Examines major texts, topics, and thinkers in medieval philosophy.</td>
<td></td>
</tr>
<tr>
<td>PHH 6105</td>
<td>Seminar in Ancient Philosophy</td>
<td>4</td>
<td>Examine major texts in Ancient Philosophy, such as Plato's Theaetetus and Timaeus, and Aristotle's Metaphysics, Physics, and De Anima.</td>
<td></td>
</tr>
<tr>
<td>URP 6201</td>
<td>Quantitative Analysis in Urban &amp; Regional Planning</td>
<td>3</td>
<td>URP 6232 Focuses on quantitative analysis techniques and their application in urban and regional planning.</td>
<td></td>
</tr>
<tr>
<td>URP 6316</td>
<td>Land Use Planning</td>
<td>3</td>
<td>The course is designed to acquaint the student</td>
<td></td>
</tr>
</tbody>
</table>
with the principles, theory and practice of land use planning. The course constitutes one of the required courses in the MURP degree.

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>URP 6126</td>
<td>Zoning &amp; Local Economic Development</td>
<td>3</td>
<td></td>
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<tr>
<td>PCB 6205</td>
<td>Cancer Biology III - Cancer Genomics and Drug Discovery</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SPA 7806</td>
<td>Advanced Research Design for the Communication Sciences</td>
<td>3</td>
<td>EDF 6407</td>
</tr>
<tr>
<td>URP 6549</td>
<td>Urban &amp; Metropolitan Economic Development Strategies</td>
<td>3</td>
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</tr>
<tr>
<td>GMS 6410</td>
<td>Cardiovascular Regulation</td>
<td>4</td>
<td>GMS 6001, GMS 6440, GMS 6505.</td>
</tr>
<tr>
<td>RTV 5416</td>
<td>Race, Gender, Class issues in Media</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MMC 6136</td>
<td>Video Storytelling 2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IDS 6938</td>
<td>Special Topics/Seminars</td>
<td>1-6</td>
<td></td>
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<tr>
<td>IDS 6235</td>
<td>Economics and Finance for Sustainability</td>
<td>3</td>
<td></td>
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<tr>
<td>IDS 6238</td>
<td>Communicating the Value of Sustainability</td>
<td>3</td>
<td></td>
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<tr>
<td>IDS 6234</td>
<td>Systems Thinking: The Key to</td>
<td>3</td>
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</table>

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.

An exploration of the normal and abnormal cancer biological processes as they pertain to regulation of the genome and of novel cancer gene discovery approaches, as well as methodological and conceptual approaches to oncologic drug design and development.

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.

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.

The course involves discussions/advanced readings of current trends in many aspects of the cardiovascular system including cardiac function, vascular biology, and signaling.

Survey of how those outside the American mainstream, whether by race, ethnicity, gender or socio-economic class are portrayed in various forms of media. Emphasis on news media, with a secondary focus on entertainment media.

Advanced video shots, audio, post-production editing and industry work flows will be covered. The art of storytelling through a lens, on-camera interviewing techniques, and tight editing for a “two train” story arc will be emphasized. VS1 required.

Special topics related to sustainability.

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.

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.

The course develops the critical system
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<tr>
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<th>Description</th>
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</thead>
<tbody>
<tr>
<td>IDS 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>ANG 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 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>CJE 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>CJE 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 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>EDF 7436</td>
<td>Rasch Measurement Models</td>
<td>3</td>
<td>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>
</tr>
<tr>
<td>EEE 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>
<tr>
<td>EEL 6285</td>
<td>Energy Delivery Systems</td>
<td>3</td>
<td>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 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 6256</td>
<td>Power Systems II</td>
<td>3</td>
<td>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>SCE 7740</td>
<td>Doctoral Research in Science</td>
<td>3</td>
<td></td>
<td>This course prepares students for proposal</td>
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<tr>
<td>Course Code</td>
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<td>Credits</td>
<td>Description</td>
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<tr>
<td>SCE 7636</td>
<td>Advanced Trends in Science Education</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>SCE 7345</td>
<td>Theories and Practices of Science Teaching and Learning</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>QMB 7557</td>
<td>Research and Writing Skills for Doctoral Students</td>
<td>1</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>
<td></td>
</tr>
<tr>
<td>PHC 7154</td>
<td>Evidence-informed Public Health I</td>
<td>3</td>
<td>This course provides an overview of evidence-informed public health practice in addition to skills for evidence-informed decision making.</td>
<td></td>
</tr>
<tr>
<td>PHC 7103</td>
<td>Transforming Public Health Practice</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>PHC 6724</td>
<td>Synthesizing Public Health Research</td>
<td>1</td>
<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>
<td></td>
</tr>
<tr>
<td>HIM 6943</td>
<td>Health Informatics Internship</td>
<td>1-3</td>
<td>HIM 6667. The course involves the successful completion of an internship experience in an institution that provides insight into one or more aspects of health informatics.</td>
<td></td>
</tr>
<tr>
<td>HIM 6930</td>
<td>Selected Topics in Health Informatics</td>
<td>1-3</td>
<td>Topics for this course will be varied and based upon student and faculty interests and programmatic requirements.</td>
<td></td>
</tr>
<tr>
<td>HIM 6908</td>
<td>Health Informatics Independent Study</td>
<td>1-3</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 health informatics.</td>
<td></td>
</tr>
<tr>
<td>MHS 6941</td>
<td>Applied Field Experience Seminar</td>
<td>3-6</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>
<td></td>
</tr>
<tr>
<td>MHS 7748</td>
<td>Statistical Applications in Translational Research and Evaluation</td>
<td>3</td>
<td>The course covers the basic applications of statistical concepts and techniques essential to translational research and evaluation in child</td>
<td></td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
<td>Description</td>
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<tr>
<td>MHS 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 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 6437</td>
<td>Family Perspectives on Behavioral Health Disparities</td>
<td>3</td>
<td>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 6067</td>
<td>EBP in Beh. Hlth for Children &amp; Adolescents with Dev. Disabil.</td>
<td>3</td>
<td>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 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 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>RED 6317</td>
<td>Intermediate Literacy: Assessment, Skills, and Strategies</td>
<td>3</td>
<td>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>MHS 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 7749</td>
<td>Applications in Dissemination and Implementation Science</td>
<td>3</td>
<td>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 6945</td>
<td>Leadership Prac in Agen Serv Chil &amp; Adol with Dev Disabilities</td>
<td>3</td>
<td>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>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
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<tr>
<td>MHS 6942</td>
<td>Practicum: EBP &amp; Service Delivery for Child. &amp; Adol. with DD</td>
<td>3</td>
<td>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>PHC 7156</td>
<td>Evidence-Informed Public Health II</td>
<td>3</td>
<td>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>IDS 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 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>ADV 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>ACG 6405</td>
<td>Advanced Accounting Information Systems</td>
<td>3</td>
<td>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 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 6636</td>
<td>Contemporary Issues In Auditing</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>ACG 5205</td>
<td>Advanced Financial Accounting</td>
<td>3</td>
<td>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>ECP 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 organizations, and organizat</td>
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<td>Prerequisites</td>
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<tr>
<td>ECS 6015</td>
<td>Economic Development</td>
<td>3</td>
<td>ECO 3101 and ECP 6702</td>
<td>The course studies human economic development focusing on explaining cross-country and intertemporal differences in living standards in the world. The course focuses on the microeconomic aspect of economic development.</td>
</tr>
<tr>
<td>EDA 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>
<td>EDF 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 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>EEC 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>
</tr>
<tr>
<td>EEX 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>ESE 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</td>
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<td>Course Code</td>
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<tr>
<td>EVR 6908</td>
<td>Environ Science, Policy And Mgmt Independent Study</td>
<td>1-3</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>
<td></td>
</tr>
<tr>
<td>EVR 6934</td>
<td>Grad Environ Sci, Policy &amp; Mgmt Selected Topics</td>
<td>3</td>
<td>Selected topics, issues and problems in Environmental Science and Policy.</td>
<td></td>
</tr>
<tr>
<td>EVR 7923</td>
<td>Doctoral Dissertation Preparation</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>GLY 6557</td>
<td>Facies Models</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>GMS 6873</td>
<td>Biomedical Ethics</td>
<td>3</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.</td>
<td></td>
</tr>
<tr>
<td>GMS 6114</td>
<td>Vaccines And Applied Immunology</td>
<td>2</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>
<td></td>
</tr>
<tr>
<td>LIS 6564</td>
<td>Materials For Children</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>LIS 6523</td>
<td>Adult Services In Libraries</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>LIS 6514</td>
<td>Digital Libraries</td>
<td>3</td>
<td>LIS 6260, LIS 6603 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>
<td></td>
</tr>
<tr>
<td>MUH 6057</td>
<td>Intercultural Music In The 20th And 21st Centuries</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>NGR 7942</td>
<td>Educational Leadership Residency</td>
<td>1-9</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>
<td></td>
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<tr>
<td>NGR 7905</td>
<td>Directed Readings</td>
<td>1-6</td>
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<tr>
<td>Course Code</td>
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<td>Credits</td>
<td>Prerequisites</td>
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<tr>
<td>NGR 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 6240</td>
<td>Adult Health For Specialty Care Nursing</td>
<td>3</td>
<td>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 6301</td>
<td>Primary Care Of Children And Adolescents I</td>
<td>3</td>
<td>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>OCB 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>
</tr>
<tr>
<td>PGY 5619</td>
<td>Photojournalism I</td>
<td>3</td>
<td></td>
<td>Today, all journalists must know how to tell stories with words, photos and audio. Through ten still photo assignments, caption writing and a multimedia project with interview audio and natural sound, the craft of photojournalism will be emphasized.</td>
</tr>
<tr>
<td>PHI 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>PHM 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 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 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>POS 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>RED 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</td>
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<tr>
<td>SPA 6559</td>
<td>Augmentative &amp; Alternative Communication</td>
<td>3</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; teacher research and a mindset for becoming</td>
<td></td>
</tr>
<tr>
<td>SPA 6645</td>
<td>Language For The Hearing Impaired</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>SPA 6674</td>
<td>Curriculum Proced/materials For Hearing Impaired</td>
<td>3</td>
<td>Curricular adaptation, methods, techniques, and organization necessary for teaching the hearing impaired.</td>
<td></td>
</tr>
<tr>
<td>SPB 6715</td>
<td>Sales And Fundraising In The Sport Industry</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>SYP 6007</td>
<td>Constructing Social Problems</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>TAX 6134</td>
<td>Advanced Corporate Taxation</td>
<td>3</td>
<td>TAX 4001 AND TAX 5015 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>
<td></td>
</tr>
<tr>
<td>TAX 6065</td>
<td>Contemporary Issues In Taxation</td>
<td>3</td>
<td>TAX 4001 AND TAX 5015 OR EQUIVALENT 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>
<td></td>
</tr>
<tr>
<td>TSL 6380</td>
<td>Instructional Methods &amp; Strategies for Teaching ESOL</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>ANG 6404</td>
<td>Health and Medical Systems</td>
<td>3</td>
<td>An explicitly medical anthropological approach to systems-level issues in health and medicine.</td>
<td></td>
</tr>
<tr>
<td>SCE 7076</td>
<td>Historical, Social, and Epistemological Foundations of Science Education</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>SCE 7895</td>
<td>Philosophy and Nature of Science</td>
<td>3</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</td>
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<td>Course Code</td>
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<td>Credits</td>
<td>Description</td>
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<tr>
<td>SCE 6315</td>
<td>Teaching Elementary (K-5) School Science</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>CAP 6940</td>
<td>IT Graduate Practicum</td>
<td>3-6</td>
<td>An information technology project-based course that requires the student to investigate, design and implement a real-world application over two semesters or, with approval, one semester.</td>
<td></td>
</tr>
<tr>
<td>ATR 5105C</td>
<td>Athletic Training Techniques</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>ATR 5125</td>
<td>Anatomical Basis of Clinical Practice in Sports Medicine</td>
<td>3</td>
<td>By way of laboratory prossection 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>
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</tr>
<tr>
<td>ATR 5217C</td>
<td>Physical Examination I</td>
<td>4</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>
<td></td>
</tr>
<tr>
<td>ATR 5218C</td>
<td>Physical Examination II</td>
<td>4</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>
<td></td>
</tr>
<tr>
<td>ATR 5306C</td>
<td>Therapeutic Interventions I</td>
<td>4</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>
<td></td>
</tr>
<tr>
<td>ATR 5307C</td>
<td>Therapeutic Interventions II</td>
<td>4</td>
<td>Theory and application methods of comprehensive therapeutic treatment and rehabilitation programs for injuries commonly sustained by the physically active.</td>
<td></td>
</tr>
<tr>
<td>ATR 5308C</td>
<td>Therapeutic Interventions III</td>
<td>1</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>
<td></td>
</tr>
<tr>
<td>ATR 5346C</td>
<td>Health and Wellness Promotion Across the Lifespan I</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>ATR 5347C</td>
<td>Health and Wellness Promotion</td>
<td>1</td>
<td>Techniques in conducting health fitness tests</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
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</tr>
<tr>
<td>ATR 5348C</td>
<td>Health and Wellness Promotion Across the Lifespan III</td>
<td>1</td>
<td>This course will introduce concepts of neuromuscular system training, specifically addressing sport specific strength training, exercise selection, and physiological needs analysis.</td>
<td></td>
</tr>
<tr>
<td>ATR 5435</td>
<td>Medical Conditions</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>ATR 5815</td>
<td>Clinical Experience in Athletic Training I</td>
<td>1-3</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>
<td></td>
</tr>
<tr>
<td>ATR 5825</td>
<td>Clinical Experience in Athletic Training II</td>
<td>1-3</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>
<td></td>
</tr>
<tr>
<td>ATR 6114</td>
<td>Preventing Sudden Death in Sport I</td>
<td>2</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>
<td></td>
</tr>
<tr>
<td>ATR 6115</td>
<td>Preventing Sudden Death in Sport II</td>
<td>2</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>
<td></td>
</tr>
<tr>
<td>ATR 6226</td>
<td>Advanced Athletic Training</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>ATR 6517</td>
<td>Professional Practice</td>
<td>4</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>
<td></td>
</tr>
<tr>
<td>ATR 6835</td>
<td>Clinical Experience in Athletic Training - III</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>ATR 6845</td>
<td>Clinical Experience in Athletic Training IV</td>
<td>1-3</td>
<td>A Capstone experience under the supervision of a preceptor at various sites. Students develop competence in mid and advanced</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
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<tr>
<td>CIS 6377</td>
<td>Information Security Architecture for IT</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>CAP 6671</td>
<td>IT Intelligent Agents</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>CGS 6842</td>
<td>IT and Systems for E-Business</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>CJE 6624</td>
<td>Introduction to Digital Evidence</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>CJE 6625</td>
<td>Network Forensic Criminal Investigations</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>CJE 6626</td>
<td>Digital Forensic Criminal Investigations</td>
<td>3</td>
<td>This course will introduce students to digital forensics as practiced by local, state, and federal law enforcement. Students will gain hands on experience with several digital forensic tools in this laboratory-based course.</td>
<td></td>
</tr>
<tr>
<td>CJE 6688</td>
<td>Cybercrime and Criminal Justice</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>MHS 6607</td>
<td>Behavior Consultation and Collaborative Systems Change</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>PGY 5625</td>
<td>Photojournalism II</td>
<td>3</td>
<td>All journalists must know how to tell stories with words, photos and audio. Photojournalism assignments will emphasize advanced composition, lighting and caption writing. A multimedia project with interview audio and natural sound will be emphasized.</td>
<td></td>
</tr>
<tr>
<td>CCJ 6459</td>
<td>Grant Writing for Criminal Justice Administration</td>
<td>3</td>
<td>Its purpose is to provide MACJA students with the skills to write a grant proposal that could be submitted to a research agency such as the National Institute of Justice. However, the skills learned will be transferable to other public service agencies.</td>
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<tr>
<td>Course Code</td>
<td>Title</td>
<td>Credits</td>
<td>Prerequisites/Notes</td>
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<tr>
<td>CCJ 6624</td>
<td>Seminar in Violence</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>CEN 6084</td>
<td>Advances in Object Oriented Programming for IT</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>GMS 6447</td>
<td>Advanced Male Endocrinology</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>GMS 6448</td>
<td>Advanced Endocrine Therapies</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>EEL 6584</td>
<td>RFID and NFC Technologies for IT</td>
<td>3</td>
<td>COP 2270 (or similar)</td>
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<td></td>
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<td></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>
<td></td>
</tr>
<tr>
<td>CAP 6663</td>
<td>IT Robotics Application</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>ENT 6119</td>
<td>Mergers and Acquisitions: An Entrepreneurial Perspective</td>
<td>3</td>
<td>Completion of Entrepreneurship core or business foundation courses in accounting, finance, and marketing (ACG 6026, FIN 6406, MAR 6815 or equivalents)</td>
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<td></td>
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<td></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>
<td></td>
</tr>
<tr>
<td>ATR 5612</td>
<td>Evidence Based Medicine in Athletic Training</td>
<td>2</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>
<td></td>
</tr>
<tr>
<td>ATR 6616</td>
<td>Research in Athletic Training</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>PHC 7932</td>
<td>Practical Applications I: Policy, Advocacy and Public Health</td>
<td>1</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</td>
<td></td>
</tr>
<tr>
<td>Program</td>
<td>Code</td>
<td>Title</td>
<td>Credits</td>
<td>Notes</td>
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</tr>
<tr>
<td>ENV</td>
<td>6438</td>
<td>Physical &amp; Chemical Processes for Treatment of Drinking Water</td>
<td>3</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>GMS</td>
<td>6055</td>
<td>Case Studies in Cancer Therapy</td>
<td>3</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>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>MHS</td>
<td>6069</td>
<td>Child &amp; Adolescent Behavioral Health</td>
<td>3</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>PHC</td>
<td>6522</td>
<td>Nutrition in Health and Disease</td>
<td>3</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>POS</td>
<td>6746</td>
<td>Quantitative Analysis I</td>
<td>3</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>PHC</td>
<td>7149</td>
<td>Practical Applications II: Public Health Leadership</td>
<td>1</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>ENG</td>
<td>6145</td>
<td>Rogue Cinema</td>
<td>3</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>AML</td>
<td>6637</td>
<td>Studies in US Latina/Latino Literatures</td>
<td>3</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>CTS</td>
<td>6716</td>
<td>Network Programming for IT</td>
<td>3</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>
</tbody>
</table>
| ISM      | 6046  | Contemporary Issues in                    | 3       | An exploration of the variety of legal, ethical,
<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEB</td>
<td>Dissertation Preparation</td>
<td>4</td>
<td>Preparing a dissertation proposal on a business topic.</td>
</tr>
<tr>
<td>BME</td>
<td>Directed Research in Biomedical Engineering</td>
<td>1-6</td>
<td>Directed research in an advanced topic in biomedical engineering.</td>
</tr>
<tr>
<td>BME</td>
<td>Ph.D. Dissertation</td>
<td>2-19</td>
<td>Dissertation research for the Ph.D. in Biomedical Engineering.</td>
</tr>
<tr>
<td>IDS</td>
<td>Directed Independent Research</td>
<td>1-3</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>MUS</td>
<td>Fit to Play: Mind-Body Integration for Musician</td>
<td>2</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>
<td>ANG</td>
<td>Ancient Diets</td>
<td>3</td>
<td>This course focuses on archaeological remains and studies about ancient diet, a fundamental practice by all world cultures.</td>
</tr>
<tr>
<td>ANG</td>
<td>Anthropological Theory Today</td>
<td>3</td>
<td>This course provides an overview of contemporary theorizing in social and cultural anthropology for graduate students.</td>
</tr>
<tr>
<td>EEE</td>
<td>Personal Health Systems</td>
<td>3</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>EEL</td>
<td>Engin Apps for Vector Analysis</td>
<td>3</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>Engin Apps of Complex Analysis</td>
<td>3</td>
<td>Analytic functions, conformal mapping, residue theory, Laurent series, transforms. Applications to various problems in engineering and physics.</td>
</tr>
<tr>
<td>SCE</td>
<td>Trends in STEM Education for Middle Grade Teachers</td>
<td>3</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,</td>
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<tr>
<td>Code</td>
<td>Course Title</td>
<td>Units</td>
<td>Description</td>
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</tr>
<tr>
<td>ACG</td>
<td>Executive Issues in Accounting</td>
<td>2-4</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>FIN</td>
<td>Executive Issues in Finance</td>
<td>2-4</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>GEB</td>
<td>Executive Issues in Business</td>
<td>2-4</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>MAR</td>
<td>Executive Issues in Marketing</td>
<td>2-4</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>MAN</td>
<td>Executive Issues in Management</td>
<td>2-4</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>QMB</td>
<td>Executive Issues in Operations Research &amp; Operations Mgmt</td>
<td>2-4</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>ADV</td>
<td>Advanced Advertising Management</td>
<td>3</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>MAN</td>
<td>MBA Essentials: Management</td>
<td>0</td>
<td>A basic conceptual overview of management principles. Topical coverage includes ethics, globalization, strategic management, leadership, and individual and group decision making.</td>
</tr>
<tr>
<td>ISM</td>
<td>MBA Essentials: Management Info Sys</td>
<td>0</td>
<td>Overview of the role that information systems play in today’s rapidly changing business environments, supporting routine business operations, facilitating management decision-making, and enabling more organic organizational forms.</td>
</tr>
<tr>
<td>MAN</td>
<td>MBA Essentials: Operations</td>
<td>0</td>
<td>A course emphasizing the quantitative</td>
</tr>
<tr>
<td>Code</td>
<td>Title</td>
<td>Units</td>
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<tr>
<td>Mgt</td>
<td>Mgt techniques for trying to optimize the human and material resources</td>
<td>2-6</td>
<td></td>
</tr>
<tr>
<td>BME</td>
<td>Research for Master’s Thesis</td>
<td>2-6</td>
<td></td>
</tr>
<tr>
<td>LAE</td>
<td>Teaching Composition in Elem Classroom: Research into Practice</td>
<td>3</td>
<td>LAE 6427</td>
</tr>
<tr>
<td>CAP</td>
<td>Multimedia and E-Commerce for IT</td>
<td>3</td>
<td>CGS 3823</td>
</tr>
<tr>
<td>CIS</td>
<td>IT Risk Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CHM</td>
<td>Spectroscopic Analysis of Organic Compounds</td>
<td>3</td>
<td>CHM 2211</td>
</tr>
<tr>
<td>GEB</td>
<td>Dissertation</td>
<td>1-8</td>
<td>GEB 7981</td>
</tr>
<tr>
<td>GMS</td>
<td>Introduction to Medical Sciences</td>
<td>3-6</td>
<td></td>
</tr>
<tr>
<td>LIS</td>
<td>Information Strategy and Decision-Making</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>LIS</td>
<td>Core Concepts in Intelligence</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>LIS</td>
<td>Advanced Intelligence Analytic Methods</td>
<td>3</td>
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<tr>
<td>LIS</td>
<td>Cyber Intelligence</td>
<td>3</td>
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<td>Course Code</td>
<td>Course Title</td>
<td>Units</td>
<td>Description</td>
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<tr>
<td>SYA 7988</td>
<td>Dissertation Proposal</td>
<td>1-6</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>CCJ 7940</td>
<td>Teaching Practicum in Criminology</td>
<td>1</td>
<td>In this course, a student will receive supervision and mentoring from an experienced teacher in the context of a single undergraduate “live” (not on-line) course, the primary instructor of which is the experienced faculty member.</td>
</tr>
<tr>
<td>HIM 6664</td>
<td>Healthcare Project Management</td>
<td>3</td>
<td>Healthcare Project Management is designed to provide a discussion of the various facets of initiating, planning, executing, monitoring, closing, and controlling projects in healthcare environments.</td>
</tr>
<tr>
<td>PHC 6108</td>
<td>Foundations of Public Health</td>
<td>3</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 6462</td>
<td>Cultural Competency in Public Health Practice</td>
<td>2</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>ISM 7939</td>
<td>Executive Issues in MIS</td>
<td>2-4</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>GMS 6058</td>
<td>Diet and Cancer</td>
<td>3</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>
</tr>
<tr>
<td>SPW 6806</td>
<td>Introduction to Hispanic Graduate Studies</td>
<td>3</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>MMC 5146</td>
<td>Web Publishing</td>
<td>3</td>
<td>Introduces mainstream web technologies and programming languages used for publishing news, digital content and information on the web. Examine and question the nature of Web publishing and what impact it has on society at large and on us as individuals.</td>
</tr>
<tr>
<td>JOU 6135</td>
<td>Video Storytelling 1</td>
<td>3</td>
<td>Best practices multimedia shots, audio, post-production editing, industry work flows, the craft of storytelling through a lens, interviewing and scripting techniques will be emphasized. Beginning Reporting or professional news writing experience required.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
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</tr>
<tr>
<td>CHM 6036</td>
<td>Chemical Biology</td>
<td>3</td>
<td>BCH 3053 or BCH 4033</td>
</tr>
<tr>
<td>CHM 6945</td>
<td>Investigating Chemical Education Research in the United States</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CHM 6279</td>
<td>Introduction to Drug Discovery</td>
<td>3</td>
<td>BSC 2011, CHM 2211</td>
</tr>
<tr>
<td>ECO 5060</td>
<td>MBA Essentials: Economics</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>MMC 5147</td>
<td>Web Publishing 2</td>
<td>3</td>
<td>MMC 5140</td>
</tr>
<tr>
<td>LIS 6026</td>
<td>Introduction to Archives and Records Management</td>
<td>3</td>
<td>LIS 6711</td>
</tr>
<tr>
<td>LIS 6670</td>
<td>Advanced Cyber Intelligence</td>
<td>3</td>
<td>LIS 6709</td>
</tr>
<tr>
<td>CCJ 6638</td>
<td>Seminar in Nature and Causes of Crime</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CCJ 6654</td>
<td>Seminar in Drugs and Crime</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CCJ 6669</td>
<td>Seminar in Social Inequality and Crime</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CCJ 7065</td>
<td>Professional Development in Criminology</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Name</td>
<td>Credits</td>
<td>Prerequisites</td>
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</tr>
<tr>
<td>CCJ 6485</td>
<td>Criminal Justice and Public Policy</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>TAX 6940</td>
<td>IRS VITA Tax Practicum</td>
<td>3</td>
<td>TAX 4001 (or its equivalent)</td>
</tr>
<tr>
<td>PHH 6677</td>
<td>Seminar in German Idealism</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>CCJ 7606</td>
<td>Theories of Criminal Behavior II</td>
<td>3</td>
<td>CCJ 7605</td>
</tr>
<tr>
<td>RCS 6971</td>
<td>Master's Thesis</td>
<td>2-6</td>
<td>RCS 6740</td>
</tr>
<tr>
<td>COP 6021</td>
<td>Programming Languages: Design and Analysis</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CPO 6077</td>
<td>Social Movements</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ENT 6930</td>
<td>Special Topics in Entrepreneurship</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>EEL 6245</td>
<td>Power Electronics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ENG 6946</td>
<td>Internship</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHA 6119</td>
<td>Micro-/Nanoscale Drug Delivery Systems</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHA 6449</td>
<td>Pharmacogenomics--Current and Future Prospects</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
</tr>
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</tr>
<tr>
<td>PHA 6146</td>
<td>Introduction to Nanotechnology</td>
<td>3</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 6336</td>
<td>Tissue Engineering and Regenerative Medicine</td>
<td>3</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 6222</td>
<td>Pharmacy Practice Management</td>
<td>3</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>RSD 7980</td>
<td>Dissertation - Directed Research in Rehabilitation Sciences</td>
<td>3-12</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 7911</td>
<td>Mentored Research Apprenticeship</td>
<td>1</td>
<td>Directed research in rehabilitation sciences.</td>
</tr>
<tr>
<td>RSD 7306</td>
<td>Rehabilitation Ethics</td>
<td>3</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 6920</td>
<td>Colloquium in Rehabilitation Sciences 1</td>
<td>1</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 6111</td>
<td>Introduction to Rehabilitation Sciences</td>
<td>3</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>ACG 5375</td>
<td>Valuation of Closely Held Businesses</td>
<td>3</td>
<td>ACG 2021 Preparies students to assess how a firm can increase its value. Students develop an understanding of the principles behind business valuation and learn how to use these principles to assess a company’s value through a case study.</td>
</tr>
<tr>
<td>VIC 6316</td>
<td>Brand Management</td>
<td>3</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>Code</td>
<td>Course Title</td>
<td>Units</td>
<td>Description</td>
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<tr>
<td>ANG</td>
<td>6570 Nutritional Assessment</td>
<td>3</td>
<td>Overview of basic nutritional assessment methods used in anthropology, nutritional sciences, and public health.</td>
</tr>
<tr>
<td>ANG</td>
<td>6533 Anthropology of Human Growth and Development</td>
<td>3</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>6585 Theories in Applied Bioanthropology</td>
<td>3</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>6732 Global Health from an Anthropological Perspective</td>
<td>3</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>6735 Reproductive Health</td>
<td>3</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>
</tr>
<tr>
<td>MAR</td>
<td>5001 MBA Essentials: Marketing</td>
<td>0</td>
<td>An overview of basic marketing principles, including the role of marketing in business and society, as well as a description of functions, practices, and concepts associated with marketing.</td>
</tr>
<tr>
<td>QMB</td>
<td>5010 MBA Essentials: Business Statistics</td>
<td>0</td>
<td>An overview of the statistical tools that allow typical business data to be analyzed. ANOVA, multiple linear regression, and tests of hypothesis are emphasized.</td>
</tr>
<tr>
<td>SCE</td>
<td>6855 Teaching Biology &amp; Ocean Science in Elementary</td>
<td>3</td>
<td>This is a graduate level course for elementary school teachers to further their knowledge and pedagogy in teaching the Life Sciences concepts comprising the Next Generation National Science Standards.</td>
</tr>
<tr>
<td>SCE</td>
<td>6804 Physical Science for Middle Grade Teachers</td>
<td>3</td>
<td>The purpose of this course is to assist middle grade teachers in developing physical science content knowledge and experiencing first hand inquiry teaching.</td>
</tr>
<tr>
<td>SCE</td>
<td>6836 Teaching Earth Space in Middle Grades</td>
<td>3</td>
<td>The purpose of this course is to assist middle grade teachers in developing science content knowledge and experiencing first hand inquiry teaching.</td>
</tr>
<tr>
<td>OCE</td>
<td>6950 Teaching the Broader Impacts of Ocean Sciences</td>
<td>1-4</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>SCE</td>
<td>6735 Trends in Math and Science Education for Elementary Teachers</td>
<td>3</td>
<td>This course will help students to develop an understanding of the theoretical frameworks and familiarity with literature on the multiple perspectives underpinning mathematics and science education.</td>
</tr>
<tr>
<td>SCE</td>
<td>6803 Physical Science for Elementary Teachers</td>
<td>3</td>
<td>The purpose of this course is to assist elementary grade teachers in developing physical science content knowledge and experiencing first hand inquiry teaching.</td>
</tr>
<tr>
<td>SCE</td>
<td>6838 Teaching Earth Space in</td>
<td>3</td>
<td>The purpose of this course is to assist...</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Notes</td>
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</tr>
<tr>
<td>IDS 6207</td>
<td>Renewable Transportation Fuels</td>
<td>3</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>IDS 6208</td>
<td>Renewable Power Portfolio</td>
<td>3</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>ISM 7406</td>
<td>Business Analytics</td>
<td>3</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>RLG 6438</td>
<td>Modern Christian Thought</td>
<td>3</td>
<td>Examines themes, thinkers, and movements in Christian thought since the 16th century.</td>
</tr>
<tr>
<td>ANG 6741</td>
<td>Introduction to Forensic Sciences</td>
<td>3</td>
<td>Provides a general introduction to the methods and techniques used in the interdisciplinary field of forensic sciences.</td>
</tr>
<tr>
<td>ANG 6536</td>
<td>Bioarchaeology</td>
<td>3</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 6745</td>
<td>Forensic Anthropology</td>
<td>3</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 6746</td>
<td>Investigation of Violent Crimes Against Children</td>
<td>3</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>SCE 6876</td>
<td>Teaching Biology &amp; Ocean Science in Middle Grades</td>
<td>3</td>
<td>This is a graduate level course for middle school teachers to further their knowledge and pedagogy in teaching the Life Sciences concepts comprising the Next Generation National Science Standards.</td>
</tr>
<tr>
<td>IDS 6246</td>
<td>Water Sensitive Urban Design for Sustainable Communities</td>
<td>3</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>PHA 6223C</td>
<td>Pharmacy Leadership</td>
<td>2</td>
<td>PY3 Standing</td>
</tr>
<tr>
<td>PHA 6786</td>
<td>Travel Medicine</td>
<td>3</td>
<td>Travel medicine is a service provided to</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Corequisites</td>
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<tr>
<td>PHA 6592C</td>
<td>Advanced Cardiology Pharmacotherapy</td>
<td>2</td>
<td>PHA 6782C, PHA 6783C, PY3 Standing</td>
</tr>
<tr>
<td>PHA 6615C</td>
<td>Ambulatory Care Pharmacy Practice Elective</td>
<td>2</td>
<td>PY3 Standing</td>
</tr>
<tr>
<td>PHA 6780C</td>
<td>Oncology Pharmacy Practice</td>
<td>2</td>
<td>PHA 6784C</td>
</tr>
<tr>
<td>PHA 6221</td>
<td>Pharmacists' Role in Transitions of Care</td>
<td>2</td>
<td>PHA 6783C and PHA 6720</td>
</tr>
<tr>
<td>PHC 6326</td>
<td>Global Issues in Environmental Health</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>RSD 6941</td>
<td>Teaching Practicum in Rehabilitation Sciences</td>
<td>3</td>
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</tr>
<tr>
<td>RSD 7900</td>
<td>Directed Readings in Rehabilitation Sciences</td>
<td>3</td>
<td>RSD 6111 and RSD 6112</td>
</tr>
<tr>
<td>RSD 7931</td>
<td>Special Topics in Chronic Disease</td>
<td>3</td>
<td>RSD 6111 and RSD 6112</td>
</tr>
<tr>
<td>RSD 7932</td>
<td>Special Topics in Neuromusculoskeletal Disability</td>
<td>3</td>
<td>RSD 6111 and RSD 6112</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
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<tr>
<td>RSD 7933</td>
<td>Special Topics in Veteran's Health/Reintegration</td>
<td>3</td>
<td>RSD 6111 and RSD 6112</td>
</tr>
<tr>
<td>SPN 6846</td>
<td>Spanish Paleography and Textual Criticism</td>
<td>3</td>
<td>SPN 6845</td>
</tr>
<tr>
<td>URP 6906</td>
<td>Independent Study</td>
<td>1-6</td>
<td></td>
</tr>
<tr>
<td>URP 6910</td>
<td>Supervised Research</td>
<td>1-6</td>
<td></td>
</tr>
<tr>
<td>URP 6971</td>
<td>Thesis</td>
<td>2-19</td>
<td></td>
</tr>
<tr>
<td>EVR 6115</td>
<td>Global Climate Change</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>EVR 6931</td>
<td>Environmental Soils, Water and Land Use</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>EVR 6946</td>
<td>Major Themes in Environmental Science</td>
<td>3</td>
<td></td>
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<tr>
<td>EVR 5956</td>
<td>Methods of Sustainable Development</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>GEO 6113</td>
<td>Qualitative Research Methods</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SCE 6644</td>
<td>Interpreting and Teaching the Environment</td>
<td>3</td>
<td></td>
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<tr>
<td>SCE 6346</td>
<td>Foundations of Environmental Education Theory</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>GEB 6458</td>
<td>Managing Global Sustainability</td>
<td>3</td>
<td>MAN 5002</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Course Description</td>
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<tr>
<td>LIT 6236</td>
<td>Studies in Postcolonial Literatures</td>
<td>3</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>CNT 6410</td>
<td>Emerging Topics in Network Security</td>
<td>3</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>POS 6707</td>
<td>Qualitative Analysis</td>
<td>3</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>RSD 6112</td>
<td>Advanced Rehabilitation Sciences</td>
<td>3</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 6921</td>
<td>Colloquium in Rehabilitation Sciences 2</td>
<td>1</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 science.</td>
</tr>
<tr>
<td>EDG 6436</td>
<td>Cybersecurity in the Schools</td>
<td>3</td>
<td>Knowledge in developing and implementing cybersecurity policies that govern schools and districts.</td>
</tr>
<tr>
<td>EDG 7069</td>
<td>Sustainable Innovation in Education</td>
<td>3</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 7207</td>
<td>Transforming the Curriculum</td>
<td>3</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>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
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<tr>
<td>EDG 7695</td>
<td>Problems of Practice in Education</td>
<td>3</td>
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</tr>
<tr>
<td>EDG 7936</td>
<td>Graduate Seminar: Leader-Scholar Community</td>
<td>3</td>
<td>EDG 7046</td>
</tr>
<tr>
<td>EDG 7941</td>
<td>Practicum in Educational Innovation</td>
<td>1-4</td>
<td>EDG 7046</td>
</tr>
<tr>
<td>MUG 6308</td>
<td>Advanced Wind Conducting II</td>
<td>2</td>
<td>MUG 6307</td>
</tr>
<tr>
<td>MUG 6309</td>
<td>Advanced Orchestral Conducting I</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>MUG 6315</td>
<td>Advanced Orchestral Conducting II</td>
<td>2</td>
<td>MUG 6309</td>
</tr>
<tr>
<td>OCE 6940C</td>
<td>Experiential Learning in Marine Science</td>
<td>1-4</td>
<td></td>
</tr>
<tr>
<td>OCE 6949C</td>
<td>Developing and Teaching a STEM Course</td>
<td>1-4</td>
<td></td>
</tr>
<tr>
<td>PHA 6225</td>
<td>Invention, Innovation and Entrepreneurship</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHA 6618</td>
<td>Principles of Geriatric Medicine</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>RSD 7930</td>
<td>Research Proseminar in Rehabilitation Sciences</td>
<td>2</td>
<td>RSD 6111 and RSD 6112</td>
</tr>
<tr>
<td>PHA 6114C</td>
<td>Drug Delivery Systems I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
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<tr>
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</tr>
<tr>
<td>PHA 6115C</td>
<td>Drug Delivery Systems II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHA 6124</td>
<td>Principles of Pharmacokinetics and Pharmacodynamics I</td>
<td>3</td>
<td>PY2 Standing</td>
</tr>
<tr>
<td>PHA 6129</td>
<td>Clinical Pharmacokinetics and Pharmacodynamics</td>
<td>3</td>
<td>PHA 6124</td>
</tr>
<tr>
<td>PHA 6130C</td>
<td>Translational Pharmacogenomics - Principles and Clinical Applications</td>
<td>3</td>
<td>PY3 Standing</td>
</tr>
<tr>
<td>PHA 6177</td>
<td>Advanced Compounding and Industrial Pharmacy</td>
<td>3</td>
<td>PY3 Standing</td>
</tr>
<tr>
<td>PHA 6185</td>
<td>Drug Discovery and Frontier</td>
<td>3</td>
<td>PHA 6575</td>
</tr>
<tr>
<td>PHA 6224</td>
<td>Pharmaceutical Debates on Recent Issues Affecting the Profession</td>
<td>2</td>
<td>PY3 Standing</td>
</tr>
<tr>
<td>PHA 6233C</td>
<td>Jurisprudence</td>
<td>3</td>
<td>PY3 Standing</td>
</tr>
<tr>
<td>PHA 6243</td>
<td>Medical Informatics and</td>
<td>2</td>
<td>PY2 Standing</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
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</tr>
<tr>
<td>PHA 6261</td>
<td>Healthcare Administration and Economics</td>
<td>3</td>
<td>PHA 6898 and PY2 Standing</td>
</tr>
<tr>
<td>PHA 6270</td>
<td>Healthcare and Medication Safety</td>
<td>2</td>
<td>PY2 Standing</td>
</tr>
<tr>
<td>PHA 6352</td>
<td>Herbal Medicines and Alternative Therapy</td>
<td>2</td>
<td>PHA 6782, PHA 6783, PHA 6795, and PHA 6618</td>
</tr>
<tr>
<td>PHA 6428C</td>
<td>Advanced Topics in Metabolic Syndrome Treatment</td>
<td>2</td>
<td>PHA 6577, PHA 6783C, and PHA 6946</td>
</tr>
<tr>
<td>PHA 6451</td>
<td>Clinical Biochemistry</td>
<td>2</td>
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<tr>
<td>PHA 6531</td>
<td>Clinical Toxicology</td>
<td>2</td>
<td>PHA 6577, PHA 6783C</td>
</tr>
<tr>
<td>PHA 6562</td>
<td>Physiologic Basis of Disease</td>
<td>4</td>
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<tr>
<td>PHA 6575</td>
<td>Introduction to Principles of Drug Action</td>
<td>3</td>
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<tr>
<td>PHA 6577</td>
<td>Biochemical and Molecular Principles of Drug Action</td>
<td>4</td>
<td>PHA 6575</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Co-requisites</td>
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<tr>
<td>PHA 6598</td>
<td>Current Perspectives in Mental Health</td>
<td>2</td>
<td>PHA 6783C and PY3 Standing</td>
</tr>
<tr>
<td>PHA 6602</td>
<td>Pediatric Pharmacotherapy</td>
<td>3</td>
<td></td>
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<tr>
<td>PHA 6618C</td>
<td>Principles of Geriatric Pharmacotherapy</td>
<td>3</td>
<td>PY2 Standing</td>
</tr>
<tr>
<td>PHA 7626</td>
<td>Advanced Health-System Pharmacy Practice Experience</td>
<td>6</td>
<td>PHA 6940</td>
</tr>
<tr>
<td>PHA 7627</td>
<td>Advanced Community Pharmacy Practice Experience</td>
<td>6</td>
<td>PHA 6940</td>
</tr>
<tr>
<td>PHA 6628</td>
<td>Introduction to Post Graduate Residency Training</td>
<td>2</td>
<td>PY3 Standing</td>
</tr>
<tr>
<td>PHA 7644</td>
<td>Geriatrics Patient Care Pharmacy Practice Experience</td>
<td>6</td>
<td>PHA 6940</td>
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<tr>
<td>PHA 7684</td>
<td>Elective 1 Pharmacy Practice Experience</td>
<td>6</td>
<td>PHA 6940</td>
</tr>
<tr>
<td>PHA 7692</td>
<td>Advanced Ambulatory Pharmacy Practice Experience</td>
<td>6</td>
<td>PHA 6940</td>
</tr>
<tr>
<td>PHA 7694</td>
<td>Advanced Adult Medicine</td>
<td>6</td>
<td>PHA 6940</td>
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</tbody>
</table>
### Pharmacy Practice Experience

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.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHA 6730C</td>
<td>Drugs of Abuse, Addiction, and Law Enforcement</td>
<td>2</td>
<td>PY3 Standing</td>
</tr>
<tr>
<td>PHA 6740</td>
<td>Grant Writing and Clinical Research</td>
<td>2</td>
<td>PHA 6792 and PHA 6795</td>
</tr>
<tr>
<td>PHA 6755</td>
<td>Medical Microbiology and Immunology</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>PHA 6760</td>
<td>Non-Prescription and Herbal Therapies</td>
<td>3</td>
<td>PY3 Standing</td>
</tr>
<tr>
<td>PHA 6771C</td>
<td>Clinical Nutrition in Pharmacy Practice</td>
<td>2</td>
<td>PY3 Standing</td>
</tr>
<tr>
<td>PHA 6782C</td>
<td>Pharmacotherapeutics I</td>
<td>5</td>
<td>PY2 Standing</td>
</tr>
<tr>
<td>PHA 6783C</td>
<td>Pharmacotherapeutics II</td>
<td>5</td>
<td>PHA 6782C</td>
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<tr>
<td>PHA 6784C</td>
<td>Pharmacotherapeutics III</td>
<td>5</td>
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<tr>
<td>PHA 6787C</td>
<td>Pharmacotherapeutics IV</td>
<td>5</td>
<td>PHA 6784C</td>
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<td>Course Code</td>
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<tr>
<td>PHA 6792C</td>
<td>Drug Information/Literature Evaluation</td>
<td>2</td>
<td>PY1 Standing</td>
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<tr>
<td>PHA 6795</td>
<td>Research Methods and Biostatistics</td>
<td>3</td>
<td>PY2 Standing</td>
</tr>
<tr>
<td>PHA 6804C</td>
<td>Pharmaceutical Calculations</td>
<td>2</td>
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<tr>
<td>PHA 6870C</td>
<td>Pharmaceutical Skills I</td>
<td>2</td>
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<tr>
<td>PHA 6871C</td>
<td>Pharmaceutical Skills II</td>
<td>3</td>
<td>PHA 6870</td>
</tr>
<tr>
<td>PHA 6872C</td>
<td>Pharmaceutical Skills III</td>
<td>3</td>
<td>PHA 6871C</td>
</tr>
<tr>
<td>PHA 6873C</td>
<td>Pharmaceutical Skills IV</td>
<td>3</td>
<td>PHA 6872C</td>
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<tr>
<td>PHA 6874C</td>
<td>Pharmaceutical Skills V</td>
<td>3</td>
<td>PY3 Standing</td>
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<tr>
<td>PHA 6875C</td>
<td>Pharmaceutical Skills VI</td>
<td>3</td>
<td>PHA 6870C, PHA 6871C, PHA 6872C, PHA 6873C and PHA 6874C</td>
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<tr>
<td>Course Code</td>
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<td>Credits</td>
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<tr>
<td>PHA 6877C</td>
<td>Critical Care Pharmacotherapy</td>
<td>2</td>
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<tr>
<td>PHA 6898</td>
<td>Foundations of Public Health</td>
<td>3</td>
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<tr>
<td>PHA 6907</td>
<td>Directed Independent Study</td>
<td>2-3</td>
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<tr>
<td>PHA 6916</td>
<td>Directed Independent Research</td>
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<tr>
<td>PHA 7928</td>
<td>Professional Forum</td>
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<tr>
<td>PHA 6940</td>
<td>Introductory Pharmacy Practice Experience I</td>
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<td>PY1 Standing</td>
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<tr>
<td>PHA 6945</td>
<td>IPPE Community Pharmacy Practice I</td>
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<td>PY2 Standing</td>
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<tr>
<td>PHA 6946</td>
<td>IPPE Community Pharmacy Practice II</td>
<td>1</td>
<td>PHA 6945</td>
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<tr>
<td>PHA 6947</td>
<td>IPPE - Institutional Pharmacy Practice I</td>
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<td>PHA 6946 and PY3 Standing</td>
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<tr>
<td>PHA 6948</td>
<td>IPPE - Institutional Pharmacy Practice II</td>
<td>1</td>
<td>PHA 6947 and PY3 Standing</td>
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<tr>
<td>Code</td>
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<td>Credits</td>
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<tr>
<td>ACG</td>
<td>5007 MBA Essentials: Accounting</td>
<td>0</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>PHC</td>
<td>6515 Food Safety</td>
<td>3</td>
<td>An 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>EGN</td>
<td>5940 Professional Engineering Internship</td>
<td>0-6</td>
<td>Professional or interdisciplinary work period in engineering or career-related field.</td>
</tr>
<tr>
<td>BCH</td>
<td>6886 Fundamentals of Structural Bioinformatics</td>
<td>4</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>GEB</td>
<td>7982 Research and Writing Skills for Doctoral Students</td>
<td>3</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>ANG</td>
<td>6770 Crime Scene Reconstruction</td>
<td>3</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>
</tr>
<tr>
<td>ANG</td>
<td>6771 The Science of Missing and Unidentified Persons</td>
<td>3</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 Homicide Investigations</td>
<td>3</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>LIN</td>
<td>6726 Individual Differences in Second Language Acquisition</td>
<td>3</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>BUL</td>
<td>5842 Risk Management and Legal Compliance</td>
<td>3</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>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
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<tr>
<td>EEL 6025</td>
<td>Math I for Professionals</td>
<td>1</td>
<td>MAP 2302</td>
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<tr>
<td>EEL 6026</td>
<td>Math II for Professionals</td>
<td>1</td>
<td>EEL 6025</td>
</tr>
<tr>
<td>EEL 6028</td>
<td>Math III for Professionals</td>
<td>1</td>
<td>EEL 6025 and EEL 6026</td>
</tr>
<tr>
<td>EEL 6729</td>
<td>Rapid System Prototyping</td>
<td>3</td>
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<tr>
<td>EEE 6368</td>
<td>RF/MW Power Amp Design</td>
<td>3</td>
<td>EEL 6427</td>
</tr>
<tr>
<td>EEL 6728</td>
<td>Intro to VHDL</td>
<td>3</td>
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<tr>
<td>EIN 6518</td>
<td>Systems Integration</td>
<td>3</td>
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</tr>
<tr>
<td>ESI 6246</td>
<td>Advanced Statistical Design Models</td>
<td>3</td>
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<tr>
<td>ESI 6346</td>
<td>Stochastic Decision Models II</td>
<td>3</td>
<td>ESI 6213</td>
</tr>
<tr>
<td>ESI 6635</td>
<td>Advanced Analytics I</td>
<td>3</td>
<td>EIN 4606, and ESI 6247 or equivalent</td>
</tr>
<tr>
<td>ESI 6636</td>
<td>Advanced Analytics II</td>
<td>3</td>
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<tr>
<td>OCE 6048</td>
<td>Scientist in the Classroom</td>
<td>1-4</td>
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</table>

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<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Prerequisites/Notes</th>
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</thead>
<tbody>
<tr>
<td>ENT 6507</td>
<td>Social Entrepreneurship in Emerging Markets</td>
<td>3</td>
<td>This course explores fundamental business approaches and issues in the emerging markets of Latin America with special emphasis on the link between sustainable economic development and the development of entrepreneurial skills in women.</td>
</tr>
<tr>
<td>ENT 6508</td>
<td>Social Entrepreneurship I</td>
<td>3</td>
<td>A course focused on the design and growth of mission-driven enterprises that use market-based approaches to solve today’s social or environmental problems.</td>
</tr>
<tr>
<td>ENT 6509</td>
<td>Social Entrepreneurship II</td>
<td>3</td>
<td>The second part of a two-course sequence. In this course students will incorporate their organizations and work on launching, establishing, growing, and leading their mission-driven social enterprises.</td>
</tr>
<tr>
<td>ANG 5406</td>
<td>Ethnobotany: People, Plants and Culture</td>
<td>3</td>
<td>This course examines the structure and function of plants, the development of the field of ethnobotany, and the practice of ethnobotany.</td>
</tr>
<tr>
<td>IDS 6947</td>
<td>Service Learning</td>
<td>0-3</td>
<td>Students will learn about civic engagement, and gain knowledge about the relevant content area and its application through the context of their field experience, while making a valuable community contribution.</td>
</tr>
<tr>
<td>MAN 7298</td>
<td>Creativity and Innovation</td>
<td>2-4</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>MAR 6466</td>
<td>Supply Chain Management</td>
<td>3</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 6599</td>
<td>Logistics Systems and Analytics</td>
<td>3</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>CCJ 7605</td>
<td>Theories of Criminal Behavior I</td>
<td>3</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>EEE 6412</td>
<td>System on a Chip</td>
<td>3</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</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credit Hours</td>
<td>Description</td>
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<tr>
<td>EEE 6277</td>
<td>Bioelectronics</td>
<td>3</td>
<td>Second course in the series covering bioelectrical phenomena and systems. The focus is electronics for biomedical applications.</td>
</tr>
<tr>
<td>EEE 6407</td>
<td>Semiconductor Materials and Devices</td>
<td>3</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>
</tr>
<tr>
<td>EEL 6292</td>
<td>Power Sys Market: Oper &amp; Analys</td>
<td>3</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>
</tr>
<tr>
<td>EEL 6018</td>
<td>System of Systems Eng &amp; Model</td>
<td>3</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 6262</td>
<td>Industrial Power Distribution</td>
<td>3</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 6654</td>
<td>Control Systems Engineering</td>
<td>3</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/interdisciplinary perspectives.</td>
</tr>
<tr>
<td>EDG 7035</td>
<td>Design and Evaluation of Teacher Education Programs</td>
<td>3</td>
<td>Students in this course will examine theories for design and evaluation of teacher education 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>NGR 7111</td>
<td>Disciplinary Perspectives in Nursing Science</td>
<td>3</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 7125</td>
<td>Model Development for Nursing</td>
<td>3</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 7810</td>
<td>Design, Measurement, and Analysis in Nursing Research I</td>
<td>3</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>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
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<tr>
<td>NGR 7837</td>
<td>Innovative Programs in Biobehavioral Research</td>
<td>3</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 7838</td>
<td>Innovative Programs in Symptom Management Research</td>
<td>3</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>
<tr>
<td>SPW 5597</td>
<td>Latin American Culture in Fantastic Literature and Film</td>
<td>3</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>SPA 6503</td>
<td>Entry Level Practicum</td>
<td>3</td>
<td>Participation in speech-language pathology and audiology practicum in the University clinical laboratory.</td>
</tr>
<tr>
<td>NGR 7930</td>
<td>Scientific Inquiry Forum</td>
<td>1</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 7954</td>
<td>Communicating Nursing Science</td>
<td>3</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>
</tr>
<tr>
<td>PHA 6622</td>
<td>Advanced Geriatric Pharmacy Care</td>
<td>3</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>
</tr>
<tr>
<td>PHA 6277</td>
<td>Ethics in Pharmaceutical Practice and Research</td>
<td>1</td>
<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>
</tr>
<tr>
<td>PHA 6797</td>
<td>Scientific Writing and Communication</td>
<td>1</td>
<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>
</tr>
<tr>
<td>PHA 6147</td>
<td>Nanotechnology and Risk Management</td>
<td>3</td>
<td>An introduction into theory with simultaneous laboratory experience for instrumentation in nano-medicine, nanotechnology, and nanopharmaceutics as well as risk management associated with nano production.</td>
</tr>
<tr>
<td>PHA 6148</td>
<td>Nanoformulations and Nanopharmaceuticals</td>
<td>3</td>
<td>Focus on developing an understanding of the fundamental properties, synthesis and characterization of nanomaterials, coupled with their applications in nanomedicine.</td>
</tr>
<tr>
<td>PHA 7930</td>
<td>Special Topics in Pharmacy</td>
<td>1-6</td>
<td>Special topics for discussion and analysis related to Pharmacy.</td>
</tr>
<tr>
<td>NGR 7812</td>
<td>Design, Measurement, and Analysis in Nursing Research II</td>
<td>3</td>
<td>This course focuses on concepts to design &amp; carry out research in nursing science; including</td>
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<td>Code</td>
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<tr>
<td>NGR 7813</td>
<td>Design, Measurement, and Analysis in Nursing Research III</td>
<td>3</td>
<td>NGR 7812</td>
</tr>
<tr>
<td>NGR 7814</td>
<td>Design, Measurement, and Analysis in Nursing Research IV</td>
<td>3</td>
<td>NGR 7813</td>
</tr>
<tr>
<td>PHC 6255</td>
<td>Homeland Security: Law, Policy and Public Health</td>
<td>3</td>
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<tr>
<td>PHC 6236</td>
<td>Business Continuity for Global Health and Security</td>
<td>3</td>
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<tr>
<td>PHC 6254</td>
<td>Public Health Implications and Concerns in Homeland Security</td>
<td>3</td>
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<tr>
<td>LIN 7639</td>
<td>Quantitative Methods in Applied Linguistics</td>
<td>3</td>
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<tr>
<td>LIN 7638</td>
<td>Qualitative Research Methods in Applied Linguistics</td>
<td>3</td>
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<tr>
<td>LIN 7635</td>
<td>Professional Development</td>
<td>3</td>
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<tr>
<td>LIN 7931</td>
<td>Advanced Seminar in Applied Linguistics</td>
<td>3</td>
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<tr>
<td>ATR 6235</td>
<td>Motor Development and Skill Acquisition</td>
<td>3</td>
<td>ATR 6236</td>
</tr>
<tr>
<td>ATR 6116</td>
<td>Preventing Sudden Death in Youth Sports</td>
<td>3</td>
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<td>Course Code</td>
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<tr>
<td>Youth Sports Settings</td>
<td>Youth Sports Settings</td>
<td>3</td>
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<tr>
<td>MAN 6774</td>
<td>Executive Leadership</td>
<td>3</td>
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<tr>
<td>IDS 5921</td>
<td>Teaching Assistant Training</td>
<td>0</td>
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<tr>
<td>IDS 5922</td>
<td>Preparing for College Teaching</td>
<td>0</td>
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<tr>
<td>EEL 6722C</td>
<td>DSP/FPGA Laboratory</td>
<td>3</td>
<td>EEL 6502</td>
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<tr>
<td>ANG 6392</td>
<td>Engaging Ethnography</td>
<td>3</td>
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<tr>
<td>SDS 6260</td>
<td>Assessment in Student Affairs</td>
<td>3</td>
<td>EDF 6481</td>
</tr>
<tr>
<td>SDS 6650</td>
<td>Organization and Administration of Student Affairs</td>
<td>3</td>
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<tr>
<td>CIE 6627</td>
<td>Digital Evidence Recognition and Collection</td>
<td>3</td>
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<tr>
<td>EEL 6263</td>
<td>Industrial Power Distribution II</td>
<td>3</td>
<td>EEL 6262</td>
</tr>
<tr>
<td>PHA 6118</td>
<td>Nanomaterials, BioMEMS, and Nanodevices in Medicine</td>
<td>3</td>
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<td>Course Code</td>
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<tr>
<td>PHA 6245</td>
<td>Pharmaceutical Informatics</td>
<td>3</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>
</tr>
<tr>
<td>PHC 6235</td>
<td>Critical Infrastructure Protection for Public Health Concepts</td>
<td>3</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>GMS 6409</td>
<td>Integrated Cardiovascular Biology</td>
<td>3</td>
<td>Designed to give a broad understanding of the biology of the cardiovascular system and the various pathophysiological changes that cause chronic heart disease together with discussion of appropriate therapies.</td>
</tr>
<tr>
<td>EDE 6328</td>
<td>Development &amp; Management of Diverse Learners</td>
<td>3</td>
<td>EDE 6326 The course is designed to deepen candidates’ understanding of child growth/development in the classroom contexts of learning and behavior management for diverse and exceptional populations. Candidates will participate in a field experience for 12 hrs/wk.</td>
</tr>
<tr>
<td>LAE 5362</td>
<td>Methods of Teaching English Language Arts</td>
<td>3</td>
<td>Explores best practices and develops methods for integrating reading, writing, speaking, listening, viewing, and critical thinking activities into secondary and post-secondary English language arts classes.</td>
</tr>
<tr>
<td>EDF 6809</td>
<td>Intro to Comparative and International Education</td>
<td>3</td>
<td>This course provides an examination of the major issues surrounding comparative and international perspectives in education.</td>
</tr>
<tr>
<td>TSL 5241</td>
<td>Applied Linguistics in Teaching Diverse Students</td>
<td>3</td>
<td>Instructional applications of teachers’ knowledge about language (phonology, morphology, syntax, pragmatics, discourse) and language acquisition in linguistically diverse classrooms.</td>
</tr>
<tr>
<td>EME 6076</td>
<td>Introduction to Online Teaching and Learning</td>
<td>4</td>
<td>The course will explore the principles of the online teaching and learning community and instructor competencies used in facilitating online courses.</td>
</tr>
<tr>
<td>EME 6972</td>
<td>Online Teaching and Learning Master’s Project</td>
<td>2</td>
<td>EDF 6944 Students work to design and create an online course in the Learning Management System of the university synthesizing theoretical work completed in the program.</td>
</tr>
<tr>
<td>BME 6573</td>
<td>Nano-medicine</td>
<td>3</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>
</tbody>
</table>
| BME 6944    | Biomedical Engineering Industrial Internship     | 1-6     | 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
<table>
<thead>
<tr>
<th>Course</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM</td>
<td>6810</td>
<td>Methods of Instruction in Higher Ed Chemistry</td>
<td>3</td>
<td>This course presents pedagogical approaches associated with evidence-based effective instruction for postsecondary chemistry education.</td>
</tr>
<tr>
<td>DIE</td>
<td>6248</td>
<td>Advanced Clinical Nutrition</td>
<td>3</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>ECH</td>
<td>5945</td>
<td>Chemical Engineering Industrial Internship</td>
<td>1-6</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>ECW</td>
<td>7195</td>
<td>Comparative Study of Career Workforce Education Systems</td>
<td>3</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>7206</td>
<td>Appreciative Inquiry and Organizing in Public Education</td>
<td>3</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>Students explore political frameworks and communication strategies in order to effectively engage multiple communities within and outside schools.</td>
</tr>
<tr>
<td>EEL</td>
<td>6293</td>
<td>Power Quality</td>
<td>3</td>
<td>EEL 6263, EEL 6256 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>SDS</td>
<td>6648</td>
<td>Introduction to Academic Advising</td>
<td>3</td>
<td>SDS 6645 Introduce the basic principles of academic advising.</td>
</tr>
<tr>
<td>SDS</td>
<td>6700</td>
<td>Advising Diverse Populations</td>
<td>3</td>
<td>SDS 6645 This course was designed to equip advisors to work with special populations of students with specific needs.</td>
</tr>
<tr>
<td>SDS</td>
<td>6702</td>
<td>Issues in Academic Advising</td>
<td>3</td>
<td>SDS 6645, SDS 6648, SDS 6700 This course was designed to address special topics that may arise in an academic advising setting.</td>
</tr>
<tr>
<td>EDG</td>
<td>7066</td>
<td>Critical Pedagogy in Teacher Education</td>
<td>3</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>EEE</td>
<td>6432</td>
<td>Nanostructures and Nanomaterials for Sustainable Systems</td>
<td>3</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>EEL</td>
<td>6630</td>
<td>Digital Control Systems</td>
<td>3</td>
<td>EEL 4657 Review of linear control systems, discrete-time linear systems analysis, Z-transforms, modeling</td>
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<td>Code</td>
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<tr>
<td>EEE</td>
<td>Biomedical Systems and Pattern Recognition</td>
<td>3</td>
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<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>
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<td>EVS</td>
<td>Environmental Research Interdisciplinary Colloquium</td>
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<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>
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<tr>
<td>FLE</td>
<td>Second Language Reading and Literacy</td>
<td>3</td>
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<td></td>
<td>Explores theoretical issues in L2 language and literacy learning from a sociocultural perspective and covers seminal perspectives on L2 language development.</td>
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<tr>
<td>FLE</td>
<td>Applications of Technology in Second Language Acquisition</td>
<td>3</td>
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<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>
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<tr>
<td>GMS</td>
<td>Stem Cells and Brain Repair</td>
<td>3</td>
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<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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<tr>
<td>HIM</td>
<td>Leadership for Health Professionals</td>
<td>3</td>
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<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>
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<tr>
<td>HUN</td>
<td>Methods of Nutritional Assessment</td>
<td>1</td>
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<tr>
<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>
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<tr>
<td>HUN</td>
<td>Nutrition and Dietetics Research</td>
<td>3</td>
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<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>
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<tr>
<td>MHS</td>
<td>Evidence Based Practices in Behavioral &amp; Community Sciences</td>
<td>3</td>
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<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>
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<tr>
<td>MHS</td>
<td>Community Based Research &amp; Evaluation in Behavioral Sciences</td>
<td>3</td>
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<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</td>
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<tr>
<td>MHS 7707</td>
<td>Interdis Approaches to Policy &amp; System Change in Behav Health</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>MHS 7720</td>
<td>Proseminar in Behavioral &amp; Community Sciences</td>
<td>1-3</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>
<td></td>
</tr>
<tr>
<td>MMC 6447</td>
<td>Quantitative Research Methods in Mass Communications</td>
<td>3</td>
<td>Examination of the process and techniques involved in quantitative data collection and analysis for mass communication purposes.</td>
<td></td>
</tr>
<tr>
<td>MMC 6448</td>
<td>Qualitative Research Methods in Mass Communications</td>
<td>3</td>
<td>Examination of qualitative research methods in mass communications with emphasis on interviewing, observational methods, and data interpretation.</td>
<td></td>
</tr>
<tr>
<td>MUE 6428</td>
<td>Learner-Centered Approaches in Music Education I</td>
<td>6</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>
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<tr>
<td>MUE 6785</td>
<td>Research Design and Methods in Music Education</td>
<td>3</td>
<td>MUE 6428 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>
<td></td>
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<tr>
<td>MUE 6788</td>
<td>Research Data Collection in Music Education</td>
<td>3</td>
<td>MUE 6428 This course is designed to assist the student in developing research skills focused upon data collection and analysis of data in music education.</td>
<td></td>
</tr>
<tr>
<td>MUE 6789</td>
<td>Research Report Writing in Music Education</td>
<td>3</td>
<td>MUE 6428 This course is designed to guide students in writing up their research report after analyzing their data.</td>
<td></td>
</tr>
<tr>
<td>OCE 6085</td>
<td>Ocean Policy</td>
<td>2</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>
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<tr>
<td>OCE 6609</td>
<td>Data Analysis Methods</td>
<td>3</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>
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</tr>
<tr>
<td>OCE 6609L</td>
<td>Data Analysis Programming</td>
<td>1</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>
<td></td>
</tr>
<tr>
<td>QMB 6358</td>
<td>Data Analytics for Business</td>
<td>2</td>
<td>QMB 6305 This course will provide an introduction to data analytics for managers. It is targeted for MBA students and provides an overview of data analytics and statistical software applications.</td>
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<tr>
<td>PHC 6450</td>
<td>Patient-centered Communication and Professionalism</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>BME 6001</td>
<td>Biomedical Engineering II</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>BME 6055</td>
<td>Modern Biomedical Technologies</td>
<td>3</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>
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</tr>
<tr>
<td>BME 6410</td>
<td>Engineering Physiology</td>
<td>3</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>
<tr>
<td>BME 6905</td>
<td>Directed Independent Study</td>
<td>1-6</td>
<td>Directed independent study in biomedical engineering.</td>
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<tr>
<td>CRW 6726</td>
<td>Practicum in Literary Editing and Publishing</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>DIE 6127</td>
<td>Principles of Leadership and Management of Food and Nutrition</td>
<td>2</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>
<td></td>
</tr>
<tr>
<td>GMS 6323</td>
<td>Pathology Case Studies 1</td>
<td>3</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 6324</td>
<td>Pathology Case Studies 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>
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<tr>
<td>GMS 6325</td>
<td>Pathology Case Studies 3</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>
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<tr>
<td>GMS 6326</td>
<td>Pathology Case Studies 4</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>ECH 6506</td>
<td>Chemical Engineering Kinetics</td>
<td>3</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>
<td></td>
</tr>
<tr>
<td>EDF 7426</td>
<td>Action Research in Schools</td>
<td>3</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>
<td></td>
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<tr>
<td>GEB 6898</td>
<td>MBA Capstone for Analytics, Compliance &amp; Cybersecurity</td>
<td>3</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>
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<tr>
<td>GMS 6950</td>
<td>Biomedical Science Communication and Instructional Skills</td>
<td>2</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>
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<tr>
<td>PHC 6588</td>
<td>History &amp; Systems of Public Health</td>
<td>1</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>
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<tr>
<td>MAN 6165</td>
<td>Principles of Collaboration</td>
<td>3</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>
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<tr>
<td>MAN 6145</td>
<td>Managing Creative Projects</td>
<td>3</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>
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<tr>
<td>MAN 6347</td>
<td>People Analytics</td>
<td>3</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>
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<tr>
<td>MAN 6435</td>
<td>Contract Management</td>
<td>3</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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</table>
| PHA 6708   | Teaching in Pharmacy                            | 3       | This course provides direct instruction in the
<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
<th>Description</th>
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<tbody>
<tr>
<td>SYA</td>
<td>Introduction to Social Network Analysis</td>
<td>3</td>
<td>Introduction to the methods by which properties of networks are described,</td>
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<td>quantified, and analyzed with attention to networks of interest to social</td>
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<td></td>
<td>scientists (such as, social, knowledge, and semantic networks).</td>
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<tr>
<td>URP</td>
<td>Environmental &amp; Planning Issues in Coastal Communities</td>
<td>3</td>
<td>The content of this course will familiarize students with issues in</td>
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<td></td>
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<td>environmental and urban planning unique to coastal communities, and</td>
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<td>explore the connections – current and potential – between the oceans and</td>
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<td>coastal urban areas.</td>
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<tr>
<td>URP</td>
<td>Urban Environmental Policy</td>
<td>3</td>
<td>The purpose of this course is to examine issues related to environmental</td>
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<td>planning and policy within the context of the urban/humanly-built</td>
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<td>environment and its relation to surrounding natural environments.</td>
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<tr>
<td>MUE</td>
<td>Literature Review in Music Education</td>
<td>3</td>
<td>This course is designed to assist the student in developing research skills</td>
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<td></td>
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<td></td>
<td>focused upon the development of a literature review in music education.</td>
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<tr>
<td>CES</td>
<td>Structural Life Prediction</td>
<td>3</td>
<td>Prediction of durability of structures, detection and evaluation of</td>
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<td>structural corrosion damage in steel/cementitious system, structure</td>
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<td></td>
<td>corrosion damage prevention, control and rehabilitation techniques.</td>
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<tr>
<td>ENV</td>
<td>Environmental Site Assessment</td>
<td>3</td>
<td>All of the fundamental elements of Environmental Site Assessments,</td>
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<td>including a review of pertinent laws and regulations, the process of</td>
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<td>interviews, file reviews, and the site reconnaissance, through the use of</td>
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<td>procedures based on the Scientific Method.</td>
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<tr>
<td>ENV</td>
<td>Environmental Field Sampling</td>
<td>3</td>
<td>This course is designed to provide students with an interest in the field</td>
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<td></td>
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<td>of environmental science/engineering, with the highest level of practical,</td>
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<td>hands-on environmental field training to help them advance their careers.</td>
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<tr>
<td>ENV</td>
<td>Green Engineering for Sustainability</td>
<td>3</td>
<td>Offers an overview of principles of green engineering including innovation,</td>
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<td>inherency, interdisciplinary, integration, and international, with an</td>
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<td>emphasis on applications of green engineering principles in different</td>
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<td>design stages.</td>
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<tr>
<td>MUE</td>
<td>Learner-Centered Approaches in Music Education II</td>
<td>3</td>
<td>This course serves as the culminating experience for the Master of Arts in</td>
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<tr>
<td></td>
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<td></td>
<td>Music Education degree program at the University of South Florida.</td>
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<tr>
<td>PHC</td>
<td>Population Assessment: Part 1</td>
<td>5</td>
<td>Fundamentals of population assessment in public health including concepts</td>
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<td></td>
<td></td>
<td></td>
<td>and skills in systems thinking, public health biology, health behavior,</td>
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<td></td>
<td>environmental health, health policy, global health, epidemiology, and</td>
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<td>biostatistics. Part 1 or 2.</td>
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<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
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<tr>
<td>EGN 6333</td>
<td>Continuum Mechanics</td>
<td>3</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>
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<tr>
<td>EVR 6116</td>
<td>Coastal Hazards and Resilience</td>
<td>3</td>
<td>Vulnerability to natural hazards and the effects of climate change, including sea level rise has greatly increased. This course examines the vulnerability of coastal communities and strategies for adaptation and resilience.</td>
</tr>
<tr>
<td>FIN 5006</td>
<td>MBA Essentials: Finance</td>
<td>0</td>
<td>The role of the finance within the corporation; financial statement analysis; discounted cash flow analysis; valuation of financial assets; and financial planning.</td>
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<tr>
<td>CES 6230</td>
<td>Advanced Structural Mechanics</td>
<td>3</td>
<td>This course develops linear elasticity from kinematics, equilibrium through linear constitutive theory.</td>
</tr>
<tr>
<td>ECH 6107</td>
<td>Molecular Thermodynamics</td>
<td>3</td>
<td>Introduction of thermodynamics from a molecular perspective. The focus will be on applications to chemical engineering systems and processes.</td>
</tr>
<tr>
<td>EEL 6592</td>
<td>Wireless Communication Systems Lab</td>
<td>3</td>
<td>An extensive introduction to digital communications and wireless communication systems; involving testing, modeling, simulating, and evaluating the performance of digital communication systems at both sub-system and complete system levels.</td>
</tr>
<tr>
<td>PAD 6717</td>
<td>GIS Applications for Urban Management</td>
<td>3</td>
<td>Provides a basic introduction to the use of Geographic Information Systems (GIS) for urban decision makers. No prior knowledge of GIS is assumed.</td>
</tr>
<tr>
<td>PHC 6593</td>
<td>Professional Development in Genetic Counseling</td>
<td>1</td>
<td>This course will prepare students to begin their career as an independent genetic counselor by fostering skills needed for lifelong learning and ongoing professional development.</td>
</tr>
<tr>
<td>PHC 6911</td>
<td>Clinical Research I</td>
<td>1</td>
<td>Students will apply principles of research design and theory to plan their own research project. Students will complete human subjects training and most of the basic components they need to submit a research proposal to the IRB.</td>
</tr>
<tr>
<td>URP 6444</td>
<td>Global &amp; Community Food Systems</td>
<td>3</td>
<td>Provides a general introduction to the food system, how it relates to planning and public policy, and an overview of the tools, strategies, and approaches public policymakers can utilize to address food system problems and challenges.</td>
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<tr>
<td>URP 6711</td>
<td>Multimodal Transportation Planning</td>
<td>3</td>
<td>This course focuses on multimodal transportation planning, including planning for roadways, public transportation, bicycling, pedestrians, and the movement of freight.</td>
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<tr>
<td>PHC 6601</td>
<td>Human Genomics in Medicine and Public Health</td>
<td>3</td>
<td>Introduction of modern genetic technologies to health students who have limited training in molecular biology and biochemistry. The course will integrate these rapidly developing</td>
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<td>RED</td>
<td>6068</td>
<td>Adolescent Literacy: In and Out of School Literacy Practices</td>
<td>3</td>
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<tr>
<td>IDS</td>
<td>6369</td>
<td>Strategic Global Negotiations</td>
<td>1</td>
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<tr>
<td>ENV</td>
<td>6935</td>
<td>Environmental &amp; Water Resources Engineering (EWRE) Seminar</td>
<td>1</td>
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<tr>
<td>EEE</td>
<td>6276</td>
<td>MEMS I/Chem Bio Sensors</td>
<td>3</td>
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<tr>
<td>EME</td>
<td>6157</td>
<td>Game Design &amp; Development for Learning</td>
<td>3</td>
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<tr>
<td>HSC</td>
<td>6261</td>
<td>Teaching Essentials</td>
<td>2</td>
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<tr>
<td>PHC</td>
<td>6096</td>
<td>Fundamentals of Probability</td>
<td>3</td>
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<tr>
<td>PHC</td>
<td>6940</td>
<td>Clinical Practicum in Genetic Counseling</td>
<td>1-6</td>
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<tr>
<td>SPA</td>
<td>7497</td>
<td>Proseminar in Communication Sciences and Disorders</td>
<td>1</td>
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<tr>
<td>SPA</td>
<td>7802</td>
<td>Critical Analysis of Literature in CSD</td>
<td>3</td>
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<tr>
<td>MHS</td>
<td>6027</td>
<td>Creating Cultural Competence in Behavioral Health</td>
<td>3</td>
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<td>Course Code</td>
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<tr>
<td>PHC 6408</td>
<td>Health Education and Counseling</td>
<td>3</td>
<td>PHC 6588, PHC 6756</td>
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<tr>
<td>PHC 6757</td>
<td>Population Assessment: Part 2</td>
<td>3</td>
<td>PHC 6588, PHC 6756</td>
</tr>
<tr>
<td>PHC 6145</td>
<td>Translation to Public Health Practice</td>
<td>3</td>
<td>PHC 6588, PHC 6756</td>
</tr>
<tr>
<td>ACG 5841</td>
<td>Analytics in Accounting</td>
<td>3</td>
<td>ACG 4632, or admission to Muma COB MBA program</td>
</tr>
<tr>
<td>EEE 6278</td>
<td>MEMS II</td>
<td>3</td>
<td>EEE 6276</td>
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<tr>
<td>SPA 7807</td>
<td>Critical Synthesis of Literature in CSD</td>
<td>3</td>
<td>SPA 7802</td>
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<tr>
<td>PHA 6890</td>
<td>Interdisciplinary Approach to Women's Health</td>
<td>3</td>
<td>PHC 6588, PHC 6756</td>
</tr>
<tr>
<td>PHC 6912</td>
<td>Clinical Research II</td>
<td>1</td>
<td>PHC 6911</td>
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<tr>
<td>PHC 6915</td>
<td>Clinical Research III</td>
<td>1</td>
<td>PHC 6911, PHC 6912</td>
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<td>Course Code</td>
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<td>Credits</td>
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<td>GMS 6057</td>
<td>Integrative Cancer Therapies</td>
<td>3</td>
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<tr>
<td>LIS 5631</td>
<td>Health Information Sources</td>
<td>3</td>
<td>LIS 6603</td>
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<tr>
<td>MUH 6376</td>
<td>The History of Blues and Rock</td>
<td>3</td>
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<td>PHC 6596</td>
<td>Introduction to Genetic Counseling</td>
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<tr>
<td>CES 6144</td>
<td>Advanced Structural Analysis</td>
<td>3</td>
<td>EGN 3331, EGN 4453, CES</td>
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<tr>
<td>TTE 5305</td>
<td>Infrastructure System Management</td>
<td>3</td>
<td>EGN 3443</td>
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<tr>
<td>TTE 6833</td>
<td>Asphalt and Asphalt Mixes</td>
<td>3</td>
<td>EGN 3331, EGN 4453, CES</td>
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<tr>
<td>CGN 6950</td>
<td>Mentoring Novice Researchers</td>
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<tr>
<td>LIS 5802</td>
<td>Information Analytics</td>
<td>3</td>
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<td>QMB 2100</td>
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<tr>
<td>EDG 7067</td>
<td>Philosophies of Inquiry</td>
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<td>EME 6614</td>
<td>Games Analytics for Learning</td>
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<td>EME 6157</td>
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<td>BME 5105</td>
<td>Introduction to Biomedical Engineering</td>
<td>3</td>
<td>CHM 2045, and MAC 2311 or MAC 2281 or MAC 2241</td>
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<tr>
<td>EEL 6289</td>
<td>Sustainable Energy</td>
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<td>SPW 5375</td>
<td>Latin American Short Story</td>
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<td>OCE 6921</td>
<td>Professional Development I</td>
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<td>CHM 6811</td>
<td>Classroom Assessment Practices in Chemistry</td>
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<td>PHC 6597</td>
<td>Quantitative Genomics and Genetics</td>
<td>3</td>
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<td>IDS 6935</td>
<td>Capstone Research Project</td>
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<td>EEE 6369</td>
<td>MMIC Design</td>
<td>3</td>
<td>EEL 6427</td>
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<tr>
<td>ADV 5508</td>
<td>Return on Advertising Investment</td>
<td>3</td>
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<td>POS 6702</td>
<td>Teaching Political Science</td>
<td>3</td>
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<td>EEE 6357</td>
<td>Integrated System</td>
<td>3</td>
<td>EEE 5356</td>
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<td>Credit Hours</td>
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<td>LIN 6688</td>
<td>Corpus Linguistics</td>
<td>3</td>
<td>LIN 5700</td>
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<tr>
<td>LIN 7637</td>
<td>Research and Writing in Applied Linguistics</td>
<td>3</td>
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<tr>
<td>LIN 7885</td>
<td>Discourse Analysis</td>
<td>3</td>
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<td>MAN 6244</td>
<td>Organizational Behavior</td>
<td>3</td>
<td>MAN 3025 or MAN 5002</td>
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<td>EDF 6120</td>
<td>Child Development</td>
<td>3</td>
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<td>GEB 6255</td>
<td>Advanced Negotiation</td>
<td>3</td>
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<tr>
<td>GEB 6265</td>
<td>Advanced Facilitation</td>
<td>3</td>
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<tr>
<td>LIS 6107</td>
<td>Advanced Professional &amp; Technical Communication for Analysts</td>
<td>3</td>
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<tr>
<td>ACG 6687</td>
<td>Fraud and Financial Reporting</td>
<td>3</td>
<td>ACG 3113, ACG 4642</td>
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<tr>
<td>CLP 6443</td>
<td>Assessment of Infant-Family Mental Health</td>
<td>3</td>
<td>CLP 6477</td>
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<tr>
<td>PHC 7504</td>
<td>Innovative Education in Public</td>
<td>1</td>
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<tr>
<td>PHC 7119</td>
<td>Organizational Behavior in Public Health Systems</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>GMS 6352</td>
<td>Forensic Pathology</td>
<td>3</td>
<td>GMS 6630</td>
</tr>
<tr>
<td>PHC 7466</td>
<td>Health Disparities and Cultural Competency in Public Health</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>ADV 6505</td>
<td>Advertising Research</td>
<td>3</td>
<td></td>
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<tr>
<td>Course Code</td>
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<tr>
<td>LIN 7911</td>
<td>Directed Research - Linguistics and Applied Language Studies</td>
<td>1-19</td>
<td></td>
</tr>
<tr>
<td>PSY 6219</td>
<td>Advanced Statistical Methodology</td>
<td>3</td>
<td>PSY 6217, PSY 6218</td>
</tr>
<tr>
<td>HIM 6629</td>
<td>Applied Healthcare Analytics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HIM 6686</td>
<td>Healthcare Decision Support</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HIM 6628</td>
<td>Health Data Visualization</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HIM 6623</td>
<td>Statistics for Healthcare Analytics</td>
<td>3</td>
<td></td>
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<tr>
<td>HIM 6655</td>
<td>Healthcare Data Mining and Predictive Analytics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CHM 6978</td>
<td>Advanced Research in Chemistry</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>POS 6918</td>
<td>Seminar in Quantitative Methods</td>
<td>3</td>
<td>POS 6746 with a minimum grade of C+</td>
</tr>
<tr>
<td>ISM 6642</td>
<td>Statistical Programming for Business Analytics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>GLY 6285L</td>
<td>Properties of Earth Materials</td>
<td>3</td>
<td></td>
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<tr>
<td>Course Code</td>
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<td>Credits</td>
<td>Description</td>
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<tr>
<td>EME 5317</td>
<td>Technology Leadership in Education</td>
<td>3</td>
<td>Selecting, organizing, and using major types of instructional technology and equipment in various school curricula and educational programs. Explores the transformational power of emerging technologies in schools. For graduate students with no/limited geologic backgrounds.</td>
</tr>
<tr>
<td>ADV 5825</td>
<td>Advertising Proseminar</td>
<td>3</td>
<td>Students will learn the basic concepts of advertising, public relations, promotion, branding, and direct marketing and their applications for integrated marketing campaigns.</td>
</tr>
<tr>
<td>MMC 6449</td>
<td>Advertising Analytics</td>
<td>3</td>
<td>Using data analytics to develop, optimize, and assess outcomes of advertising strategies for brands; the scientific approach to marketing with hands-on use of technologies such as databases, analytics and computing systems to collect, analyze, and act.</td>
</tr>
<tr>
<td>LAS 6220</td>
<td>Issues and Perspectives in Latin American Studies</td>
<td>3</td>
<td>Overview of the economic and political history of Latin America, the history of thought about Latin American development problems, and US - Latin American relations during the 19th and 20th centuries.</td>
</tr>
<tr>
<td>IDS 6270</td>
<td>Sustainable Food Production</td>
<td>3</td>
<td>Overview of global food production systems including both traditional and sustainable agriculture, animal husbandry, and aquatic farming practices, their impact on ecosystems and the environment, and solutions for feeding a rapidly growing population.</td>
</tr>
<tr>
<td>IDS 6247</td>
<td>Water Resources Planning</td>
<td>3</td>
<td>Provides overview of water resources planning and introduces water resources planning and management tools. It will also teach students water quality, water and wastewater treatment technologies. Students will apply tools to develop water resources plans.</td>
</tr>
<tr>
<td>IDS 6271</td>
<td>The Future of Food: Environment, Health and Policy</td>
<td>3</td>
<td>This interdisciplinary course will introduce students to food as an operational component of the environment, human health, and public policy throughout the world and discuss historical perspectives, current issues, and future outlooks of food security.</td>
</tr>
<tr>
<td>PHC 7982</td>
<td>Introduction to Doctoral Training in Public Health</td>
<td>1</td>
<td>An introduction for Public Health doctoral students to the competencies and milestones that will be reached at the successful completion of a doctoral program. Topics include Public Health research methods, writing for publication, teaching and service.</td>
</tr>
<tr>
<td>GEO 7938</td>
<td>Doctoral Professional Development in Geosciences</td>
<td>3</td>
<td>This seminar prepares doctoral students for potential careers in academia: (1) choosing a career path in academia, (2) setting goals to achieve the desired type of faculty position by graduation, and (3) preparing for the job application process.</td>
</tr>
<tr>
<td>CHM 6480</td>
<td>Advanced Quantum Mechanics I</td>
<td>3</td>
<td>Basic theoretical concepts and mathematical framework; applications to simple systems.</td>
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<tr>
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<tr>
<td>WST 6338</td>
<td>Advanced Feminist Theories of Media and Popular Culture</td>
<td>3</td>
<td>This course surveys advanced feminist theoretical approaches to visual regimes, surveillance, scopophilia, encoding, representation, reception, pro-suming, commodification, pranking, and culture jamming.</td>
</tr>
<tr>
<td>MHS 7927</td>
<td>Grant Writing Seminar</td>
<td>3</td>
<td>The purpose of this course is to provide class participants with the knowledge and skills necessary to develop, submit, and evaluate grants and contracts related to their areas of research or professional interest.</td>
</tr>
<tr>
<td>HIM 6671</td>
<td>Advanced Healthcare Analytics Applications</td>
<td>3</td>
<td>This is a project-oriented course in analytics. It emphasizes techniques necessary for prediction of health outcomes.</td>
</tr>
<tr>
<td>IDS 6210</td>
<td>Bioresources for a Sustainable Future</td>
<td>3</td>
<td>Agricultural and biological resources (bioresources) for producing food, bio-based products, and renewable energy are presented and discussed along with their environmental and climate change impact using an integrated food-energy-water nexus approach.</td>
</tr>
<tr>
<td>EDF 6697</td>
<td>Learning and Linguistic Diversity in a Transnational Context</td>
<td>3</td>
<td>This course will explore the relationships between immigration, identity, and language. The course will take a transnational approach, which presumes that people, language, and culture are subject to dynamic change within the globalized world.</td>
</tr>
<tr>
<td>MHS 7205</td>
<td>Functional Analysis and Function-Based Intervention</td>
<td>3</td>
<td>The purpose of this course is to provide advanced, in-depth instruction in functional behavior assessment and intervention planning. This course will cover indirect and direct assessment methods, including both descriptive and functional analysis.</td>
</tr>
<tr>
<td>PET 5769</td>
<td>Principles and Issues in Coaching</td>
<td>3</td>
<td>This course is designed to provide a broad examination of many basic issues involved in coaching. The primary point is of a philosophical nature and in these discussions, students have the opportunity to form their own values in regards to sports.</td>
</tr>
<tr>
<td>PHC 6194</td>
<td>Public Health Geographic Information Systems</td>
<td>3</td>
<td>This course will prepare students to work with Geographic Information Systems related to Public Health. GIS allows the user to simplify, visualize, analyze, interpret and understand data in a geospatial world to address Public Health concerns.</td>
</tr>
<tr>
<td>EDF 6864</td>
<td>International Perspectives and Practices in Gifted and Talented Education</td>
<td>3</td>
<td>This course focuses on historical and current conceptions of giftedness and talent development. Historical and current practices in the education of gifted and talented learners will also be examined.</td>
</tr>
<tr>
<td>MHS 7796</td>
<td>Conceptual Foundations of Behavior Analysis</td>
<td>3</td>
<td>The purpose of this course is to provide advanced instruction in the conceptual foundations of behavior analysis. Students can expect to learn about advanced concepts and develop their understanding of the theoretical foundations of behavior analysis.</td>
</tr>
<tr>
<td>EDE 6365</td>
<td>Culturally Responsive Pedagogy</td>
<td>3</td>
<td>This course provides the opportunity for the</td>
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<tr>
<td>MHS 6780</td>
<td>Ethics in Applied Behavior Analysis</td>
<td>3</td>
<td>MHS 7796 with a minimum grade of B-</td>
</tr>
<tr>
<td>HIM 6477</td>
<td>Medical Terminology for Health Informatics Professionals</td>
<td>3</td>
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<tr>
<td>HIM 6482</td>
<td>Consumer Health Informatics</td>
<td>3</td>
<td></td>
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<tr>
<td>ANG 6575</td>
<td>Neuroanthropology</td>
<td>3</td>
<td></td>
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<tr>
<td>MHS 6937</td>
<td>Behavior Theory</td>
<td>3</td>
<td>MHS 7796 with a minimum grade of B-</td>
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<tr>
<td>TTE 6307</td>
<td>Statistical and Econometric Methods I</td>
<td>3</td>
<td></td>
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<tr>
<td>CWR 6105</td>
<td>Vadose Zone Hydrology</td>
<td>3</td>
<td></td>
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<tr>
<td>HIM 6844</td>
<td>Health Outcomes Research</td>
<td>3</td>
<td></td>
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<tr>
<td>TSL 6133</td>
<td>Curriculum and Instructional Materials Development</td>
<td>3</td>
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<tr>
<td>ADV 6305</td>
<td>Advertising Media Strategy</td>
<td>3</td>
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<tr>
<td>TTE 6267</td>
<td>Traffic Flow Theory</td>
<td>1</td>
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<tr>
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<td>Description</td>
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<tr>
<td>MHS 6708</td>
<td>Experimental Analysis of Behavior 1</td>
<td>3</td>
<td>This seminar provides students with a survey of core concepts in the experimental analysis of behavior often with special emphasis on methodological and conceptual issues and their translation to the study of socially important problems.</td>
</tr>
<tr>
<td>MHS 6615</td>
<td>Observational Methods and Functional Assessment</td>
<td>3</td>
<td>The course focuses on identifying and using appropriate observational methods based on individual cases, assessing individuals using functional behavior assessment procedures, displaying and interpreting behavioral data, and designing interventions.</td>
</tr>
<tr>
<td>MHS 6701</td>
<td>Applied Behavior Analysis Basic Principles</td>
<td>3</td>
<td>This course provides the student with an introduction to the concepts and principles of Behavior Analysis. It covers basic behavioral principles and then discusses behavioral procedures with an emphasis on the principles underlying each procedure.</td>
</tr>
<tr>
<td>AMS 6026</td>
<td>Florida and Regional Studies</td>
<td>3</td>
<td>This course will examine the evolution of regional cultures and regional thinking in the United States while situating the study of Florida within the larger enterprise of regional studies.</td>
</tr>
<tr>
<td>CES 6935</td>
<td>Graduate Structures/Materials Seminar</td>
<td>1</td>
<td>This course consists of oral presentations made by graduate structures/materials seminar students, faculty members, and outside speakers including practitioners on their current topics of structures and materials engineering.</td>
</tr>
<tr>
<td>EDF 6552</td>
<td>The Role of Education in a Democracy</td>
<td>3</td>
<td>This course will focus on the common conceptions of democracy, equality, freedom, liberty, and equity and what these conceptions imply for educational aims and practice.</td>
</tr>
<tr>
<td>EDG 5014</td>
<td>Introduction to Standards Based Education</td>
<td>1</td>
<td>This course is designed to introduce students to standards-based education, linking program outcomes for student learning with the relevant state and national educational standards.</td>
</tr>
<tr>
<td>FIN 6455</td>
<td>Financial Modeling and Analytics</td>
<td>3</td>
<td>FIN 6406, with a minimum grade of B- The course offers advanced knowledge of finance and skills of using Excel for financial modeling and financial analysis. Finance concepts will be covered in class, and then modeled and analyzed in Excel.</td>
</tr>
<tr>
<td>HIM 6527</td>
<td>Healthcare Information Security and Privacy</td>
<td>3</td>
<td>This course is designed to provide a comprehensive introduction to policies, regulations and strategies to ensure healthcare information security and privacy.</td>
</tr>
<tr>
<td>HIS 5114</td>
<td>Spanish Paleography I</td>
<td>3</td>
<td>The purpose of this course is to introduce students to the forms of writing used in early modern Spanish documents, and to introduce students to the sources, tools, and interpretative strategies used by historians who examine these records.</td>
</tr>
<tr>
<td>HIS 5116</td>
<td>Spanish Paleography II</td>
<td>3</td>
<td>HIS 5114, with a minimum grade of B- This course provides advanced instruction in taxonomy and models of highway traffic flow as well as intelligent transportation systems.</td>
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<tr>
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<tr>
<td>ISM 6562</td>
<td>Big Data for Business Applications</td>
<td>3</td>
<td>The course will cover web application development for Business using various big data technologies such as No-SQL database, distributed file system, Map-Reduce, distributed caching, message handlers and big data search system.</td>
</tr>
<tr>
<td>SMT 6315</td>
<td>Middle and Secondary STEM Methods</td>
<td>3</td>
<td>This course is designed for in-service middle and high school math or science teachers. It provides an opportunity to discuss current pedagogical philosophies and strategies in science, technology, engineering, and mathematics (STEM) education.</td>
</tr>
<tr>
<td>PHC 6319</td>
<td>Modern Human Diseases, Diagnosis, and Treatment</td>
<td>3</td>
<td>This course will cover topics regarding current-day human diseases and conditions. We will explore a new topic that is affecting our society, including but not limited to cancer, HIV, diabetes, nosocomial infections, and the current vaccination debate.</td>
</tr>
<tr>
<td>PHC 6943</td>
<td>Integrated Learning Experience</td>
<td>3</td>
<td>Student will demonstrate synthesis of MPH competencies through an integrated learning experience. This course is a culminating experience for the MPH.</td>
</tr>
<tr>
<td>PHC 6949</td>
<td>Applied Practice Experiences</td>
<td>3</td>
<td>Students demonstrate MPH-competency attainment through applied practice experiences. This course is a culminating experience for the MPH.</td>
</tr>
<tr>
<td>MHS 6744</td>
<td>Single Case Experimental Design</td>
<td>3</td>
<td>The purpose of this course is to introduce the fundamentals of behavior-analytic research methods. The course will review single-case time series methodologies to assess various dimensions of behavior and evaluate the effects of interventions on behavior.</td>
</tr>
<tr>
<td>MHS 7926</td>
<td>College Teaching Seminar</td>
<td>3</td>
<td>This course is designed to teach the knowledge and skills needed to become effective college teachers. The course is designed to discuss all aspects of college teaching.</td>
</tr>
<tr>
<td>TTE 6501</td>
<td>Statistical and Econometric Methods II</td>
<td>3</td>
<td>Advanced and new model estimation techniques in the application of various statistical and econometric analysis.</td>
</tr>
<tr>
<td>CHM 6138</td>
<td>Mass Spectrometry</td>
<td>3</td>
<td>This course covers the topic of mass spectrometry from physical principles and theory to implementation and method development.</td>
</tr>
<tr>
<td>CHM 6440</td>
<td>Reaction Kinetics</td>
<td>3</td>
<td>The course covers macro- and microscopic reaction kinetics; rate laws of model reactions; enzyme catalysis; reactions in solutions, gases or on solid surfaces; collision and transition state theories; potential energy surfaces; and unimolecular reactions.</td>
</tr>
</tbody>
</table>
| CHM 6937    | Discipline-Based Education Research Colloquium        | 3       | The course involves two types of presentations that are typically expected of graduate
<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Credits</th>
<th>Prerequisites</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>PHA 6935</td>
<td>Special Topics in Pharmacy</td>
<td>1-5</td>
<td></td>
<td>Special topics for discussion and analysis related to Pharmacy.</td>
</tr>
<tr>
<td>OCB 6068</td>
<td>Fish Biology</td>
<td>3</td>
<td></td>
<td>This course introduces students to the taxonomy, evolution, anatomy, sensory ecology, physiology, behavior, habitat use, reproduction, larval dynamics and ecology of fishes. Evaluation is based on exams and practical exercises.</td>
</tr>
<tr>
<td>OCB 6716</td>
<td>Population Dynamics</td>
<td>3</td>
<td></td>
<td>This course provides instruction in population modeling as applied to fishery resources. Population dynamics synthesizes information on life history, fishery monitoring and resource surveys using mathematical models.</td>
</tr>
<tr>
<td>MHS 6709</td>
<td>Experimental Analysis of Behavior 2</td>
<td>3</td>
<td>MHS 6708 with a minimum grade of B-</td>
<td>This course is part II in a 2-part sequence on major concepts from the experimental analysis of behavior. This course is intended to provide students with systematic opportunities to delve more deeply into specific topics.</td>
</tr>
<tr>
<td>OCB 6626</td>
<td>Dynamics of Marine Ecosystems</td>
<td>3</td>
<td></td>
<td>The objective of this course is to examine a broad range of topics related to understanding how bottom-up (physical processes) and top-down (predation) processes influence marine ecosystem dynamics.</td>
</tr>
<tr>
<td>PHC 6021</td>
<td>Fundamentals of Clinical Trials</td>
<td>3</td>
<td>PHC 6050, (PHC 6051 or PHC 6756), PHC 6757 all with a minimum grade of C-</td>
<td>The course will familiarize students with the issues in the design, and conduct of clinical trials. Factors involved in randomizing subjects, determining sample size, reporting and interpreting of results, analyzing data from the study will be considered.</td>
</tr>
<tr>
<td>GEY 6222</td>
<td>Elder Abuse Assessment and</td>
<td>3</td>
<td></td>
<td>The course provides an overview of elder abuse assessment and intervention, essential knowledge for all professionals who work with or encounter older adults.</td>
</tr>
<tr>
<td>GEY 5504</td>
<td>Assistance Living Facility</td>
<td>3</td>
<td></td>
<td>The course covers the material for students to sit for and pass the State of Florida Assisted Living Core examination to become a licensed assisted living administrator.</td>
</tr>
<tr>
<td>HSC 6261L</td>
<td>Teaching Essentials Lab</td>
<td>1</td>
<td></td>
<td>An exploratory lab that focuses on the execution of fundamental concepts of teaching and learning within a Health Professions Education context. Students will receive guidance and mentorship while they develop educational seminars.</td>
</tr>
<tr>
<td>DIG 6178</td>
<td>Introduction to Digital</td>
<td>3</td>
<td></td>
<td>Introduction to the interdisciplinary field of Digital Humanities. Examines contemporary theories and debates at the intersection of technology and humanities research and learning, provides practical experience with specific DH tools and methods.</td>
</tr>
<tr>
<td>CCJ 7726</td>
<td>Research Methods in Criminology II</td>
<td>3</td>
<td>CCJ 6705, CCJ 6706 and CCJ 6707</td>
<td>Students will have the opportunity for the practical application of key research processes including classical test theory, item response theory, reliability and validity, item analysis, construct validity, sampling methods, causal</td>
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<tr>
<td>DIG</td>
<td>Digital Humanities Capstone Project</td>
<td>3</td>
<td>DIG 6000 with a minimum grade of C-</td>
<td>Student designs and implements a significant demonstration segment of a practical Digital Humanities project (or serves in an internship and documents it with a portfolio). A written proposal for the project is also required.</td>
</tr>
<tr>
<td>FIN</td>
<td>Corporate Financial Planning</td>
<td>3</td>
<td>FIN 6406 with a minimum grade of B</td>
<td>This course is an introduction to financial planning methods. It will provide techniques to forecast the financial statements of a company, capital budgeting, cash flow analysis and valuation. It is a Finance application class for MBA students.</td>
</tr>
<tr>
<td>ENV</td>
<td>Resilient and Sustainable Infrastructure (RESIN)</td>
<td>3</td>
<td></td>
<td>Learn about the impact of climate change and extreme events on infrastructure for urban settings. Topics include green and resilient approaches for water, energy, transportation and other critical infrastructure systems.</td>
</tr>
<tr>
<td>ANG</td>
<td>Human Osteology</td>
<td>3</td>
<td></td>
<td>This course involves the detailed examination of the elements of the human skeleton with an emphasis on identifying individual bones and their structures.</td>
</tr>
<tr>
<td>ANG</td>
<td>Evolution and Life History Theory</td>
<td>3</td>
<td></td>
<td>Life history theory is the study of how organisms evolved to optimize their resources to maximize reproductive success. This course will primarily focus on human life histories and provides the theoretical background of evolutionary life history theory.</td>
</tr>
<tr>
<td>OCE</td>
<td>Applied Multivariate Statistics</td>
<td>3</td>
<td></td>
<td>The focus of this course is hands-on analysis of large, high-dimensional marine ecological and environmental data sets using a suite of distribution-free methods.</td>
</tr>
<tr>
<td>EME</td>
<td>Digital Citizenship and Online Safety</td>
<td>3</td>
<td></td>
<td>This course provides an overview of basic digital citizenship concepts and a critical view of online safety issues with a focus on youth and educational settings.</td>
</tr>
<tr>
<td>IDS</td>
<td>Strategic Communication</td>
<td>1</td>
<td></td>
<td>The course is a two-day dynamic and interactive 1-credit executive education course that provides practical policy-oriented practitioner’s experience to participants who desire to enhance their skills to communicate effectively in a globalized world.</td>
</tr>
<tr>
<td>HMG</td>
<td>Hospitality Law &amp; Hotel Management Contracts</td>
<td>3</td>
<td></td>
<td>Functions of the law, legal environment, legal reasoning, and contract negotiation at a high level will be presented. Students will represent “Owners” or “Operators” in teams of two and conduct mock hotel management contract negotiations.</td>
</tr>
<tr>
<td>MAE</td>
<td>Teaching College Mathematics</td>
<td>3</td>
<td>MGF 3301 with a minimum grade of C</td>
<td>In this course, students will acquire pedagogical skills necessary to become effective teachers of undergraduate math. It will also introduce students how to implement research-supported teaching practices and student-centered pedagogies in a classroom.</td>
</tr>
<tr>
<td>ACG</td>
<td>Innovation and Analytics in Accounting</td>
<td>3</td>
<td>ACG 3401 with a minimum grade of C</td>
<td>Topics covered include the latest innovations in accounting and application of contemporary analytics to discover value-adding insights for a</td>
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<tr>
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<tr>
<td>EDF 6863</td>
<td>Contemporary Issues and Trends in International Education</td>
<td>3</td>
<td></td>
<td>This course focuses on current IB research, trends, issues, as well as international, national, and state/provincial legislation concerning schools and the potential impact on IB schools.</td>
</tr>
<tr>
<td>EDG 6447</td>
<td>Instructional Design and Classroom Management</td>
<td>3</td>
<td></td>
<td>Examines the legal issues affecting classroom/school management, school safety, professional ethics, &amp; elementary school methods; explores best practices of a variety of teaching/management strategies deemed appropriate for diverse elementary settings.</td>
</tr>
<tr>
<td>ATR 5835C</td>
<td>Clinical Practicum in Athletic Training</td>
<td>1-3</td>
<td>ATR 5815 with a minimum grade of C, ATR 5825 with a minimum grade of C</td>
<td>Performance of mid-level athletic training skills under the supervision of a preceptor at various sites. Students develop competence in mid-level and advanced athletic training skills.</td>
</tr>
<tr>
<td>PHA 6915C</td>
<td>Pharmacy Longitudinal Research Project</td>
<td>1</td>
<td></td>
<td>Application of research principles through a longitudinal research project under direction of an approved mentor.</td>
</tr>
<tr>
<td>PHA 6971</td>
<td>Master's Thesis</td>
<td>1</td>
<td></td>
<td>This course is for the completion of research hours and a written thesis related to a specific original research project based on experimental data. Includes submission of a final Committee-Approved Thesis, including oral defense.</td>
</tr>
<tr>
<td>GIS 5034C</td>
<td>Introduction to Remote Sensing</td>
<td>3</td>
<td></td>
<td>An introduction to the basic concepts, principles and practices of photogrammetry and remote sensing and their applications in natural resource management, measurements of structural parameters, and environmental monitoring.</td>
</tr>
<tr>
<td>PHC 6550</td>
<td>Child Health and Development</td>
<td>3</td>
<td></td>
<td>This course examines the biological, social and environmental factors that influence child development, the epidemiology of child health, issues related to children with special needs, child health policy, prevention, and intervention.</td>
</tr>
<tr>
<td>PHC 6917</td>
<td>Master of Health Administration Internship Report</td>
<td>2</td>
<td>PHC 6160 with a minimum grade of B, PHC 6180 with a minimum grade of B, PHC 6181 with a minimum grade of B, PHC 6760 with a minimum grade of B, PHC 6756 with a minimum grade of B, PHC 6588 with a minimum grade of B</td>
<td>In-depth analysis of an approved management problem at a health organization that results in a management consulting report based on the field-based practice experience.</td>
</tr>
<tr>
<td>PHC 6941</td>
<td>Master of Health Administration Internship</td>
<td>2</td>
<td>PHC 6160 with a minimum grade of B, PHC 6180 with a minimum grade of B, PHC 6181 with a minimum grade of B, PHC 6760 with a minimum grade of B, PHC 6756 with a minimum grade of B, PHC 6588 with a minimum grade of B</td>
<td>Students demonstrate MHA-competency attainment through an integrative field-based practice experience analyzing a management problem for a public or private health organization.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
<td>Description</td>
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<tr>
<td>PHC 7565</td>
<td>Public Health Laboratory Management I</td>
<td>3</td>
<td>PHC 7156 with a minimum grade of B</td>
<td>This course will provide students a comprehensive report on the history and evolution of public health laboratories (PHLs) in the United States, management theory and organizational tools for use in PHLs.</td>
</tr>
<tr>
<td>PHC 7944</td>
<td>Advanced Applied Practice Experiences</td>
<td>1</td>
<td>PHC 7156 with a minimum grade of B</td>
<td>Students demonstrate DrPH-competency attainment through applied practice experiences. This course is part of a culminating experience for the Dr.P.H.</td>
</tr>
<tr>
<td>URP 6439C</td>
<td>Disaster Resilient Community</td>
<td>3</td>
<td></td>
<td>The course examines factors to promote effective disaster mitigation with emphasis on involvement of community stakeholders. Attention is given to natural hazards and uses a community-engaged approach in partnership with public/private entities.</td>
</tr>
<tr>
<td>MTG 6257</td>
<td>Differential Geometry II</td>
<td>3</td>
<td>MTG 5256 with a minimum grade of C</td>
<td>A continuation of the study of graduate differential geometry, covering additional topics such as Tensor Analysis, Riemannian Geometry, Lie Groups, and Lie Algebras.</td>
</tr>
<tr>
<td>HIM 6217</td>
<td>Health Data Management</td>
<td>3</td>
<td></td>
<td>This course is designed to provide a sound database system foundation, while highlighting healthcare applications.</td>
</tr>
<tr>
<td>PET 6802</td>
<td>Effective Teaching and Classroom Management in Physical Education</td>
<td>3</td>
<td></td>
<td>The purpose of this course is to help students develop into physically literate individuals by providing a comprehensive, yet concise, guide to what is most important for quality teaching in physical education.</td>
</tr>
<tr>
<td>PET 6542</td>
<td>Grant Writing</td>
<td>3</td>
<td></td>
<td>This course will provide the foundation to enable the students to create a grant project, find appropriate funding sources, write a competitive grant proposal, and manage a successful program grant to completion.</td>
</tr>
<tr>
<td>MHS 6627</td>
<td>Contemporary Leadership Issues in Child and Adolescent Behavioral Health</td>
<td>3</td>
<td>MHS 6626 with a minimum grade of B</td>
<td>This course examines contemporary issues of leadership in child and adolescent behavioral health and emphasizes development of leadership skills and analytic approaches in public and private child and adolescent behavioral health organizations.</td>
</tr>
<tr>
<td>MHS 6732</td>
<td>Research and Evaluation in Child and Adolescent Behavioral Health</td>
<td>3</td>
<td></td>
<td>This course covers foundational concepts in research methods and program evaluation that are necessary to understand and critically evaluate the research of others and to plan and conduct research and evaluation in child and adolescent behavioral health.</td>
</tr>
<tr>
<td>DIG 6834C</td>
<td>Digital Antiquity</td>
<td>3</td>
<td></td>
<td>This course provides a hands-on, project based introduction to digital technologies as they are used in the study of the ancient world.</td>
</tr>
<tr>
<td>DIG 6886</td>
<td>Digital Pedagogy</td>
<td>3</td>
<td></td>
<td>Introduction to wide range of foundational concepts &amp; digital tools in digital pedagogy. Designed for English majors &amp; English students, focus is on what the digital can offer to theorizing &amp; teaching of reading, writing, &amp; research in humanities studies.</td>
</tr>
</tbody>
</table>
| DIG 6818  | Feminist Digital Humanities                                                  | 3       |                                        | This course offers an introduction to foundational concepts and analytical tools in the study of feminist digital humanities and
<table>
<thead>
<tr>
<th>COURSE</th>
<th>CREDIT HOURS</th>
<th>COURSE TITLE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIG 6007</td>
<td>3</td>
<td>Trends in Digital Humanities</td>
<td>Conducts key feminist digital humanities projects using feminist literature.</td>
</tr>
<tr>
<td>PHC 7567</td>
<td>3</td>
<td>Public Health Laboratory Molecular Biology and Molecular Diagnostics</td>
<td>Intensive study of one or more current issues in digital humanities. Involves readings in theory, discussion leading, reverse engineering, and participation in current Digital Humanities project.</td>
</tr>
<tr>
<td>PHC 7566</td>
<td>3</td>
<td>Public Health Laboratory Safety and Security</td>
<td>This course will teach students to apply knowledge of cellular structure and function to molecular diagnostic procedures.</td>
</tr>
<tr>
<td>PHC 6084</td>
<td>3</td>
<td>Bayesian Data Analysis</td>
<td>This course will teach students the principles, policies, and methods for management of public health laboratory safety and security programs. Topics include: Biosecurity, PPE, engineering controls, biological, chemical, radiological, and animal safety.</td>
</tr>
<tr>
<td>PHC 6096</td>
<td>3</td>
<td>PHC 6096 with a minimum grade of C</td>
<td>This course introduces the theory and practice of Bayesian inference for single and multiple parameter hypotheses, regression models, generalized linear models, hierarchical models, and analysis of health-related data and others via MCMC algorithms.</td>
</tr>
<tr>
<td>MAN 6406</td>
<td>3</td>
<td>Employment Law</td>
<td>This course provides students with a working knowledge and understanding of how employment law originates, evolves, and impacts the workplace.</td>
</tr>
<tr>
<td>PHA 6879</td>
<td>2-3</td>
<td>Death and Dying for Healthcare Professionals</td>
<td>This course will undoubtedly be a daily theme for which healthcare professionals must be prepared to face. To best serve the needs of patients, this course will focus on the historical, cultural, and procedural issues related to a wide range of loss.</td>
</tr>
<tr>
<td>MHS 6743</td>
<td>3</td>
<td>Qualitative Research Foundations</td>
<td>This course provides students with an understanding of the foundations of qualitative research and how to conduct qualitative research. The course also assists them, where appropriate, in applying qualitative methods to their doctoral dissertation.</td>
</tr>
<tr>
<td>PSY 6065</td>
<td>1-4</td>
<td>Introduction to Advanced Psychology</td>
<td>This course introduces students to the major ideas in the discipline of psychology, history of psychology, and cultural and diversity issues and promotes practice in scholarly discourse and professional development.</td>
</tr>
<tr>
<td>EDA 7192</td>
<td>3</td>
<td>Leadership in Education: Theory and Inquiry</td>
<td>The course provides students with exposure to major leadership theories and contemporary inquiry in Leadership as applicable to various educational contexts.</td>
</tr>
<tr>
<td>CJE 6268</td>
<td>3</td>
<td>Minorities and Crime</td>
<td>This course provides an overview and discussion of issues surrounding the relationship between minority groups and the criminal justice system. It focuses on overt and institutional racism and discrimination and its relationship to the justice system.</td>
</tr>
<tr>
<td>DSC 6020</td>
<td>3</td>
<td>Terrorism and Homeland Security</td>
<td>This course will introduce you to the phenomena of contemporary terrorism and extremism. Emphasis will be placed on</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
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<tr>
<td>ACG 6678</td>
<td>Legal Aspects of Fraud and Information Assurance</td>
<td>3</td>
<td>BUL 5842 with a minimum grade of C+</td>
</tr>
<tr>
<td>MHS 6456</td>
<td>Co-occurring Mental and Substance Use Disorders in Child and Adolescent Behavioral Health</td>
<td>3</td>
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<tr>
<td>PHA 6621</td>
<td>Graduate Program Internship in Pharmaceutical Sciences</td>
<td>6</td>
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<tr>
<td>PHA 6952</td>
<td>Graduate Program Capstone in Pharmacy</td>
<td>3</td>
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<tr>
<td>PHC 6042</td>
<td>Methods in Pharmacoepidemiology</td>
<td>3</td>
<td>PHC 6756 with a minimum grade of B</td>
</tr>
<tr>
<td>PHC 6043</td>
<td>Trending Topics in Pharmacoepidemiology and Pharmacoeconomics</td>
<td>3</td>
<td>PHC 6756 with a minimum grade of B</td>
</tr>
<tr>
<td>EEE 6217</td>
<td>Biomedical Optical Spectroscopy and Imaging</td>
<td>3</td>
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<tr>
<td>QMB 6304</td>
<td>Analytical Methods for Business</td>
<td>3</td>
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<tr>
<td>PHI 6686</td>
<td>Climate Change and Societal Evolution</td>
<td>3</td>
<td></td>
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<tr>
<td>PHC 6595</td>
<td>Applied Clinical Genetics</td>
<td>3</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
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<tr>
<td>ECH 6536</td>
<td>Catalysis: Concepts and Applications</td>
<td>3</td>
<td>Descriptions of thermodynamic, dynamic, and structural features of surfaces, analysis of the chemical bonds at surfaces, and assessment of unique properties of surfaces and exploitation in applications including heterogeneous catalysis.</td>
</tr>
<tr>
<td>ECH 6805</td>
<td>Synthetic Fuel Production</td>
<td>3</td>
<td>Descriptions of historic developments in transportation fuel production, current oil and gas industry methods for fuel production analyses of futuristic synthetic fuel production, and assessment of proposed future fuel economies.</td>
</tr>
<tr>
<td>EME 6356</td>
<td>Introduction to Big Data and Learning Analytics</td>
<td>3</td>
<td>This course will explore the design and implementation of large databases used for educational planning, evaluation, and assessment. In addition, the course will investigate the analysis of data for the purposes of optimizing student learning.</td>
</tr>
<tr>
<td>EME 6419</td>
<td>Motivational Design for Learning Technology</td>
<td>3</td>
<td>This course explores the design principles of learner motivation in technology-enhanced learning environments. Students will learn various motivational design concepts and also be engaged in the motivational design process.</td>
</tr>
<tr>
<td>EME 6348</td>
<td>Predictive Learning Analytics</td>
<td>3</td>
<td>This course will examine how educational professionals can leverage data to promote student success. Students will learn how to use data modeling to effectively identifying at-risk students and create programs to support those students.</td>
</tr>
<tr>
<td>EME 6346</td>
<td>Data Visualization in Education</td>
<td>3</td>
<td>Students will learn how to communicate effectively using data in reporting. In addition, students will be able to create graphs, images, diagrams, and animations to convey messages to differing constituents in educational settings.</td>
</tr>
<tr>
<td>EME 6817</td>
<td>Data in Assessment and Accreditation</td>
<td>3</td>
<td>This course will explore the role of data in assessment and accreditation. Educational practitioners will gain an understanding of how assessment can inform their work and how data collection and analysis can be critical to a successful accreditation.</td>
</tr>
<tr>
<td>EME 6347</td>
<td>Digital Media and Learning</td>
<td>3</td>
<td>In this course students will be introduced to the sociological and critical literatures on instructional technology, primarily via the Digital Media and Learning (DML) research network.</td>
</tr>
<tr>
<td>EVR 6072</td>
<td>Florida Springs</td>
<td>3</td>
<td>This course introduces students to the relationship between groundwater systems and Florida springs. It will examine human activities that threaten springs as well as the struggle to develop policy initiatives to protect diseases and the practice of clinical genetics and genetic counseling are covered. The course builds on concepts from Genomics in Medicine and Public Health, which is recommended but not required.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Units</td>
<td>Prerequisites</td>
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<tr>
<td>MAR 6735</td>
<td>Digital Marketing</td>
<td>3</td>
<td>MAR 6815 with a minimum grade of B-</td>
</tr>
<tr>
<td>URP 6401</td>
<td>Planning for Resilient Communities</td>
<td>3</td>
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<tr>
<td>PHA 6603C</td>
<td>Internal Medicine Elective</td>
<td>3</td>
<td>PHA 6784C with a minimum grade of C</td>
</tr>
<tr>
<td>LIS 6266</td>
<td>Search Engine Society and Digital Natives</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IDS 6272</td>
<td>Research Methods for Sustainability</td>
<td>3</td>
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</tr>
<tr>
<td>GLY 6393C</td>
<td>Modeling of Volcanic Processes</td>
<td>3</td>
<td>MAC 2311 with a minimum grade of C or MAC 2241 with a minimum grade of C or MAC 2281 with a minimum grade of C, MAC 2312 with a minimum grade of C, MAC 2242 with a minimum grade of C, MAC 2282 with a minimum grade of C, GLY 3311C with a minimum grade</td>
</tr>
<tr>
<td>PHT 7710C</td>
<td>Foundations in Hand and Upper Limb Rehabilitation</td>
<td>4</td>
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</tr>
<tr>
<td>PHA 7711C</td>
<td>Clinical Decision Making I for Hand and Upper Limb Rehabilitation</td>
<td>4</td>
<td>PHT 7031C with a minimum grade of B</td>
</tr>
<tr>
<td>PHT 7712C</td>
<td>Clinical Decision Making II Hand and Upper Limb Rehabilitation</td>
<td>4</td>
<td>PHT 7710C with a minimum grade of B</td>
</tr>
<tr>
<td>Course</td>
<td>Code</td>
<td>Title</td>
<td>Credits</td>
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<tr>
<td>WST</td>
<td>6107</td>
<td>Transnational Feminisms</td>
<td>3</td>
</tr>
<tr>
<td>MAP</td>
<td>6426</td>
<td>Special Functions</td>
<td>3</td>
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<tr>
<td>PCB</td>
<td>6556</td>
<td>Conservation Genetics</td>
<td>3</td>
</tr>
<tr>
<td>BSC</td>
<td>6940</td>
<td>Internship in Conservation Biology</td>
<td>1-3</td>
</tr>
<tr>
<td>BSC</td>
<td>6865</td>
<td>Conservation Biology Theory</td>
<td>3</td>
</tr>
<tr>
<td>BSC</td>
<td>6381C</td>
<td>Biodiversity</td>
<td>3</td>
</tr>
<tr>
<td>IDS</td>
<td>6216</td>
<td>Implementing the United Nations Sustainable Development Goals</td>
<td>3</td>
</tr>
</tbody>
</table>